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AN INVESTIGATION INTO PUBLIC STIGMA TOWARDS DEPRESSION:
MEASURING, PREDICTING AND REDUCING NEGATIVE RESPONSES AMONG
ADOLESCENTS.

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Thesis submitted to the National University of Ireland, Galway in fulfilment of the
requirements for the Degree of Doctor of Philosophy (Psychology)

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Abstract

The current research focuses on how adolescents stigmatise their peers with depression and explores this theme in a series of three interrelated studies. Study 1 tests an empirical model of public stigma towards depression based on its theoretical conceptualisation. It is proposed that stigma is composed of separate cognitive, affective and behavioural elements. However, empirical validation of this tripartite model among adolescents is lacking. Additionally, there is a paucity of research investigating the validity of instruments used to assess stigma among adolescent populations, with researchers typically relying on adult measures. In order to address these research gaps, exploratory (N=332) and confirmatory (N= 236) factor analyses were conducted on two separate samples of Irish adolescents. Results provided empirical support for the tripartite model of stigma, whilst also highlighting discrepancies between the validity of stigma instruments among adult and adolescent populations. Using the same sample as Study 1, Study 2 examines how select dispositional and situational factors may influence adolescents' ($M = 15.49$ years, $SD = 1.14$) stigmatising responses. It is argued that investigating the factors that lead to the expression of stigma is an important step in designing effective stigma reduction strategies. Although other social psychological research indicates that empathy and peer norms may influence individuals' stigmatising responses, the role that these two factors play in influencing stigma responses among adolescents is relatively under explored. Specifically, Study 2 explores the predictive effect of (affective and cognitive) empathy and (descriptive and injunctive) group norms on adolescents' explicit and implicit stigmatising responses toward (hypothetical) male and female peers with depression. Results indicated that descriptive norms exert a substantial influence on adolescents' explicit stigma responses. Based on the results from Study 2, Study 3 examines the utility of a pilot, normative feedback technique at reducing explicit stigma responses in adolescents. Specifically, Study 3 investigates whether exposing adolescents (N=116) to positive normative messages reduces the expression of stigma among these adolescents, at a follow-up assessment, in comparison to a control condition. Additionally, Study 3 assesses the mechanisms that are proposed to mediate and moderate the effectiveness of normative approaches. Results indicate that normative feedback was not effective at reducing stigma in this instance. Furthermore, no support was provided for the moderation effects, although some support was identified for the mediational effects of descriptive norms. This research makes important contributions to the literature. However, findings suggest that future research may benefit from further consideration of the methods that are used to assess stigma among adolescents.

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List of Abbreviations

ADHD	Attention Deficit Hyperactivity Disorder
AIC	Akaike Information Criterion
ANOVA	Analysis of Variance
AQ	Attribution Questionnaire
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence Interval
EFA	Exploratory Factor Analysis
EM	Estimation Maximisation
EPC	Expected Parameter Change
FAS	Friendship Activity Scale
HLM	Hierarchical Linear Modelling
KMO	Kaiser-Meyer-Olkin
MAR	Missing at Random
MCAR	Missing Completely at Random
MI	Modification Indices
ML	Maximum Likelihood
MLR	Multiple Linear Regression
NMAR	Not Missing at Random
R-AQ	Revised – Attribution Questionnaire
RMSEA	Root Mean Square Error of Approximation
SDQ	Strengths and Difficulties Questionnaire
SEM	Structural Equation Modelling
SRMR	Standardised Root Mean Square Residual
TLI	Tucker Lewis Index
UK	United Kingdom
US	United States

Chapter 1

Thesis Overview

1.1 Aim of Chapter

The aim of this chapter is to provide a short overview of the structure of this doctoral thesis and provide a brief rationale for the aims and objectives of the current research. Specifically, this chapter will discuss the meaning of the term ‘stigma’ and the negative effects that stigmatisation can exert on individuals in a global context. It will continue by discussing the importance of researching mental illness stigma in adolescents and highlight the current limitations associated with the research area. Finally, this chapter will conclude by outlining the aims of each study conducted as part of this doctoral thesis.

1.2 Overview of the Current Research Area

The stigmatisation of people with mental health disorders is considered a priority area of concern for social researchers, health policy and clinical practitioners, as there is now an extensive body of research documenting the substantial and pervasive effects that stigma can exert on the lives of people who experience mental health problems (Corrigan, 2000; Deacon, 2006; Link & Phelan, 2001; Markowitz, 1998; Spagnolo, Murphy & Librera, 2008; Sartorius, 1998, Tsang, Tam, Chan & Cheung, 2003; World Health Organisation, WHO, 2013). This stigma can be manifested in the form of social exclusion, rejection, blame or devaluation of individuals due to their association with a particular disorder (Scambler, 2009). It has been argued that the emotional impact of stigma can contribute to the physical, psychological and social burden of many mental health conditions in various ways, with researchers contending that the impact of stigma on individuals’ lives can be as great a source, if not a greater source, of suffering than the physical manifestation of the disease itself (Weiss, Jadhav, Raguram, Vounatsou & Littlewood, 2001; Weiss, Ramakrishna & Somma, 2006).

Stigma exerts a wide range of effects on the personal and social functioning of the people who experience mental health difficulties and their families (Elkington et al., 2012; Hinshaw, 2007). For example, there is now a well established body of evidence linking stigma with indicators of low well-being, such as lowered self-esteem (Rosenfield, 1997), decreased self-efficacy (Kleim et al., 2008), poorer psycho-social functioning (Van Brakel, 2006) and negative affect (Heatherton, Kleck, Hebl & Hull, 2000). Researchers have also noted that stigma can cause lowered expectations and feelings of shame or hopelessness in individuals who experience mental health problems (Hinshaw, 2007). Stigma exerts

egregious effects on the lives of individuals affected by mental health issues, by acting as a significant barrier in these individuals' pursuit of vocational, housing, educational, familial and friendship goals (Corrigan, Bink, Fokuo & Schmidt, 2012; Munoz, Sanz, Perez-Santos & De Los Angeles Quiroga, 2011). For instance, Link and Phelan (2014) noted that individuals with mental health issues experience more restricted social networks, poorer life satisfaction and higher levels of unemployment. Researchers such as Link and Phelan (2001) and Nicholls, Wiens and Smith (2003) have proposed that stigma has indirect, but strong, negative implications for public health efforts to combat the condition. Stigma can also result in concealment of a disorder (Weiss, 2006), delayed help-seeking, poor treatment adherence, and lead to increased risk of disability (Clement et al., 2015; Corrigan, 2000; Heijnders & Van Der Meij, 2006; Hinshaw, 2005). It is now widely accepted that the stigma associated with mental illness not only poses a pronounced threat to the quality of life of stigmatised individuals' but also represents a fundamental form of social injustice (Corrigan et al., 2005a; Hinshaw, 2007; Murman et al., 2014).

Until recently, research into the stigmatisation of mental illness had focused almost exclusively on examining this construct among adults (Heflinger, Wallston, Mukolo & Brannan, 2014; Parcesepe & Cabassa, 2013; O'Driscoll, Heary, Hennessy & McKeague, 2012). As a result, the nature and consequence of stigma in childhood and adolescence is comparatively less understood. However, the available literature suggests that mental health stigma among young people is also a cause for concern (Ng & Chan, 2000; Quinn & Chaudoir, 2009; Watson, Miller & Lyons, 2005; Walker, Coleman, Lee, Squire, & Freisen, 2008). For instance, a review by Wahl (2002) found that negative attitudes toward people with mental health problems are already evident in children as young as five years of age. Other research has shown that as children age these stigmatising responses appear to increase in intensity, with adolescents tending to express more negative responses toward people with mental health problems than younger children (Griffiths, Christensen & Jorm, 2008; O'Driscoll et al., 2012). Penn et al. (2005) examined young people's (14-22 years) attitudes toward people with different mental health conditions and found that stigmatising responses were highly prevalent in this age group. Specifically, respondents appeared to view people with mental health problems as being different from other people, less able to function in an adaptive manner and associated them with more negative stereotypes. However, stigma responses may vary depending on the type of disorder being assessed (Hinshaw, 2005).

Consistent with the adult literature, stigma appears to exert significant, negative effects on the lives of children and adolescents who experience mental health difficulties. Stigma contributes to the under-utilisation of mental health services and treatment non-adherence among adolescents, as well as a reluctance to engage in other informal methods of help-seeking (Chandra and Minkowitz, 2007; Gulliver, Griffiths & Christensen, 2010; Polanczyk et al., 2015). Research shows that a substantial portion of adolescents with mental health difficulties experience teasing and harassment from peers or tend to be excluded from their peer group (Juvonen, 1991; Moses, 2010; Walker, Coleman, Lee, Squire & Freisen, 2008). Research has shown that stigma causes feelings of embarrassment and shame and that some adolescents may fear disclosing their disorders to peers and others in their social networks due to anticipated social rejection and ridicule (Moses, 2009; 2010). Thus, stigma is contended to exert substantial negative effects on adolescents' social, emotional and health outcomes. It is for these reasons that public health organisations, such as the U.S. National Institute of Mental Health (NIMH, 2010) and the World Health Organisation (2013; 2014), have identified stigma as one of the most formidable obstacles facing advancement in the treatment of mental illness and improving quality of life among adolescents with mental health disorders. Given the critical importance of adolescence as a stage of development (Crockett, 1997), as well as the high prevalence of mental health disorders among this age group (Kessler, Berglund, Demler, Merikangas & Walters, 2005), it is now universally recognised that the reduction of mental health stigma in adolescents should be a priority area of concern for researchers and policy makers (WHO, 2013).

Although it is widely accepted that the identification of effective stigma interventions should be of paramount concern; in order for these interventions to be successful, it is essential that researchers first obtain a comprehensive understanding of the nature and causes of stigma (Gulliver et al., 2010; Mukolo & Heflinger, 2010). Despite the remarkable increase in research investigating mental health stigma among children and adolescents over the past decade, the literature is replete with notable research 'gaps', which future research should strive to address. For example, although the current research base provides ample evidence of the robust nature of mental illness stigma among adolescents (Quinn & Chaudoir, 2009; O'Driscoll et al., 2012; Swords, Heary & Hennessy, 2011), relatively little attention has been placed on studying the factors that influence the expression or maintenance of these stigmatising responses (Stier & Hinshaw, 2007). Numerous researchers, such as Deacon (2006) and O'Driscoll, Heary, Hennessy and McKeague (2014), now argue that there is a

need for researchers to conduct further investigations into the factors that may cause or promote stigmatising responses in adolescents. However, research of this nature is difficult due to methodological shortcomings, which not only make it difficult to assess the causes of stigma among adolescents, but to compare findings across the existent research studies.

One major criticism of the literature is that a substantial proportion of research has focused on assessing young people's responses toward the generic term 'mental illness' (Adler & Wahl, 1998; Armstrong, Hill & Secker, 2000; Wahl, 2002), as opposed to measuring how these individuals respond toward people with specific mental health problems (Hinshaw, 2005). This approach is criticised as it limits our understanding and knowledge about how individuals' stigmatising responses may vary across the different mental health disorders. Hence, it is argued that researchers investigating stigma should conduct examinations of how individuals respond to specific health conditions separately (Stier & Hinshaw, 2007; Weiss et al., 2006). Another methodological limitation of the mental health research base surrounds the theoretical conceptualisation of stigma. Stigma is a complex construct, which is hypothesised to be composed of separate cognitive, emotional and behavioural elements (i.e. Stereotypes, Prejudice & Discrimination; Corrigan & Watson, 2002). However, although this conceptualisation is commonly endorsed in the literature (O'Driscoll et al., 2012; Munoz et al., 2011), no research has empirically assessed the validity of this tripartite conceptualisation of stigma among adolescents. Additionally, researchers investigating mental health stigma, rarely appear to include assessments of all three proposed components (Pinto, Hickman, Logsdon & Burant, 2012). This represents an important limitation in the research base as researchers suggest that in order to advance the scientific investigation of adolescent stigma, an understanding about the empirical make-up of stigma and the ability to measure the separate conceptual dimensions is crucial (Earnshaw & Chaudoir, 2009; Hinshaw, 2007; Link, Yang, Phelan & Collins, 2004; Pinto, Hickman, Logsdon & Burant, 2012; Rusch, Angermeyer & Corrigan, 2005).

Additionally, the investigation of mental health stigma among children and adolescents is also hampered by the lack of tools that are validated to measure this construct among this age group (Link et al., 2004; Pinto et al., 2012). This lack of validated measures is considered a major drawback of the child and adolescent stigma research as it limits confidence in the observed research findings (Pinto, Hickman & Thomas, 2014; Wahl et al., 2014). In addition, researchers criticise the current adolescent mental health stigma base for the lack of research that has focused on assessing implicit stigmatising responses (O'Driscoll

et al., 2012; McKeague et al., 2014). Although there has been a surge in the use of implicit measures among the wider social cognitive literature, with researchers recognising that implicit measures can capture important aspects of intergroup bias that may not be detected through traditional explicit measures (Greenwald et al., 2002), there is a paucity of research that include assessments of children and adolescents' implicit attitudes toward people with mental health problems.

Furthermore, although it is argued that identifying the processes which promote the expression of stigma toward people with mental health difficulties is critical because these mechanisms are likely to affect the efficacy of stigma reduction interventions (Dovidio & Gaertner, 2010; Mukolo & Heflinger, 2011), there is a scarcity of research that has actually focused on examining the reasons why children and adolescents with mental health problems may be excluded by their peers (O'Driscoll et al., 2014). Evidence from the wider social literature suggests that two factors, group norms and empathy, appear to exert considerable effects on the type of stigmatising responses that individuals express toward various marginalised groups (Batson, Early, & Salvarani, 1997; Crandall, Eshleman & O'Brien, 2002; Sierksma et al., 2014; Stangor, Seachrist & Jost, 2001; Stephen & Finlay, 1999). Crucially, a considerable amount of research has also indicated that the experimental manipulation of these variables can significantly reduce explicit and implicit endorsements of stigma (Shih, Stotzer & Gutiérrez, 2013; Sierksma, Thjis & Verkuyten, 2015). However, no research has investigated the potential role that either of these factors may play in predicting and reducing mental health stigma in adolescents.

Thus, the current research project attempts to address some of the methodological shortcomings evident in the extant adolescent stigma literature, by carrying out a series of interrelated studies. As recommended by Stier and Hinshaw (2007), this project concentrates on assessing adolescents' responses toward a peer with a particular mental health disorder; depression. First, this project attempts to establish a valid measurement model of how adolescents stigmatise their peers with depression. Second, this project examines the potential role that empathy and group norms play in influencing stigmatising responses among adolescents. Finally, this project explores the efficacy of a pilot intervention at reducing stigma in adolescents. The specific aims of each study are as follows:

Study 1

- To explore the validity and reliability of a series of self-report instruments in order to establish a valid measurement model of the stigma adolescents express toward (fictional) peers with depression.
- To also assess the tripartite conceptualisation of stigma by exploring whether these measures empirically represent three separate components; Stereotypes, Prejudice and Discrimination.

Study 2

- To investigate the role that empathy and group norms play in predicting adolescents' explicit and implicit stigmatising responses toward their male and female (fictional) peers with depression.

Study 3

- To examine the effect of a pilot normative feedback intervention (based on the findings from Study 2) at reducing the stigmatising responses directed by adolescents toward fictional peers with depression.
- To examine the theoretical mechanisms through which normative feedback interventions exert their effects.

The aims, objectives and findings of each of these three studies will be discussed in more detail in the proceeding chapters of this thesis. An outline of the thesis chapter structure is provided below:

Chapter 1 provides an overall introduction to the core research topics associated with this thesis and outlines the general structure of this thesis project. This chapter briefly highlights pertinent limitations associated with current research on adolescent mental health stigma and outlines the importance of addressing these research gaps.

Chapter 2 provides an introductory rationale for Study 1. An overview of the historical and conceptual roots of mental health stigma is provided, with particular reference to the tripartite conceptualisation of stigma. This chapter establishes the importance of investigating mental health stigma among adolescents, placing particular emphasis on

investigating public stigma toward peers with depression. This chapter also critically appraises the conceptualisation and operationalisation of mental health stigma in adolescents and outlines the limitations associated with the current research base.

Chapter 3 outlines the methodology employed in Study 1. This chapter describes the processes involved in the selection and development of the materials that were used to assess the types of stereotypes, prejudice and discriminatory intentions that adolescents exhibited toward their (fictional) peers with depression. Specifically, this chapter provides a description of the design, participants, measures and procedures used for data collection in Study 1.

Chapter 4 presents the results of Study 1, which is divided into two parts (1A and 1B). First, this chapter presents the results of Study 1A, which focused on using Exploratory Factor Analysis (EFA) to assess the dimensionality of measures used to assess stigmatising responses in adolescents. Next, this chapter presents the findings of Study 1B, which focused on using Confirmatory Factor Analysis (CFA) to confirm the validity of the stigma model, which emerged from Study 1A, in a separate sample of adolescents. This chapter also presents the findings from the higher-order CFAs which were conducted to assess whether the observed stigma model empirically fit the conceptual, tripartite model of stigma (e.g. Stereotypes; Prejudice; and Discrimination).

Chapter 5 provides a discussion of the findings from Study 1. The chapter reviews key findings in the context of previous research findings and outlines the strengths and limitations associated with the current studies. Recommendations for future research are provided and the applied implications of this research are considered.

Chapter 6 provides an introduction to Study 2. Specifically, the utility of exploring the role that empathy and group norms may play in influencing adolescents' responses to peers with mental health issues is discussed. This chapter also establishes the importance of including measures of both explicit and implicit stigma among adolescents.

Chapter 7 outlines the methodological tools and procedures utilised in Study 2. This chapter highlights unique features of the methodology associated with Study 2 that were not previously discussed in Chapter 3.

Chapter 8 presents the findings from Study 2. This chapter highlights differences in adolescents' stigmatising responses toward their peers with depression and their 'typically developing' peers. This chapter presents the findings from a series of hierarchical multiple

regression analyses which were conducted to assess how empathy and group norms influence adolescents' explicit and implicit stigma responses toward male and female peers with depression.

Chapter 9 provides a discussion of the core research findings from Study 2. Key research findings are reviewed in the context of previous research and the strengths and limitations associated with the current study is discussed. This chapter concludes by outlining recommendations for future research and considering the practical implications of the current findings.

Chapter 10 presents the details of Study 3, which focuses on evaluating the effectiveness of a pilot normative feedback approach at reducing public depression stigma in adolescents. The utility of normative feedback approaches at reducing stigma is reviewed by considering findings from other research domains. Additionally, this chapter outlines the theoretical mechanisms that purportedly influence the effectiveness of normative approaches.

Chapter 11 details the methodology of Study 3. This chapter describes the unique methodological features associated with this study. Namely, this chapter describes the process involved in selecting and developing the normative 'messages', which were presented to adolescents in the normative feedback intervention. Additionally, this chapter also details the study design, participants, and procedure used for data collection.

Chapter 12 presents the findings from Study 3. Specifically, this chapter outlines the results of a series of mixed-subject Analysis of Variance (ANOVAs), which compared the effect of a normative feedback intervention at reducing adolescents' stigma responses from pre-test to post-test, in comparison to a control condition. This chapter also presents the results of a series of moderated and mediated hierarchical regression analyses, assessing the theoretical mechanisms underpinning the effectiveness of the normative feedback approach.

Chapter 13 provides a synthesised discussion of the findings from Study 3 in relation to previous research findings. The strengths, limitations and practical implications of the research are discussed.

Chapter 14 provides a short conclusion to the thesis project. This chapter briefly outlines the theoretical and empirical contributions made by this overall doctoral thesis to research and practice in the area of adolescent mental health stigma. Key strengths and limitations of this project are also reviewed.

Chapter 2

Study 1 Introduction

2.1 Aim of Chapter

This chapter addresses key issues relevant to the overall research project and outlines the pertinent issues relating to Study 1 (Part A & B) of this doctoral thesis. Within this chapter a brief synopsis of the historical meaning of the term stigma and an outline of the tripartite conceptualisation of stigma is provided. Next, the importance of investigating mental health stigma among adolescents will be discussed. Particular emphasis will be placed on highlighting the importance of investigating stigma toward peers with depression and an overview of the findings from the current literature will be presented. This chapter will then provide a critical overview of the limitations associated with the current conceptualisation and measurement of mental health stigma in adolescents. This chapter concludes by discussing the aims and hypotheses of the current study.

2.2 Historical Overview of the Meaning of the term ‘Stigma’

The term stigma has had many associations and connotations rooted throughout the history of social science and public health research (Weiss, 2001). Although the concept of stigma has attracted increased attention among health professions, social researchers and the general public over recent years (Earnshaw & Quinn, 2012; Scambler, 2009; Weiss et al., 2006), researchers have yet to produce one common, unifying, conceptual perspective on stigma (Deacon, 2006). One of the earliest and most enduring conceptualisations of stigma was put forth by Goffman (1963), who defined stigma as “an attribute that is deeply discrediting” (p. 3). Goffman (1963) described stigma as a ‘mark’ or ‘attribute’ that, when assigned to an individual or group, disqualifies them from full social acceptance (Weiss et al., 2001). More recently, Parker and Aggleton (2003) described stigma as an interactive construct that affects relationships between the person, or group, that is stigmatised and the social acceptance given, or withheld, by others. Similarly, the World Health Organisation (WHO; 2001) defined stigma as a mark of shame, disgrace or disapproval which results in a person being rejected, discriminated against, or excluded from participating in a number of areas of society. According to Goffman (1963), the actual term stigma refers to how individuals are devalued by society and regarded as flawed or compromised. Crocker, Major and Steele (1998) elaborated upon this definition and stipulated that “stigmatised individuals possess (or are believed to possess) some attribute, or characteristic, that conveys a social identity that is

devalued in some particular context” (p.505). Hence, although researchers have approached the study of stigma from different perspectives and produced several varying definitions of the phenomenon; the majority of researchers now appear to agree on the classification of stigma as an undesirable or discrediting attribute that reduces an individual’s status in the eyes of society (Heijnders & Van Der Meij, 2006).

Research into stigma has expanded exponentially since Goffman’s (1963) seminal essay. A substantial portion of the current research on stigma has been propelled by sociologists and social psychologists who contend that in order to advance our understanding of stigma, research into this topic needs to be located within the context of general social-psychological processes (Link & Phelan, 2001). According to Alonzo and Reynolds (1995) stigma is a process that is fundamentally social in nature. It is in this sense that stigma is conceptualised as being relationship and context specific, in that ‘stigma’ is not thought to reside within a particular person, but within a particular social context (Major & O’Brien, 2005). Dovidio, Crocker and Major (2000) further argued that stigma is a socially constructed phenomenon that involves the recognition of a difference based on a particular characteristic or ‘mark’ and the devaluation of the individual as a direct consequence of this difference. According to Earnshaw and Chaudoir (2009) stigmatisation does not occur exclusively as a product of the ‘mark’ itself, but occurs as a result of social interactions in which the ‘mark’ is constructed to represent a taint or flaw in the target’s character. Hence, the attribute in question is not considered inherently deviant in and of itself but the deviance is said to be derived from culturally embedded meanings in the context of a particular social environment or historic period (Visser, Kershaw, Makin & Forsyth, 2008). Link and Phelan (2001) also likened stigmatisation to a process whereby the individual who is being stigmatised is labelled with a mark that is seen as socially deviant and is then set apart in society by more powerful individuals, communities or governments. Additionally, Link and Phelan (2001) emphasised the role of power in the social process of stigmatisation, whereby social, economic, political etc. forms of power are considered to enable stigmatisation (see also Thomas & Nair, 2011). It is in this regard that researchers typify stigma as being socially constructed, in that society decides what characteristics or attributes are ‘normative’ and which are ‘deviant’(Crocker et al., 1998). Moreover, Heijnders and Van Der Meij (2006) suggested that stigma can be conceptualised as marking the boundaries a society creates between ‘in-groups’ and ‘out-groups’ or between ‘us’ and ‘them’. Stigma is a powerful social phenomenon that is inextricably linked to the value placed on varying social identities that

occur within a given social context (Dovidio, Crocker & Major, 2000). Hence, the way in which stigma manifests, and the nature of the social ‘exclusion’ or ‘devaluation’ that occurs, can vary from one culture to another (Weiss et al., 2001). Internationally, however, mental illness is considered to be one of the most stigmatised health conditions affecting adults, children and families in modern society (Hinshaw, 2007).

2.2.1 The Tripartite Model of Stigma Researchers contend that one of the most fundamental steps in stigma research is the conceptualisation of the psychological processes of stigma (Munoz et al., 2011). As stigma is regarded as a type of ‘social attitude’ many of the conceptual stigma models have been adapted from theoretical models on attitude formation. Within the general attitude literature, there is a long held consensus that attitudes are comprised of three inter-related components: Cognition, Affect and Behaviour (Breckler, 1984). The roots of this tripartite attitudinal model of thinking, feeling and acting can be traced back to ancient Greek philosophers (McGuire, 1969) and has been heavily supported by early social psychologists (Allport, 1954; Breckler, 1984). This basic model of attitude specifies that these processes represent distinct psychological responses, whereby thoughts are considered separate from emotions, which in turn are considered separate from behaviour (Allport, 1954). It is from this three-component model of attitudes that the current conceptual models of stigma have predominantly emerged (Corrigan & Watson, 2002; Fiske, 2000; Hinshaw, 2005; Nelson, 2009).

One of the most dominant theoretical conceptualisations of mental illness stigma in the literature is the social-cognitive model, which is represented by theorists such as Hinshaw (2005), Corrigan et al. (2003; 2012), and Murman et al. (2014). This model views stigma as a social-cognitive process that involves both psychological and social dimensions (Deacon, 2006); It is argued that while stigma is socially constructed, the way in which individuals learn about the world is limited by their cognitive structures and processes (Corrigan et al., 2005b). As with the tripartite model of attitudes, this model proposes that stigma is composed of separate cognitive, affective and behavioural facets, namely stereotypes, prejudice and discrimination, respectively. It is proposed that these processes work in tandem to produce a societal level outcome: the development and maintenance of stigma (Earnshaw & Chaudoir, 2009). While other conceptual models specify that other factors, such as labelling, status loss, stereotype awareness, categorisation skills and power dynamics (Link & Phelan, 2001; 2004), may also play a role in the stigma process, at a measurement level, stigma is increasingly recognised as being composed of these three cognitive, affective and behavioural elements

(Munoz et al., 2011; Murman, Buckingham, Fontilela, Villaneuva, Leventhal & Hinshaw, 2014; Rusch et al., 2005; Thornicroft, Rose, Kassam & Sartorius, 2007; Yamaguchi, Mino & Uddin, 2011).

According to Rusch et al. (2005), it is important for both theoretical research and practical initiatives to understand these separate components of stigma. Stereotypes are purported to make up the cognitive aspect of stigma and are defined as schemas or beliefs about members of a particular social group (Hamilton, Stroessner, & Driscoll, 1994). These knowledge structures are generally well known and widely shared among individuals with similar cultural backgrounds (Crocker et al., 1998). Stereotypes are sometimes viewed as an efficient way of categorising information about different social groups because they contain collective opinions about groups of people (Rusch et al., 2005). It is important to note that stereotypes can be both positive and negative. Additionally, although individuals may be aware of the stereotypes associated with particular groups, it does not mean that they endorse these stereotypes (Earnshaw & Chaudoir, 2009). Thus, prejudice is defined as an emotional response based on the personal endorsement of negative stereotypes (Corrigan & Watson, 2002). It is proposed that this emotional response can then lead to a behavioural reaction. Discrimination is the behavioural component of stigma and involves negative or differential treatment of one group or individual relative to another (Fiske, 1998). Fishbein (1996) described discrimination as a harmful or negative action directed toward others based on their membership in a particular social group. It is proposed that these three stigma components represent separate psychological processes that are experienced by people to varying degrees and can affect different types of outcomes (Earnshaw & Chaudoir, 2009). It is through these inter-related components of stereotypes, prejudice and discrimination that mental illness stigma is maintained (Corrigan et al., 2003).

2.2.2 Differentiating Between Self-Stigma and Public-Stigma When discussing the stigma associated with mental health disorders it is also important to distinguish between two major forms of stigma: Public-stigma and self-stigma (Corrigan et al., 2010; Munoz et al., 2011). Public stigma refers to the phenomenon of how large social groups in western societies endorse negative stereotypes and act against or devalue individuals belonging to certain social groups or categories, such as those with mental health problems (Corrigan, Kerr & Knudsen, 2005a). Stigma in this context is described as being dependent on inequalities of power (Link & Phelan, 2001). In order for stigmatisation to occur, there must be group differences in social status and power, whereby groups of higher social status and power are

able to imbue their world view on what is socially acceptable or deviant onto others (O'Driscoll et al., 2012). In other words, in order for a group to become stigmatised they must be conceptualised as having low power within society (Corrigan & Shapiro, 2010). Specifically, in relation to mental health stigma, public stigma is said to occur because more powerful groups in society restrict or limit opportunities for people with mental health problems (Corrigan et al., 2005a; Link & Phelan, 2001). In turn, individuals affected by mental illness tend to adopt these negative social judgments and begin to discredit and disqualify themselves from equal participation in society (Munoz et al., 2011). Self-stigma is thus the term used to describe how people with mental illness may internalise the public stigma that is prevalent in their wider community (Corrigan et al., 2005a).

In sum, public stigma is described as fostering a negative social environment toward people with mental health problems (Murman et al., 2014); this causes individuals affected by mental health issues to internalise negative self-views, which compounds the already distressing symptoms characteristic of most mental health disorders (Holmes & River, 1998). Thus, stigma can affect individuals both through direct and structural discrimination, or through social and psychological processes which involve the stigmatised person's perceptions (Link & Phelan, 2014). Both these forms of stigma contribute to what the WHO's Nations for Mental Health Program refers to as the hidden burden of mental illness (WHO, 2001) and hence, establishing a greater understanding of both public and self stigma has been identified as an important topic of research (Calear, Griffiths & Christensen, 2011). However, researchers have proposed that it may be more prudent for initiatives attempting to reduce stigma to concentrate on public stigma, as it is anticipated that a reduction in public stigma may also help alleviate self-stigma (Pinto et al., 2012). Therefore, the focus of this research dissertation will be on public stigma.

2.3 Why Investigate Public Mental Health Stigma in Adolescents?

Adolescence is a critical period of development that is characterised by extensive physical, cognitive, emotional, and social changes and marks the fundamental transition from childhood into adulthood (Crockett, 1997; Greenberg, Siegel & Lietch, 1983; Pejović-Milovančević, Lečić-Toševski, Tenjović, Popović-Deušić, & Draganić-Gajić, 2009; Spear, 2000). However, due to the transitional nature of this developmental period, adolescence is also often regarded as a period of increased vulnerability (Steinberg, 2005). Adolescence is a sensitive period in which lived experience can have disproportionate and lasting impacts on

future health and development (Hertzman & Boyce, 2010). As children advance through the adolescent period and enter adulthood, they progress through a number of developmental milestones and learn various social and cognitive skills which enable them to function effectively in a variety of social settings (Chicchetti & Rogosch, 2002). Hence, adolescence is considered an important developmental period as the social skills and experiences one acquires during this period can have huge effects on individuals' quality of life and psychological well-being, throughout their lifespan (Morganti, Nehrke & Hulicka, 1988; Goldbeck, Schmitz, Besier, Herschbach, & Henrich, 2007).

Adolescence is viewed as a key period in which individuals form intimate bonds of friendship with their peers (Crosnoe, 2000). This is considered an important developmental process as researchers have established a significant link between adolescents' peer relationships or friendships and their developmental outcomes (Wentzel & Caldwell, 1997). For example, developmental psychologists propose that the bonds of friendship forged in adolescence are crucial for fostering emotional socialisation and helping adolescents form effective coping strategies for dealing with psychological stress (Dumont & Provost, 1998; Hartup & Stevens, 1997). Similarly, Warrington and Younger (2011) argued that being accepted by the peer group is one of the most powerful determinants affecting adjustment and change during adolescence. In addition, peer rejection can negatively impact on children and adolescents' engagement or achievement in school (Buhs, Ladd & Herald, 2006) and may lead to later emotional or behavioural maladjustment (Mikami & Normand, 2015). In fact, social exclusion has been found to exert an array of negative effects on individuals' psychological adjustment, including links with anxiety (Rigby, 2000), emotionality (Abecassis, Hartup, Haselager, Scholte & Lieshout, 2002) and social withdrawal (Masten et al., 2009). Thus, peer acceptance is cited as playing a critical role in shaping developmental outcomes for children and adolescents. However, research shows that adolescents who experience mental health problems are more likely to encounter difficulties in forming and maintaining friendships and as a result may be compromised in their ability to achieve these important developmental goals (Bansal, Thind & Jaswal, 2006; Coie, Dodge, & Kupersmidt, 1990; Deater-Deckard, 2001). This is of particular concern given the emerging research which indicates that mental health disorders are highly prevalent among adolescents (Fergusson & Woodward, 2002; Sund, Larsson & Wichstrom, 2011).

2.3.1 Prevalence of Mental Health Disorders Among Adolescents Among the various health conditions affecting individuals, mental illness is one of the most prevalent and

is evident throughout the worldwide population. For example, it is estimated that approximately 20% of the population in the United States are affected by a mental health disorder, within any given year (Healthy People & U.S. Department of Health and Human Services, 2010). Additionally, the World Health Organisation (WHO) carried out a systematic review on data and statistics taken from a series of community studies carried out in European Union (EU) countries. This review found that 27% of the adult population appeared to have experienced at least one mental health disorder within the past year (WHO/E, 2014). Crucially, research suggests that the majority of mental disorders begin to manifest themselves during adolescence (Kessler et al., 2005).

Adolescence marks a period of peak onset for several mental health conditions (Merikangas et al., 2010). A study conducted by Kim-Cohen, Caspi and Moffitt (2003) found that an estimated 74% of individuals who admitted to having a current psychiatric diagnosis, reported experiencing their condition before 18 years of age. Moreover, it was found that 50% of the participants began experiencing symptoms before the age of 15 years (Kim-Cohen et al., 2003). In 2010, the National Institute of Mental Health (NIMH) carried out a large survey of over 10,000 adolescents, aged between 13-18 years. This survey revealed that approximately 20% of young people are affected by a mental health disorder (NIMH, 2010). This is concomitant with reports by Wright, Jorm and MacKinnon (2011) that mental health disorders affect every 1 in 4 or 5 adolescents each year. Recently, Polanczyk et al. (2015) conducted a meta-analytic review which assessed the prevalence of mental illness in children and adolescents in 27 different countries worldwide. The results from this meta-analysis indicated that 13.4% of children and adolescents were reportedly affected by at least one mental health disorder (Polanczyk et al., 2015). Within an Irish context, a recent national study, the 'My World Survey', indicated that the number one health issue affecting young people in Ireland is their mental health (Dooley & Fitzgerald, 2012). Similarly, national studies such as The Clonmel Project (2006) and The Lifestyle and Coping Survey (2004) have indicated that approximately 19% of children and adolescents in Ireland meet the criteria for a diagnosis of a psychological disorder, and that 27% of teenagers evident serious personal, emotional, behavioural or mental health problems. At a global level, mental health disorders are considered to be the most prevalent source of disability affecting young people, accounting for 45% of the disease burden in adolescents and young adults worldwide (Gore et al., 2011).

Prevalence of Depression in Adolescents Among the many mental health problems affecting adolescents, depression is arguably one of the most concerning. According to Lewinsohn, Rohde and Seeley (1998), depression is the most prevalent affective disorder, and is the leading cause of illness and disability among adolescents worldwide (WHO, 2014). A study by Fergusson, Horwood and Lynskey (1993) found that 7% of 15-year-olds met the DSM-III-R criteria for a diagnosis of depression. More recent investigations have seen a slight increase in the prevalence rates of depression among children and adolescents in western society. Zuckerbrot and Jensen (2006) reported that approximately 9% of teenagers met the criteria for depression. Similarly, NIMH (2012) also reported that approximately 9.1% of U.S. adolescents aged between 12-17 years had experienced at least one episode of major depression in the past year. Other researchers have estimated that the percent of adolescents who will have experienced some level of depressive symptoms by the time they reach adulthood may be as high as 20-30% (Bansal et al, 2006; Burns & Rapee, 2006; Sund, Larsson & Wichstrom, 2011). This is consistent with the findings from a recent-systematic review on the prevalence of depression among university students, which reported that approximately 30% of this population had experienced depressive symptoms (Ibrahim, Kelly, Adams & Glazebrook, 2013). Crucially, there is also evidence to suggest that depression is highly prevalent among Irish adolescents. For example, Lynch et al. (2004) surveyed approximately 720 Irish adolescents and reported that approximately 4.5% of these 12-15 year olds suffered from depression. Furthermore, Martin et al. (2006) found that 10% of the Irish adolescents sampled showed evidence of suicide ideation and 7% had already engaged in deliberate self-harming behaviours. These high prevalence rates are particularly worrying given the devastating effects that depression can have on adolescents' health and psychological well-being.

2.3.2 Impact of Depression on Adolescents' Well-Being Mental health problems exert a monumental impact on the lives of adolescents who are affected by these psychiatric symptoms, with research showing that mental illness can impact on an array of physical, psychological and social outcomes. Adolescent depression, like the depression of adults, can encompass a spectrum of symptoms, ranging from mild/moderate depressive episodes to the severe physical, psychological and emotional impairments associated with clinical depression (Bansal, Goyal, & Srivastava, 2009). Research has shown that depression can lead to suffering and disability among adolescents and causes serious long-term consequences which can follow adolescents across their lifespan (Sund, Larsson & Wichstrom, 2011). For

example, severe cases of depression are often found to be associated with negative feelings of hopelessness, worthlessness and guilt, which can lead to individuals engaging in risky or self-harming behaviours (Emerton, 2010). In fact, adolescent depression is cited as the single strongest risk factor for both attempted and completed suicides (Reavley & Jorm, 2011). According to Stolberg, Clark and Bongar (2002) depression is associated with a 30-fold increased risk of completed suicide, with suicide currently being reported as the third leading cause of death among adolescents, after accidents and homicide (WHO, 2014; Center for Disease Control & prevention [CDC], 2015). Additionally, adolescents who have experienced at least one depressive episode are significantly more likely to experience a range of other mental health issues, including anxiety disorders, antisocial behaviour, and recurrent depression (Weissmann et al., 1999). Furthermore, other research has shown that there is also a strong relationship between depression and other health concerns among young people, including substance misuse, violence, increased hospitalisations, smoking, unhealthy eating, infrequent exercise, reproductive problems and sexual health issues (Bansal et al., 2009; Dooley & Fitzgerald, 2012; Franko, Striegel-Moore, Thompson, Schreiber & Daniels 2005; Lewinsohn et al., 1998). Thus, depression is now considered to be a major burden of disease among young people (Burns & Rapee, 2006).

Importantly, there is also now a sizeable body of literature to suggest that adolescent depression consistently impacts on other areas of adolescents' normal development and psychological well-being. An array of national and international research indicates that depression is associated with a wide range of adverse social and psychological outcomes. For example, in Ireland, the 'My World Survey' (2012) found that mental health problems, such as depression, were linked with lower academic achievement and lower self-efficacy in young people. Similar findings have been consistently replicated in other international studies, which have found links between adolescent depression and lower academic achievement, poorer psychosocial functioning and impaired family relations (Bansal et al, 2006; Fergusson & Woodward, 2002).

2.3.3 Detrimental Impact of Stigma on Adolescents' Well-Being As documented above, experiencing mental health difficulties can exert a profound impact on adolescents' normal development, affecting their ability to function at home, at school, and in the wider community (Swords et al., 2011). However, despite its association with a wide array of negative physical and psychological outcomes, research has shown that over two-thirds of adolescents who require mental health services do not receive treatment or engage in

appropriate help-seeking behaviours (Chandra and Minkowitz, 2007; Polanczyk et al., 2015). For example, Essau (2005) conducted a large study of 12 to 17 year old adolescents which revealed that only 23% of those with depressive disorders had sought help from mental health services. In fact, Kessler et al. (2005) noted that despite the high prevalence of mental disorders among adolescents generally, this age group is one of the least likely to seek help. One of the most frequently cited explanations as to why teens do not seek appropriate help or contact the recommended services is due to the social stigma that can often accompany a mental health diagnosis (Gulliver, Griffiths & Christensen, 2010).

Research indicates that adolescents commonly associate the need for mental health treatment as a sign that someone is ‘bad’, ‘crazy’ or ‘defective’ in some manner (Kranke, Floresch, Townsend & Munson, 2009; Rappaport & Chubinsky, 2000). Other research shows that stigma causes feelings of embarrassment and shame in those adolescents who experience mental health difficulties (Kranke, Guade, Kranke & Floresch, 2012; Moses, 2009). Similarly, children who experience mental health problems are often excluded or ostracised by their peer group and tend to report poorer levels of social support (Moses, 2010; Walker et al., 2008). Several studies have documented that adolescents, who experience mental health problems, also appear to have difficulty integrating in school settings and worry about being different from their peers (Chandra & Minkowitz, 2007; Kranke et al., 2010; Leavey, 2009; Pescosolido, Perry, Martin, McLeod, & Jensen 2007). Studies show that adolescents fear disclosing their disorders to peers and others in their social networks due to the anticipated social rejection (Gulliver et al., 2010; Watson, Kelly & Vidalon, 2009). In fact, research has revealed that one of the most pertinent issues for adolescents experiencing mental health difficulties are these concerns about peer acceptance (Kranke et al., 2010).

2.4 Overview of Findings from the Literature on Public Mental Health Stigma

Research investigating how the public respond toward people with mental health disorders shows that stigma responses may vary dramatically depending on the type of mental health condition being investigated (Corrigan, 2000; Hinshaw, 2005; O’Driscoll et al., 2012; Weiss et al., 2006). For example, individuals have been found to express a greater desire for social distance from people with schizophrenia and drug dependency than toward people with depression (Parcesepe & Cabassa, 2013). Additionally, Walker et al. (2008) found that adolescents viewed a child with depression as being lazier than a child with ADHD. Hence, it is now strongly recommended that researchers investigating public stigma

should investigate how individuals respond toward people with specific mental health disorders (Hinshaw, 2005; Stier & Hinshaw, 2007). Due to the high prevalence of depression among adolescents and the array of severe, negative consequences associated with this disorder, research that focuses on gaining a greater understanding of the stigmatisation of depression among adolescents may have important benefits (Polanczyk et al., 2015).

2.4.1 Summary of Findings from the Adult Mental Health Stigma Literature

Within the adult literature there is a large body of evidence documenting the pervasive nature of public mental health stigma in western society. Decades of research has established that the public consistently express negative responses toward individuals who experience mental health problems, such as depression (Corrigan et al., 2003; Martin, Pescosolido, Olafsdottir, & McLeod, 2007; Mukolo & Heflinger, 2011; Sartorius, 2002). Specifically, research has indicated that the public tend to endorse negative stereotypes about people with depression, expressing beliefs that these individuals are ‘unpredictable’, ‘lazy’, ‘incompetent’, ‘unstable’ or ‘hard to talk to’ (Angermeyer, Matschinger & Corrigan, 2004; Crisp, Gelder, Rix, Meltzer & Rowlands, 2000; Griffiths et al., 2006; Martin et al., 2007; Parcesepe & Cabassa, 2013; Perry, Pescosolido, Martin, McLeod & Jensen, 2007; Roehrig & McLean, 2009). There is also evidence to suggest that the public typically regard individuals with mental health difficulties as being dangerous (Griffiths et al., 2006; Parcesepe & Cabassa, 2013). Crucially, research indicates that although the public may believe that individuals with depression are less dangerous than individuals with other mental health disorder, such as schizophrenia (Angermeyer et al., 2004; Crisp et al., 2000; Peluso & Blay, 2009), they still regard these individuals as being more dangerous than people with health conditions, such as asthma, or people who experience other ‘normal issues’ (Martin, Pescosolido & Tuch, 2000; Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007). Furthermore, beliefs that mental health issues are a sign of ‘personal weakness’, and are ‘shameful’, also appear dominant among the public (Griffiths et al., 2006; Parcesepe & Cabassa, 2013). A study by Barney, Griffiths, Christensen and Jorm (2009) found that individuals with a personal history of depression reported experiencing blame and felt that others often held them responsible for their own condition.

Additionally, research indicates that adults tend to express an array of prejudicial reactions toward people with mental health problems (Angermeyer & Matschinger, 2003; Corrigan et al., 2001). Research suggests that although the public often express pity and other related emotions, such as empathy and a desire to help, toward people with depression

(Angermeyer & Matschinger, 2004; Peluso & Blay, 2009), they also tend to express other more negative emotional responses toward these individuals. For example, feelings of uneasiness, fear, irritation and anger are some commonly expressed emotional reactions toward individuals with depression (Angermeyer & Dietrich, 2006; Corrigan et al., 2003; Peluso & Blay, 2009). There also appears to be a consistent, observable tendency for people to exclude or distance themselves from individuals with mental health problems (Corrigan et al., 2002; Jorm, 2000; Link et al., 1999; Parcesepe & Cabassa, 2013; Pescosolido, Monahan, Link, Stueve & Kikuzawa, 1999; Martin, et al., 2000). Research shows that individuals who experience mental health difficulties often encounter significant barriers in their pursuit of vocational, housing, healthcare and friendship goals (Corrigan et al., 2012). Importantly, research shows that the public tend to express a desire for social distance from people with depression, in a variety of social domains (Link et al., 1999; Martin et al., 2007; Mukolo & Heflinger, 2011; Pescosolido, Fettes et al., 2007). For instance, research by Martin et al. (2000) and Link et al. (1999) reported that respondents expressed a greater desire for social distance from individuals with depression than individuals with asthma or normal issues, with approximately 38-47% of the overall sample endorsing the desire for social distance from individuals with depression.

Overall, research suggests that stigmatising responses toward people with depression are prevalent among the general adult public (Barney et al., 2009; Griffiths et al., 2006; Martin et al., 2000; Parcesepe & Cabassa, 2013; Perry et al., 2007). Crucially, findings from a number of recent reviews indicate, that despite a significant increase in anti-stigma efforts over the last three decades, public attitudes toward people with mental health issues, including depression, have not improved (Angermeyer, Matschinger, Carta & Schomerus, 2014; Pescosolido et al., 2010). However, the majority of these investigations were conducted with adults and it is important that research also independently explores the type of stigmatising responses that adolescents direct toward people with mental health difficulties.

2.4.2 Summary of Findings from the Adolescent Mental Health Stigma

Literature Until recently, research into the stigmatisation of mental illness had focused primarily on examining this construct in adult populations and as a result comparatively less is known about how adolescents stigmatise people with mental health disorders (Heflinger, Wallston, Mukolo & Brannan, 2014; Lovett, Tamkin & Fletcher, 2011; Parcesepe & Cabassa, 2013; Wahl et al., 2012). However, there is now a growing literature base which suggests that children and adolescents may also demonstrate negative, stigmatising responses toward

people with mental health disorders, including depression (Ng & Chan, 2000; Schulze et al., 2003; Spitzer & Cameron, 1995; Watson, Miller & Lyons, 2005). For instance, Wahl (2002) conducted a review of the child and adolescent literature. Although the studies reviewed involved different methodologies and age groups, overall, Wahl (2002) concluded that negative attitudes toward mental illness are already evident in very young children. More recently, Wahl, Susin, Lax, Kaplan and Zatina (2014) found that adolescents showed considerable reluctance to interact closely with a person with a mental health disorder. For example, although the majority (62%) of adolescents expressed willingness to meet someone with a mental illness, less than half (42%) indicated a willingness to invite someone with mental illness to their home or to work on a class project with someone with a mental health problem (41%). Adler and Wahl (1998) carried out a study which found that elementary school children displayed more negative attitudes toward people with mental illness than toward people with physical impairments or non-disabled individuals. Furthermore, Rose, Thornicroft, Pinfold and Kassam (2007) investigated how adolescents (14-year olds) in the UK think about people with mental health problems. This study reported that young people use an overwhelming amount of negative connotations (75% of the most popular words and themes) to describe people with mental health difficulties (Rose et al., 2007).

Given the growing influence of the peer group during adolescence and the significant developmental implications associated with peer acceptance (Deater-Deckard, 2001; Wahl et al., 2012), researchers argue that investigations on how adolescents respond to their peers with mental health problems are particularly important (Lovett et al., 2011). On this note, Corrigan et al. (2005b) found that adolescents endorsed significantly more stigmatising responses toward their peers with mental health problems than toward peers with physical health conditions (e.g. leukaemia). Adolescents in this study rated the teen with 'mental illness' as being more dangerous, more likely to be feared, more likely to be excluded and less likely to be helped than the peer with leukaemia (Corrigan et al., 2005b). Faulkner, Irving, Paglia-Boak and Adlaf (2010) found that over 60% of Canadian secondary school students would feel uncomfortable being in the same class as someone with a serious mental illness. Other research has also indicated that children and adolescents with mental health problems are commonly regarded as being less popular than their peers and are more likely to experience weaker levels of social support (Juvonen, 1991; Moses, 2010). For instance, Bagwell, Molina, Pelham and Hoza (2001) observed that adolescents with externalising mental health conditions (e.g., attention deficit/hyperactivity disorder; ADHD) have fewer

close friends and experience greater levels of peer rejection than typically developing peers. In fact, numerous researchers have found that a large percentage of children and adolescents with mental health issues experience difficulties in their peer relationships and are frequently rejected from their peer groups (Hay, Payne & Chadwick, 2004; Hoza et al., 2005; Mikami & Normand, 2015).

Research examining how adolescents respond toward their peers with depression is more limited; however, the existing evidence suggests that stigmatising responses toward these peers are also common among adolescents. For example, a study by O'Driscoll et al. (2012) revealed that both children and adolescents expressed more negative stereotypes, higher levels of prejudice and lower intentions to interact with their peers with depression, in comparison to typically developing peers. Specifically, children and adolescents regarded their peers with depression as being more dangerous than their typically developing peers; expressed more fear and anger toward their peers with depression; and exhibited a greater desire for (physical and relational) social distance from these peers (O'Driscoll et al., 2012). Similarly, Walker et al. (2008) found that, although adolescents did not endorse overly negative responses, adolescents viewed their peers with depression as being significantly more likely to be violent than their peers with asthma; perceived these peers as being more lazy, and expressed a greater desire for social distance from their peers with depression (Walker et al., 2008). Notably, research by Moses (2010) found that 62% of adolescents who had personally experienced symptoms of depression also reported being stigmatised by their peers. In addition, Rudolph, Hammen and Burge (1994) found that children with mood and anxiety disorders reported more peer and social problems than healthy children. Furthermore, a review by Platt, Kadosh and Lau (2013) also noted that adolescents with depression were more likely to be rejected by their peers.

Overall, research indicates that public stigma toward depression appears to be a cause for concern among adolescents. Research has shown that a large portion of adolescents evidence stigmatising responses toward their peers who experience mental health difficulties, such as depression; whereby ostracism, teasing and other forms of social rejection are commonly observed consequences (Moses, 2010; Quinn & Chaudoir, 2009; Walker et al., 2008). These persistent experiences of stigmatisation can result in a devalued sense of self and lower self-esteem among those children and adolescents who are affected by mental health problems (Link & Phelan, 2014; Visser et al., 2009). Notably, the public stigma associated with mental illness has been cited as a leading cause of concern for people who

experience mental health problems (Griffiths, Christensen & Jorm, 2008; Moses, 2010). Given the detrimental effects that stigma can exert on adolescents' developmental well-being, quality of life and help seeking intentions, researchers contend that it is important to conduct research aimed at establishing a greater understanding of the factors that shape the expression of stigma and design successful interventions to reduce mental health stigma (Calear, Griffiths & Christensen, 2011; Lovett et al., 2011). However, before researchers can design successful intervention strategies, the methodological limitations, associated with the way in which stigma is conceptualised and operationalised, need to be addressed.

2.5 Limitations Associated with the Measurement of Mental Health Stigma in Adolescents

Although research into the area of adolescent mental health stigma has been identified as an important topic of research (NIMH, 2010; WHO, 2013), advancements in knowledge in this area are hindered by several limitations associated with the way in which stigma is conceptualised and measured among adolescents. First, as already discussed, the tripartite conceptualisation of mental health stigma proposes that stigma is comprised of three separate constructs; Stereotypes, Prejudice and Discrimination (Corrigan & Watson, 2002; Hinshaw, 2005). Although this conceptual model is frequently endorsed in the mental health stigma literature (O'Driscoll et al., 2012; McKeague et al., 2015; Munoz et al., 2011; Rusch et al., 2005), no research has evaluated the empirical support for this conceptual model among adolescents. Researchers such as Link, Yang, Phelan and Collins (2004) have stated that in order to advance the scientific understanding of stigma researchers need to observe and measure how this social phenomenon occurs. Corrigan (2000) suggests that applying the tripartite theory to research on mental illness stigma provides numerous advantages to the field; not only does this theory provide researchers with a conceptual framework for understanding stigma, but it also enables researchers to employ rigorous assessments of the construct. Researchers argue that the current lack of empirical investigation into the structure of stigma among adolescents represents a serious limitation of the research base and that researchers investigating adolescent mental health stigma need to formulate a greater understanding of the separate stigma dimensions (Earnshaw & Chaudoir, 2009; Rusch et al., 2005).

Research into the area of mental health stigma in adolescents is also limited by the observed discrepancy in the way in which stigma has been operationalised across the various

studies in this area (Dixon, Murray & Daiches, 2012). To elucidate, although the tripartite model proposes that stigma is composed of the three dimensions; stereotypes, prejudice and discrimination, a review of the research investigating mental health stigma reveals that studies including assessments of all three psychological components are rare (McKeague et al., 2015). For example, Law, Sinclair and Fraser (2007) investigated how children stigmatised their peers with ADHD but only assessed children's attitudes and behavioural intentions toward the targets. Walker et al. (2008) investigated adolescents' stigmatising responses toward their peers with ADHD and depression but only assessed their stereotypic and discriminatory responses. Schulze et al. (2003) carried out a study which aimed at reducing stigma toward people with schizophrenia in adolescents. Although this study measured reductions in both negative stereotypes and social distance, the researchers also did not include any assessments of prejudice. Likewise, Murman et al. (2014) assessed adolescents' responses toward their mentally ill peers but only included assessments of attitudes and discriminatory intentions. Moreover, a study by Yamaguchi, Ling, Kim and Mino (2014) which reportedly assessed Japanese adolescents' stigmatising responses toward people with mental health problems, measured desire for social distance as a proxy measure of behavioural discrimination but did not include any assessments of stereotypes or prejudice. This lack of consistency in the measurement and operationalisation of mental health stigma in adolescents is readily illustrated in countless other research studies (Moses, 2010; Pejovic-Milovancevic et al., 2009; Pinfold et al., 2003; Yamaguchi et al., 2011).

The huge variability in the way in which stigma is operationalised makes it difficult to synthesise and compare findings across the different stigma studies (Dixon et al., 2012; O'Driscoll et al., 2012). Furthermore, it is argued that the lack of focus on all three psychological components of stigma could potentially hinder the advancement of research aimed at understanding and reducing stigma (Breshnan & Zhuang, 2010; Hinshaw, 2005). Researchers have proposed that if stereotypes, prejudice and discrimination represent separate psychological components, factors that influence the expression or maintenance of one component may not affect another component (Earnshaw & Chaudoir, 2009; Hinshaw, 2007; Jorm & Wright, 2008). Thus, it is important that research investigating stigma includes measurements of all three psychological dimensions.

Additionally, despite the importance of adolescence in the development of attitudes toward people with mental illness, validated assessments for use with this age group have been slow to emerge (Wahl et al., 2012). Within the adult literature, there are several

standardised measurements widely available that researchers can use to assess individuals' stigmatising responses toward people with mental health problems (Corrigan et al., 2003; Pinto et al., 2012). Conversely, only a paucity of measures have been validated to assess stigma among children and adolescents (Link et al., 2004; Pinto et al., 2012; 2014; Wahl et al., 2012). When assessing stigma among this age group researchers have typically tended to rely on instruments that have been developed for use with adult populations and implement them in a child or adolescent context. The problem with this method is the associated underlining assumption that knowledge about adult mental health stigma, and the tools used to assess this construct, are transferrable to and informative about the stigma expressed by children and adolescents (Mukolo et al. 2010). This method is criticised as there is evidence to suggest that the findings and measurements of adult mental health stigma may not necessarily be generalisable to children and adolescents (Hinshaw, 2005; Pescosolido et al., 2007; Mukolo et al., 2010).

For example, the revised-Attribution Questionnaire (r-AQ; Corrigan et al., 2005a; Watson et al., 2004) is a commonly used measure of public mental health stigma. Although the r-AQ has been frequently used among adolescent populations (Corrigan et al., 2005a; O'Driscoll et al., 2012), psychometric evaluations of the validity of this scale for use with adolescents is limited. In fact, it was not until 2012 that a study by Pinto and colleagues directly examined the validity of this scale as a measure of stigma among adolescents. Although these researchers concluded that the scale evidenced good reliability and validity amongst an adolescent age group, the authors needed to make several modifications to the original measure (Pinto et al., 2012). Thus, it cannot be presumed that instruments that are valid or reliable among adults will also be valid and reliable among adolescents. This lack of psychometrically sound measures has been identified as a major limitation of the child and adolescent stigma area (Brohan, Elgie, Sartorius, Thornicroft & GAMIAN-Europe Study Group, 2010; Pinto et al., 2014; Wahl et al., 2014). Hence, it is now acknowledged that if the stigma associated with mental health problems in children and adolescents is to be better understood then more psychometrically sound instruments for its measurement are needed (Brohan et al. 2010; Link et al., 2004; McKeague et al., 2015; Murman et al., 2014; Pinto et al., 2014).

2.6 Conclusions

Adolescence is a period characterised by intensive physical and emotional changes (Crockett, 1997; Pejovic-Milovancevic et al., 2009). During this period of life, young people appear to be highly influenced by the opinions of their peers and acceptance by the peer group appears to exert strong effects on adolescents' emotional and developmental well-being (Goldbeck et al., 2007). However, research has repeatedly suggested that adolescents who experience mental health problems can be stigmatised by their peer-group and may face peer rejection (O'Driscoll et al., 2012; Law et al., 2004; Walker et al., 2008). The prevalence of public stigma surrounding mental health has been found to lead to a host of egregious effects on adolescents' well-being, including loss of self-esteem and reluctance to seek help resources (Murman et al., 2014). Given that adolescence marks a key period in the onset of mental health disorders and that stigmatising tendencies have been found to worsen and may begin to solidify during this period, establishments such as the U.S. Surgeon General (1999), the U.S. National Institute of Mental Health and the World Health Organisation (2013; 2014) have all identified the reduction of mental illness stigma among adolescents as a priority area for future research.

Although the reduction of mental health stigma has been identified as a key health goal, researchers have proposed that in order for anti-stigma strategies to be effective they should be informed by scientific research evidence and theory. However, instruments that propose to measure stigma in adolescents have limited evidence to support their reliability and validity (Link et al., 2004; Pinto et al., 2012). Additionally, although stigma is widely conceptualised as being composed of three inter-related dimensions; stereotypes, prejudice and discrimination (Corrigan & Watson, 2002; Rusch et al., 2005), no research has yet assessed the validity of this tripartite model among adolescents. Moreover, an examination of the research base appears to indicate that there is also a dearth of research that assesses stigma by incorporating measures of all three proposed psychological components (Moses, 2010; Pejovic-Milovancevic et al., 2009; Pinfold et al., 2003; Walker et al., 2008). Thus, it is now strongly contended that the current research and theoretical models need to be improved in order for researchers to be able to more adequately assess the stigmatisation of children and adolescents with mental health problems, such as depression, and tackle pressing issues (Mukolo et al., 2010). Hence, the current study attempts to address some of the methodological limitations detailed above, by empirically testing the tripartite conceptualisation of stigma outlined by Corrigan and Watson (2002), and establishing a valid

and reliable measurement model of mental illness stigma among adolescents. Specifically, following the recommendations that stigma research should focus on assessing responses toward people with specific mental health conditions (Stier & Hinshaw, 2007; Weiss et al, 2006), this research will focus on assessing adolescents' responses toward peers with depression.

2.7 Research Aims and Objectives

The current study has several important research aims and objectives. Generally, the overall aim of this study is to evaluate the latent factor structure of measures used to assess public stigma among an adolescent sample and to use this observed factor structure to explore the validity of the tripartite model of stigma. In order to achieve these aims it is necessary to split this study into two components, which will be referred to as Study 1A and Study 1B.

Study 1A aims to explore the validity and reliability of a selection of measures, assessing adolescents' stigmatising responses toward peers with depression. The main objective of this study is to employ an Exploratory Factor Analysis (EFA) technique to investigate the most parsimonious factor structure of these measures among an adolescent sample and to assess the reliability and validity of the observed factor model.

The aim of Study 1B is two-fold: First, this study aims to re-evaluate the validity of the factor structure observed in Study 1A in a separate group of adolescents. Second, this study aims to investigate whether this measurement model empirically supports the tripartite conceptualisation of stigma. Specifically, Study 1B will employ Confirmatory Factor Analyses (CFA) to further examine the factor structure of the stigma model which emerged from Study 1A. Next, higher-order CFAs will be conducted to empirically explore whether the observed measurement model fits the conceptual construction of stigma (i.e. Stereotypes, Prejudice and Discrimination).

Chapter 3

Study 1(A & B) Method

3.1 Aim of Chapter

The aim of this chapter is to illustrate the research design and methodological features of Study 1 (A & B). This chapter will describe the measures and procedure that were utilised to assess adolescents' stigmatising responses toward their (hypothetical) peers with depression. The main ethical considerations pertinent to this study will also be discussed. The chapter will conclude by detailing the statistical approaches taken to analysing the data.

3.2 Participants

Overall, a total of 646 adolescents (227 males and 418 females; 1 non-specified) participated in this study. Participants ranged in age between 13 and 18 years ($M = 15.49$, $SD = 1.14$; 8 non-specified). All participants were secondary school (2nd, 4th or 5th year) students attending schools located within the West of Ireland as selected from the Department of Education & Skills webpage. Participants were recruited from a total of sixteen separate secondary schools. All participants supplied written parental consent as well as verbal assent to participate in this study. Adolescents in the selected schools who did not provide parental consent, verbal assent or did not demonstrate sufficient language proficiency were excluded from the research. A total of 381 (112 male and 269 female) adolescents participated in the EFA component of the study (Study 1A). These adolescents ranged in age between 13 and 18 years ($M = 15.09$, $SD = 1.21$). A separate 265 (115 male and 149 female; 1 unspecified) adolescents participated in the CFA component of the study (Study 1B). These participants ranged in age between 14 and 18 years ($M = 16.06$, $SD = .69$).

3.3 Measures

3.3.1 Use of Vignettes The use of vignettes as a methodological tool in psychological research involves presenting individuals with a brief, descriptive extract of a person or incident which is used to elicit opinions and reactions from these individuals (Schoenberg & Ravdal, 2000; Morrison, Stettler & Anderson, 2004). Vignettes are a commonly used tool to assess individuals' attitudes toward socially sensitive topics (Schoenberg & Ravdal, 2000) and have been utilised by many researchers as a means of assessing children and adolescents' responses toward people with mental health difficulties (Burns & Rapee, 2006; O'Driscoll et al., 2012; Reavley & Jorm, 2011; Walker et al., 2008). Within the mental health domain, vignettes are viewed as possessing several methodological advantages over other approaches.

For example, they enable the researcher to avoid potential ethical issues involved with asking adolescents to respond to real peers or individuals. Moreover, vignettes are beneficial as they can be used to assess the responses of children and adolescents who do not have contact with persons with mental health problems (Finch, 1987; Munoz et al., 2011). Additionally, vignettes provide researchers with a means of establishing a similar contextual framework through which attitudes and responses can be assessed. However, it is important to note that although vignettes are intended to act as a proxy description of a ‘real-life’ person, it is not conclusive how generalisable the elicited responses actually are to similar real-life peers or settings (Schoenberg & Ravdal, 2000). Hence, some caution must be expressed when interpreting or generalising findings obtained from vignette based studies.

Selection and Development of the Vignettes The vignette employed in the current study provided a brief description of an age-matched hypothetical peer displaying behavioural characteristics of depression. Two versions of this vignette were employed; one depicted a male peer while the other vignette depicted a female peer. Both vignettes were identical apart from the gender of the target character. No diagnostic labels accompanied the vignette. The behavioural description provided in this study was based on vignettes that had been incorporated in similar research studies (O’Driscoll et al., 2012; Swords et al., 2011). While these original vignettes had received validation by clinical psychologists a review of the content of the behavioural description highlighted several methodological issues, which the current study wished to address. First, it was noted that neither the vignette employed by Swords et al. (2011) nor O’Driscoll et al. (2012) made reference to the time in which the target had been experiencing the behavioural characteristics of depression. This study modified the original vignette in order to specify that the behaviour exhibited by the vignette target had been present for an extended period of time, as per the DSM-VI diagnostic criteria (Carr, 2004). Additionally, in order to increase the ecological validity of the vignette, the content of the vignette was expanded in order to ensure that the vignette did not focus solely on diagnostic information. See Appendix A for a comparison of the original and adapted vignette.

Validation of Vignettes In order to ensure that the vignette employed in the current study contained an accurate description of an adolescent with depression, a selection of qualified clinical psychologists, and trainee clinical psychologists, from the National University of Ireland, Galway and Trinity College Dublin, were asked to assess the internal validity of this vignette. All potential participants were emailed a cover letter which provided

a general overview of the research aims (see Appendix B) as well as the validation questionnaire (see Appendix C). Reviewers were randomly assigned to read vignettes about either male or female targets. The questionnaire instructed reviewers to read the vignettes and to identify whether the adolescent described in each vignette met the criteria for a clinical diagnosis and, if so, to reference which diagnosis they would provide. Reviewers were also asked to indicate how accurate they believed the vignette to be in describing an adolescent with such a diagnosis. Reviewers indicated the accuracy of the description on a 7-point Likert-type scale ranging from 1 'Very Inaccurate Description' to 7 'Very Accurate Description'. Specific feedback on the strengths and limitations of each vignette was also requested from each reviewer. In total, eleven clinical trainees and psychologists agreed to participate in this validation process and returned completed validation forms. Seven female vignettes and four male vignette forms were returned.

Feedback results indicated that a diagnosis of low mood/depression was queried by each reviewer with a mean accuracy rating of 4.82. Overall, feedback in relation to the portrayal of the vignette character was largely positive with the majority of reviewers noting that the vignette described a broad range of symptoms and appeared to be a good representation of an adolescent with depression. The main limitation identified by most reviewers was that the vignette focused predominantly on observable symptoms of depression and failed to provide any information on precipitating factors. It was also noted by one reviewer that the vignette appeared to have been written from a 'clinical perspective' and as such may be 'too clear to be true'. Additionally, two reviewers suggested that it may be beneficial to focus on some less well known symptoms of depression, such as 'irritability'. A number of reviewers also remarked that the length of time the character had been experiencing symptoms was ambiguous and recommended that symptoms should be experienced over a longer period of time.

Vignette Employed in the Present Study All comments and suggestions made by reviewers were appraised and taken under consideration. Although a number of reviewers commented that the lack of information on precipitating factors acted as a drawback by hindering the provision of a diagnosis for the vignette character, a decision was made to leave out any information on precipitating factors. This was done in order to ensure that the vignette provided a behavioural description of an adolescent exhibiting signs of depression, as could be observed by peers in school in a real-life setting. It was the view that not

disclosing information on precipitating factors would increase ecological validity as this information may not be readily available to peers in a real-life setting.

Some minor refinements were made to the vignette based on the comments returned by the reviewers. For example, the length of time the character had been experiencing depressive symptoms was increased and other minute changes were made to the type of depressive symptoms the character was displaying. For example, an effort was made to reduce the ‘clinical focus’ of the vignette and to include more unusual symptoms, such as irritability, as was recommended by reviewers. The vignette that was employed in the current study is as follows:

Michael/Michelle

Michael is in the same year as you. He used to enjoy lots of hobbies, such as hanging out with his friends and playing football for his local team. Although Michael sometimes complained about how much time the team had to spend training, he was usually quite good at turning up for practice. A few months ago, Michael started missing a lot of training sessions and has since stopped coming altogether. Over this time, Michael’s friends have noticed a change in him, in that he doesn’t seem to be interested in doing things with them anymore as he no longer makes an effort to hang out with them or talk to them online. Some of Michael’s close friends have also noticed that he seems more irritable lately and doesn’t smile, or laugh, or appear to find as much enjoyment in things as he used to. Michael has also started to experience some problems at school. Over the past six weeks or so, Michael has been constantly late for school and has started to fall behind on his school work. When the head teacher asked Michael about this, he said that he has been finding it extremely difficult to get to sleep at night and feels tired all the time. Michael explained that although he would like to do better in school, he just couldn’t concentrate on things or think as well as he used to. Michael said that he just feels ‘down’ all the time now and doesn’t think that he is good at anything anymore.

3.3.2 Stigma Stigma was evaluated using an array of different measures aimed at assessing stereotypes, prejudice and discrimination. Measures were selected through an extensive literature search within the social and developmental psychology and the mental health service literature, and were drawn from studies that had previously attempted to measure these ‘stigma’ constructs in child or adult populations.

Stereotypes In order to provide a diverse selection of the potential stereotypes that adolescents may hold toward a peer with depression a number of different tools were selected in order to represent this construct. Given the recommendations of researchers such as Rutland, Cameron, Milne and McGeorge (2005) that young people may be more inclined to show biases through a lack of positive judgements rather than an endorsement of negative bias, the measures employed here were selected in order to capture an array of both positive and negative potential stereotypes.

Previous research examining mental health stigma in adults has found that individuals experiencing mental health problems are often perceived as being more helpless and more dangerous than the general population (Teachman et al., 2006). In order to assess whether adolescents also associated their peers with depression with these stereotypes, perceptions of Dangerousness and Helplessness were measured using the Angermeyer and Matschinger (2003) scale, which was developed for use with adults. The Dangerousness scale consists of 6-items and the Helplessness scale consists of 3-items. Participants indicate their responses to each item on a 5-point Likert-type scale (e.g. 1 = Definitely Not True, 5 = Definitely True). The Dangerousness scale ranges from 6-30 and the Helplessness scale ranges from 3-15. Higher scores on both sub-scales indicate higher endorsements of these negative stereotypes. Angermeyer and Matschinger (2003) reported good reliability for both the Dangerousness ($\alpha=.88$) and Helplessness ($\alpha=.60$) scales. For Study 1A an alpha coefficient of $\alpha=.73$ was observed for the Dangerousness scale and an alpha coefficient of $\alpha=.61$ was found for the Helplessness scale.

In addition, the literature is replete with findings suggesting that people tend to hold individuals with mental illness personally responsible for their behaviour (Corrgian & Watson, 2007). Perceptions of Responsibility were measured using 3-items assessing personal responsibility and 1-item assessing perceived volition (Swords et al., 2011). Responses are recorded on a four point scale, 1= Agree A Lot, 2 = Agree A Little, 3 = Disagree A Little, 4 = Disagree A Lot. Responses are reversed scored so that higher scores represent higher endorsements of responsibility. These 4-items were developed by Swords et al. (2011) to assess children and adolescents' stereotypes toward their peers with mental health issues and were found to have adequate reliability ($\alpha=.69$; Swords et al., 2011). Scale reliability of .82 was observed in Study 1A.

Numerous studies examining social perceptions have also contended that perceptions of warmth and competence are two fundamental dimensions of human social cognition (Cuddy, Fiske & Glick, 2008; Fiske, Cuddy & Glick, 2007; Rosenberg et al., 1968). Generally, individuals who are perceived as being higher in warmth and competency are also more liked or more included (Cuddy et al., 2008). Independent lines of research investigating stereotypes associated with specific social groups have implicated warmth and competence as central dimensions (Fiske et al., 2007). For example, negative stereotypes evidenced toward older adults (Cuddy & Fiske, 2002), racial minorities (Lin et al., 2005) and people with mental health difficulties have been linked to low endorsements of these dimensions (Kaye, 2012; Sadler, Meagor & Kaye, 2012). These measures are popular within the social perception literature because they provide a balance of assessments and allow researchers to investigate both positive and negative stereotypes. For these reasons, these dimensions were included as a measure of stigma in the current study. Perceptions of Warmth and Competence in the current study were measured using an adapted version of the *Warmth* (4-items) and *Competence* (4-items) sub-scales, which were developed for use with adults by Fiske et al. (2002). Both the Warmth ($\alpha=.86$) and Competence ($\alpha=.89$) scales have previously been shown to possess good internal consistency (Sadler et al., 2012). Participants endorsed these stereotypes by indicating their responses on a 5-point Likert-type scale, from 1 (Not at All) to 5 (Extremely). Responses can range from 8 to 40. Items are reversed scored so that higher scores represent lower levels of perceived warmth or competency which are indicative of more negative responses. For the current study the response option was changed from ‘most American’s/people in society believe’ to ‘I believe’. Study1A reported reliability of .80 and .84, for the warmth and competence scales, respectively.

According to Greenwald and Banaji (1995), attitudes form an important aspect of social cognition. One of the most widely implored techniques used by researchers to assess general attitudes toward out-groups is through the use of semantic differential scales. Rather than assessing a particular belief or stereotype these measures are more a reflection of globally held bias toward particular groups. For the current study, these general attitudes were assessed using the semantic differential scales employed by Teachman et al. (2006). The scale consisted of four bipolar adjectives, with each adjective pair anchoring a 5-point rating scale (e.g. 1 = Awful, 5 = Great). The four adjective pairs are as follows; Terrible/Excellent, Horrible/Wonderful, Nasty/Joyful, Awful/Great. Higher scores for each adjective pair indicate more a negative attitude toward the target. Teachman et al. (2006)

developed this measure to demonstrate that adults show higher endorsements of negative attributes toward an individual with mental health difficulties than toward an individual with physical disabilities. Cronbach's alpha for the scale in study 1A was found to be .81.

Prejudice Prejudicial responses toward the vignette character were assessed using the Emotional Reactions scale employed by Angermeyer and Matschinger (2003), which is one of the most widely used measures assessing prejudicial reactions toward people with mental health issues. This scale consists of three sub-scales; Fear (4-items), Pity (3-items) and Anger (4-item) and was developed for use with adults. Each sub-scale is scored on a 5-point Likert type scale ranging from 1 (Definitely the case) to 5 (Definitely not the case). Items are reversed scored so that higher ratings reflect more negative responses and higher endorsements of each of the prejudicial components. Angermeyer & Matschinger (2003) reported good reliability for each subscale; $\alpha=.79$ for fear, $\alpha=.74$ for pity and $\alpha=.77$ for anger. For Study 1a, reliability estimates were as follows; $\alpha=.82$ for fear, $\alpha=.64$ for pity and $\alpha=.78$ for anger.

Prejudice was also measured by asking participants to indicate the extent to which they liked each target by responding to a single item and rating their degree of liking for the target on a 7-point bipolar scale, ranging from 1 *Not At All* to 7 *Very Much*. Items were reversed scored so that higher scores reflected less liking of the target character. Similar Liking items have been used in previous research to assess the extent to which children and adolescents like numerous different peers or social groups (Nesdale et al., 2005; Wortman & Wood, 2011).

Discrimination Adolescents' discrimination or behavioural intentions toward the vignette target was assessed using the Friendship Activity Scale (FAS; Siperstein, 1980). The FAS is a 21-item scale that assesses children and adolescents' intentions of engaging in different types of behaviours with a particular peer. These behaviours can be conceptually grouped into: Helping Behaviours (e.g. I would defend X), Sharing Behaviours (e.g. I would lend X a pencil or a pen), Physical Proximity (e.g. I would sit next to X in class), Common Activities (e.g. I would talk to X in class during free time) and Intimacy Level (e.g. I would become good friends with X). Participants indicate their intentions of engaging in a specific activity with the target character by recording their responses on a four point scale, (1 = Yes, 2 = Probably Yes, 3 = Probably No and 4 = No). Responses are then summed to reveal a total scale score, where higher scores are indicative of higher levels of discrimination. Previous studies that have employed the FAS have reported high reliability among adolescent samples

($\alpha=.91$; Hemphill & Siperstein, 1990) and Study1a also reported a high level of reliability ($\alpha=.95$).

3.3.3 Validation Measures All measures included for validation purposes are outlined below.

Contact It is generally contended in the literature that individuals who report having contact with members of an out-group also tend to endorse less stigmatising responses toward that out-group (Aboud, Mendelson & Purdy, 2003; Allport, 1954; Rutland et al., 2005). These effects have been seen for a variety of marginalised groups, such as peers with physical disabilities (Cameron & Rutland, 2006), homosexuals (Herek et al., 1996), racial minority groups (Dovidio, Gaertner & Kawakami, 2003) and individuals with mental health issues (Kolodziej & Johnson, 1996; Pettigrew & Tropp, 2000; Pinfold et al., 2003; Schulze et al., 2003). Additionally, many studies investigating the effects of inclusion in schools, show that contact can also have a positive impact on children and adolescents' stigmatising attitudes toward a variety of out-groups (Ozer et al., 2012). There is also growing evidence to suggest that contact may help to reduce mental health stigma among children and adolescents (Schachter et al., 2008). Hence, previous contact was employed in the current study as an indicator of known-groups validity. It was hypothesised that individuals who reported having contact with someone similar to the vignette character would demonstrate lower stigmatising responses than individuals with no previous contact. One item assessing participants' contact with peers similar to those described in the vignette was utilised in the current study. The item used was based on that employed in previous research (O'Driscoll et al., 2012; Swords et al., 2011) and was depicted as follows: 'Do you know someone who is like [target Name]?' The response options were 'Yes' or 'No'.

Knowledge Research has shown that individuals who have more knowledge of mental illness tend to express less stigmatising responses toward individuals with mental health problems. Researchers such as Reavley and Jorm (2011) have argued that a lack of understanding of mental illness may be an important factor that influences individuals' stigmatising responses and many stigma reduction strategies focus on increasing knowledge levels as a method of reducing stigma (Holmes & River, 1999; Wahl et al., 2012). Thus, the current study utilised a measure of mental health knowledge as a means of assessing convergent validity. It was anticipated that individuals demonstrating higher knowledge of general mental health disorders would also endorse lower stigmatising responses toward the target with depression.

The instrument used to measure adolescents' knowledge of mental health disorders in Study 1A was the Knowledge of Mental Illness scale (Wahl et al., 2012). The Knowledge Scale consists of 17 factual statements about mental illness (e.g., People with mental illness tend to be violent and dangerous). Respondents were asked to indicate their degree of agreement on a 5-point Likert-type scale from 1 'strongly disagree' to 5 'strongly agree'. Higher scores on this measure represent higher levels of mental illness knowledge. The instrument was designed specifically to measure mental illness knowledge among an adolescent population and has previously shown evidence of satisfactory reliability ($\alpha=.67$). However, the Study 1A reported an internal reliability of $\alpha=.46$ for this scale.

Screening The Emotional Problems sub-scale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was utilised in order to identify adolescents who exhibited behaviours similar to the peer described in the vignette. Previous research has shown that individuals with emotional or behavioural disorders often have different reactions to other people with disorders than the general population (Hansson, Jormfeldt, Svedberg & Svensson, 2011; Rusch, et al. 2011b). For example, Rusch, Corrigan, Todd and Bodenhausen (2011a) compared the attitudes of individuals with mental health conditions, such as affective disorders, and those displayed by members of the public toward people with mental health disorders. The researchers found that individuals with mental health disorders showed significant differences in their automatic stereotyping compared to the general public. The SDQ is a self-report measure which is used to identify children and adolescents who may be at risk of experiencing an emotional or behavioural disorder. However, it is not a diagnostic tool. The SDQ asks participants to respond to questions about how they typically feel and act, as evidenced over the past six months. The Emotional Problems sub-scale consists of 5-items which can be summed to produce a total sub-scale score. Responses are scored on a 3-point Likert scale, ranging from 0 'Not True' to 2 'Certainly True', with higher scores being indicative of experiencing more emotional problems. In the current research, scores were dichotomised using the recommended cut off scores for 'normal/borderline' (≤ 7) and 'abnormal' (≥ 8) behaviour (Goodman, 1997). Any participant evidencing an 'abnormal' score on the Emotional problems sub-scale was removed from the final analysis. This was completed in order to ensure that responses were limited to adolescents without emotional difficulties. Prior research has shown that the SDQ is a psychometrically sound measure with an average internal reliability of $\alpha = .72$ (Goodman, 2001). For Study 1A, the internal reliability for the emotional problems scale specifically was $\alpha = .79$.

3.4 Procedure

3.4.1 Procedure for School Recruitment Post-primary schools listed on the Department of Education and Skills website were invited to participate in this study using a stratified random-sampling approach. Schools listed as having a student population greater than 200 and located within the west of Ireland were selected for randomisation. The west of Ireland was chosen as a convenience location. Additionally, in order to increase the representativeness of the sample, a planned decision was made to recruit a number of disadvantaged schools, formally registered on the Delivering Equality of Opportunity in Schools (DEIS) programme. Initial contact was established with each school via a posted letter and email invitation addressed to the acting School Principal (see Appendix D). The letter detailed the purpose of the research study and outlined the involvement that was being sought from the school. A follow-up phone call was made to the school within the next two-three days later to discuss the study with the Principal and if the school agreed to participate, then a request was made for the contact details of a member of staff who would act as a liaison between the students and the researcher. In total, 37 schools were invited to participate in Study 1A and 1B, with a total of 16 (3 girls; 2 boys & 11 mixed gender) schools agreeing to participate. Two of these schools were designated DEIS schools. This indicated a general response rate of approximately 42%.

3.4.2 Recruiting Participants Post-primary school students in participating secondary schools were invited to take part in Study 1 (A& B). The procedure for recruiting participants to Study 1A and 1B was identical. First, the researcher introduced the study to all students by addressing them in their individual subject classes. The researcher verbally informed students about the aims and objectives of the research. Students were also provided with a detailed description of what would be required of them should they choose to participate in the study. All students were informed that the questionnaire would ask them to read a story about a person whom they did not know and to answer questions about how they would think, feel and act toward that teenager. All students were also informed that the questionnaire would ask them to respond to questions about how they think and feel in general. Students in Study 1A were also informed that they would be asked to answer questions about their knowledge about certain groups of people, such as people with emotional or behavioural problems. Participants in Study 1B were not asked to complete this additional validation measure. A Participant Information Sheet (see Appendix E) was distributed to all students, which provided a detailed written summary of the studies aims,

objectives and procedure. Students were also given the opportunity to ask the researcher questions about the study. Any student who expressed interest in participating in the study at this stage was given a letter containing a Parent Information Sheet and Consent Form (see Appendix F). See Figure 3.1 for an outline of the recruitment procedure.

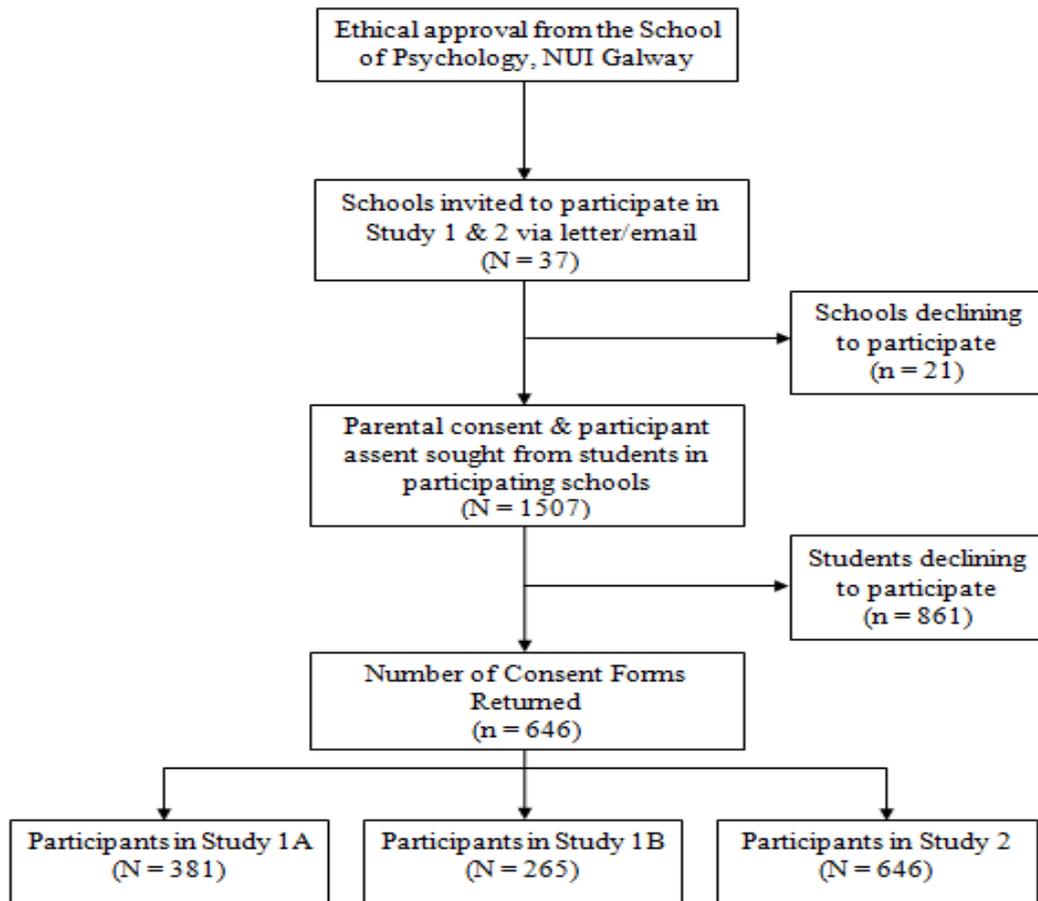


Figure 3.1 Participant recruitment and sample retention summary.

3.4.3 Distribution of Questionnaires The researcher returned to all participating schools within one to three weeks after distributing the Information Sheets and Consent Forms. All students who had returned signed parental consent forms, and were present in school on the day, were gathered in a classroom by the liaison teacher. These students were once again reminded of the aims and requirements of the study. They were then given an opportunity to ask the researcher any questions that they had pertaining to the study. Students were then asked to indicate whether they still wished to participate in the study and were also reminded that they could withdraw from the study at anytime or choose not to respond to any of the questions presented in the booklet.

All students were randomly administered a questionnaire booklet. Half the participants were asked to read about a male vignette character, who was experiencing characteristics symptoms of depression, and half the participants read about a female character. The researcher directed participants' attention to the questionnaire booklets and instructed participants to indicate their gender and date of birth on the booklet cover. The researcher informed the students that instructions for completing each section of the questionnaire were located throughout the booklet and if that they could speak to the researcher at any stage if they had any further queries. Both the researcher and a member of school staff remained in the room while students completed the questionnaires. On average, it took students approximately 35-45 minutes to complete the questionnaire. Once all students in each class had completed the questionnaires, students were thanked for their participation and given an opportunity to ask the researcher any questions they had in regards to the study

3.4.4. Ethical Issues and Considerations Full ethical approval for Study 1 (A & B) was granted by the Research Ethics Committee at the National University of Ireland, Galway on December 12th, 2012. The key ethical concerns associated with Study 1A and 1B, as identified to the research ethics committee, were as follows:

One primary ethical concern pertaining to the current research involved receiving informed, voluntary assent and informed parental consent from all participating adolescents. As detailed in the previous section (pp. 9-10), prior to the commencement of the study, all potential participants were provided with a verbal introduction to the study, as well as a Participant Information Sheet (See Appendix E). Parents were also provided with a Parent Information Sheet (See Appendix F). Only those students who provided both parental consent and verbal assent participated in the research.

An additional ethical issue relating to the research was the possibility that the vignette character would be interpreted as being descriptive of a specific teenager/s in the school, or that students themselves would identify with the character and feel that they were being prejudiced against. Several steps were taken to eliminate these ethical concerns:

- (i) All participants were explicitly informed that the character described in the vignette was not a student in the school and was not known to the participant in any way.
- (ii) No negative or pejorative labelling (such as 'problematic') was used in any information that was communicated to either the participants or their parents.

- (iii) No diagnostic labelling was used to refer to the character with depression.

A further ethical concern in regards to this study was ensuring that the researcher minimised the potential of inflicting any kind of harm on the adolescents. In order to ensure the trustworthiness of the researcher, Garda Clearance to carry out work with children and adolescents was obtained. Additionally, all students completed the questionnaire in class with a member of staff present.

Ethical consideration was also given to the use of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) in the current research, as asking participants to reflect on their emotions or behaviour had the potential to evoke distress. In order to resolve this concern, participants were informed that they could skip any questions that they did not feel comfortable answering. Additionally, as this scale posed the potential of identifying adolescents who were at risk of emotional or behavioural disorders, a protocol was developed to deal with this eventuality, which was outlined to both students and parents prior to data collection. The protocol was as follows: Parents of any adolescent who scored over the cut-off point on the SDQ and identified as potential being at risk of an emotional problem, were informed of this fact by the researcher via a telephone call. The telephone call emphasised that the SDQ is not a diagnostic tool and suggested that should the parent have any concerns, they should contact their local General Practitioner in order to discuss the matter further. The researcher also outlined a list of other available counselling services, that parents could contact about the matter, if they so wished.

3.5 Statistical Analyses

All quantitative data collected from the questionnaire booklets were analysed using a combination of PASW Statistics 20 (IBM, 2011), and MPlus 7.1 (Muthén & Muthén, 2011). Specifically, Study 1A employed exploratory factor analysis (EFA) to examine the factor structure of the stigma measures outlined above. Following the EFA, the reliability of the new, observed factor structure for each scale was examined. In addition, the construct validity of each of these scales was examined. Study 1B, employed confirmatory factor analyses (CFA) to confirm the factor structure of the stigma model observed in Study 1A in a new sample. The reliability of these measures was reassessed with this second sample. Finally, in order to examine whether these measures empirically fit the tripartite model of stigma, higher order confirmatory factor analyses were conducted.

Chapter 4

Study1 Results

4.1 Aim of Chapter

The aim of this chapter is to detail the results from the statistical analyses which were carried out in Study 1 (A & B). First, this chapter highlights the findings from the Exploratory Factor Analysis (EFA), which was performed to assess the factor structure of measures used to assess public stigma among adolescents. Second, the construct validity of this observed factor structure is explored. Next, results from the Confirmatory Factor Analysis (CFA), which was carried out on a separate group of adolescents to confirm the factor structure derived from the EFA, are discussed. Finally, a higher order CFA model was constructed to test whether there was an empirical fit between the observed stigma model and the theoretical tripartite model of stigma and results from these analyses are provided.

4.2 Validity

The validity of a measure can be defined as the extent to which an instrument measures what it claims to measure (Carmines & Zeller, 1979). Construct validity refers specifically to the extent to which a measure relates to other measures, and is based on theoretically derived hypotheses regarding the concepts being assessed (Carmines & Zeller, 1979). Construct validity is of utmost important when criterion-related validity cannot be established (i.e., when there is no acceptable gold standard measure with which to ascertain the quality of the construct being measured; Cronbach & Meehl, 1955). In order to ascertain the validity of the new factor structure of the measures obtained in the EFA, two types of construct validity were assessed: convergent validity and known-groups validity, in lieu of the absence of a gold standard indicator of mental health stigma (Corrigan, Markowitz & Watson, 2004). Convergent validity refers to the degree to which scores on a specified measure are correlated with scores on related measures (Furr & Bacharach, 2013). Known-groups validity refers to the ability of a measure to discriminate across different groups, wherein the groups are theoretically expected to score differently on the construct being measured (Cronbach & Meehl, 1955).

4.3 Study 1A (EFA) Participants

A total of 381 (112 male and 269 female) adolescents were recruited to this study. Participants ranged in age between 13 and 18 years ($M = 15.09$, $SD = 1.21$). All participants

were secondary school (2nd, 4th or 5th year) students attending schools located within the West of Ireland. Participants for this section of the study were recruited from a total of eight separate secondary schools. No more than a maximum of 25% the sample was recruited from any one school in order to ensure a fair representation of students from different schools.

4.3.1 Screening The SDQ was used as a screening tool to identify participants who may be susceptible to emotional issues, which may affect their responses toward the vignette character. Previous research has shown that individuals with emotional problems often express different reactions to other individuals with similar disorders than those expressed by the general population (Hansson et al., 2011; Rusch et al., 2011a; 2011b). In order to ensure that participants' responses on the stigma measures were limited to adolescents who did not display signs of emotional difficulties, individuals who obtained above the identified cut-off mark on the SDQ were removed from the final analyses. A total of 49 participants were removed on the basis of this criteria, which left a final sample size of 332 (109 male and 223 female) participants, who were aged between 13 to 18 years ($M = 15.10$, $SD = 1.21$).

4.4 Data Analytic Strategy

4.4.1 Factor Analysis There are two main types of factor analysis used in scale development and instrument validation: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). EFA is useful for assessing whether a number of observed variables, such as questionnaire items, can be grouped together to form a single index or factor (Howitt & Cramer, 2014). EFA allows items to be related to any number of underlying factors; hence, it is most advantageous when the underlying relationships between items and factors are unknown. CFA, in contrast, requires a theoretical or empirical basis for an assumed factor structure (Fabrigar, Wegener, MacCallum, & Strahan 1999) and tests the extent to which the characteristics of an EFA or previous analysis can be reproduced in a separate factor analysis with new data (Howitt & Cramer, 2014). Hence, in order to establish the most parsimonious factor structure of the selected stigma measures, a preliminary EFA was first carried out on the data, followed by a CFA (see Study 1B).

4.4.2 Missing Data Missing data is a common feature of almost all research surveys (Scheffer, 2002). The method in which missing data is addressed is considered a critical issue as researchers are encouraged to minimise bias and maximise the use of available information (Allison, 2001). There are three ways in which missing data can be categorised: 1) Data can be missing completely at random (MCAR); 2) missing at random (MAR) and 3) not missing

at random (NMAR). The term MCAR refers to data where the missingness mechanism does not depend on the variable of interest, or on any other variable, observed in the data set (Scheffer, 2002). When data are MAR (or conditionally missing at random; Graham, 2009) it suggests that missing data values do not occur as a consequence of the variable of interest but are related to some other variable in the data set (Little & Rubin, 1987). NMAR occurs when the missingness mechanism depends on the actual value of the missing data (Scheffer, 2002) and is considered a more serious problem for researchers than data that are MCAR or MAR.

Traditional approaches to dealing with missing data often involved using case wise deletion (listwise or pairwise) and imputation of mean scores (Scheffer, 2002). However, these conventional methods possess shortcomings and recently a move has been made toward using newer multiple imputation procedures, such as Expectation Maximisation (EM; Graham, 2009). EM is considered an excellent procedure for handling missing data (Allison, 2001) and is advised when the data are MCAR or MAR or when the percentage of missing data is small to minimal (Owen et al., 2007). Little's (1988) Missing Completely at Random (MCAR) test is used to determine whether data are MCAR; where a significant chi-square value indicates that data are not missing at random.

In the current study, Little's MCAR test was run using SPSS version 20 software and was found to be significant ($\chi^2 [2540] = 2869.90, p < .001$), indicating that the data was not missing completely at random. However, in the current study the highest level of 'missingness' was 10.9%. Thus, the data was deemed suitable for EM and the EM algorithm for imputing missing values was employed on the data.

4.4.3 Methodological Considerations There are a number of methodological issues that researchers need to take into consideration prior to carrying out an EFA. One important criterion in determining the appropriateness of conducting an EFA on a particular dataset pertains to that of sampling or sample size. A wide range of recommendations regarding sample size in factor analysis have been proposed (Zhang & Hong, 1999). However, a general rule of thumb has been outlined by researchers such as Tabachnick and Fidell (2007) and Comrey and Lee (1992) which stipulates that a sample size greater than 300 is 'good' for EFA. Thus, the sample size ($N = 332$) employed in this current study was deemed of sufficient size and suitable to EFA.

The factorability of the current data was also examined using Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. If Bartlett's test is statistically significant it indicates that the variables being factor analysed are related to

one another (i.e., the correlation matrix for the data is an identity matrix; Tabachnick and Fidell, 2007). For the KMO measure, values above .60 are necessary for EFA (Tabachnick & Fidell, 2007). In the current study, as Bartlett's test was statistically significant ($\chi^2 [1653] = 10415.63, p < .001$) and the KMO statistic exceeded .60 (KMO = .901), the data was considered suitable for EFA.

Dimensionality was examined using principal axis factoring (PAF) with oblique rotation (direct oblimin, delta set at zero). PAF is a method of extraction which fits common factor models to data without distributional assumptions (Fabrigar et al., 1999). Considering scores on some of the stigma measures were non-normally distributed, PAF was deemed to be appropriate. Oblique rotation was employed as some degree of inter-relatedness among the factors was expected.

4.4.4 Item Reduction Decisions regarding the number of factors to retain were based on a parallel analysis (O'Connor, 2000), in conjunction with examination of the scree plot. Parallel analysis generates eigenvalues from random data sets that match (or are parallel to) the actual data set in relation to the number of participants and variables. Eigenvalues from the random data set are then compared to eigenvalues of the actual data set. The number of factors to retain is indicated when a given eigenvalue for the random data becomes larger than the corresponding eigenvalue for the actual data or when eigenvalues in the actual data set fall below one (Pallant, 2007). A scree plot is a graph of eigenvalues; the number of factors to retain is suggested by counting the number of data points above where the curve flattens out, excluding the data point where the break occurs (Costello & Osborne, 2005).

For the purpose of retaining items, the minimal acceptable factor loading for the retention of items was .50, where all cross-loadings for that item were less than .32 (Worthington & Whittaker, 2006). Only factors containing three items or more were retained as per factor retention guidelines (Byrne, 2012). Furr and Bacharach (2013) stipulate that high correlations between variables can be indicative of item redundancy. It is recommended that if two items in the same factor are found to correlate with each other in excess of .90 (Field, 2009), the item with the lower factor loading should be deleted. It is also recommended that items that have weak inter-item correlations with other items in the same factor (i.e. *rs* across other items are less than .30), should be removed (Field, 2009). In the current study, no item correlation greater than .90 or less than .30 was observed. Item reduction guidelines also suggest that corrected item-total correlations for each factor should be assessed and items with value totals less .30 should be removed (Field, 2009). Corrected item-total correlations for each factor were greater than .30.

4.5 Results

4.5.1 Descriptive Statistics Prior to conducting statistical analyses means and standard deviations for each of the scales were calculated. Descriptive Statistics for each of the measures, as they are originally constructed, are displayed in Table 4.1. Higher scores on each measure are representative of more negative or stigmatising responses. As can be seen in this table, participants did not appear to endorse overly high stigmatising responses on any measure, as the majority of scores fell within the low to middle range of possible scores.

Table 4.1

Descriptive Statistics Including Means and Standard Deviations for all Measures in Study 1A Prior to conducting EFA

Factor	M	SD	Possible Range	Attained Range	Skewness	Kurtosis
Dangerousness	14.62	4.18	6-30	6-27	.23	-.34
Helplessness	7.51	2.83	3-15	3-15	.32	-.68
Warmth	11.69	3.17	4-20	4-20	-.03	-.01
Competence	13.86	3.32	4-20	5-20	-.11	-.51
Responsibility	6.38	2.53	4-16	4-15	1.02	.24
General Attitude	11.78	4.18	4-20	4-20	.22	1.63
Fear	8.95	3.81	4-20	4-20	.80	.19
Pity	10.51	2.97	3-15	3-15	-.49	-.32
Anger	8.62	4.07	4-20	4-20	1.01	.48
Discrimination (FAS Scale Total):	45.77	12.36	21-84	21-84	1.30	2.25
<i>Helping Behaviours</i>	8.58	2.99	5-20	5-20	.88	.74
<i>Sharing Behaviours</i>	3.89	1.31	2-8	2-8	.52	.17
<i>Physical Proximity</i>	6.67	2.28	3-12	3-12	.11	-.71
<i>Common Activities</i>	8.97	2.92	4-16	4-16	.19	-.51
<i>Intimacy Level</i>	17.66	4.53	7-28	7-28	-.17	-.30

4.5.2 EFA Results Using syntax provided by O'Connor (2000), an initial parallel analysis suggested that an eight-factor solution should be retained. In other words, the first eight eigenvalues for the real data (14.31, 4.35, 3.53, 2.65, 2.22, 1.97, 1.83, 1.75) exceeded the first eight eigenvalues for the random data (13.93, 3.97, 3.12, 2.16, 1.79, 1.53, 1.37, 1.24). A visual inspection of the scree plot also provided support for an eight factor matrix. Thus,

the analysis was repeated forcing an eight-factor solution. Items with factor loadings less than .50 or cross loadings greater than .32 were then removed. A total of seventeen-items were removed during this process. Upon deleting these items an additional parallel analysis was carried out on the remaining items. A final inspection of the parallel analysis syntax and scree plot (see Figure 4.1) suggested that a seven-factor solution would best suit the data. Hence, a seven-factor solution was forced. This seven factor solution was found to account for 62.84% of the total variance.

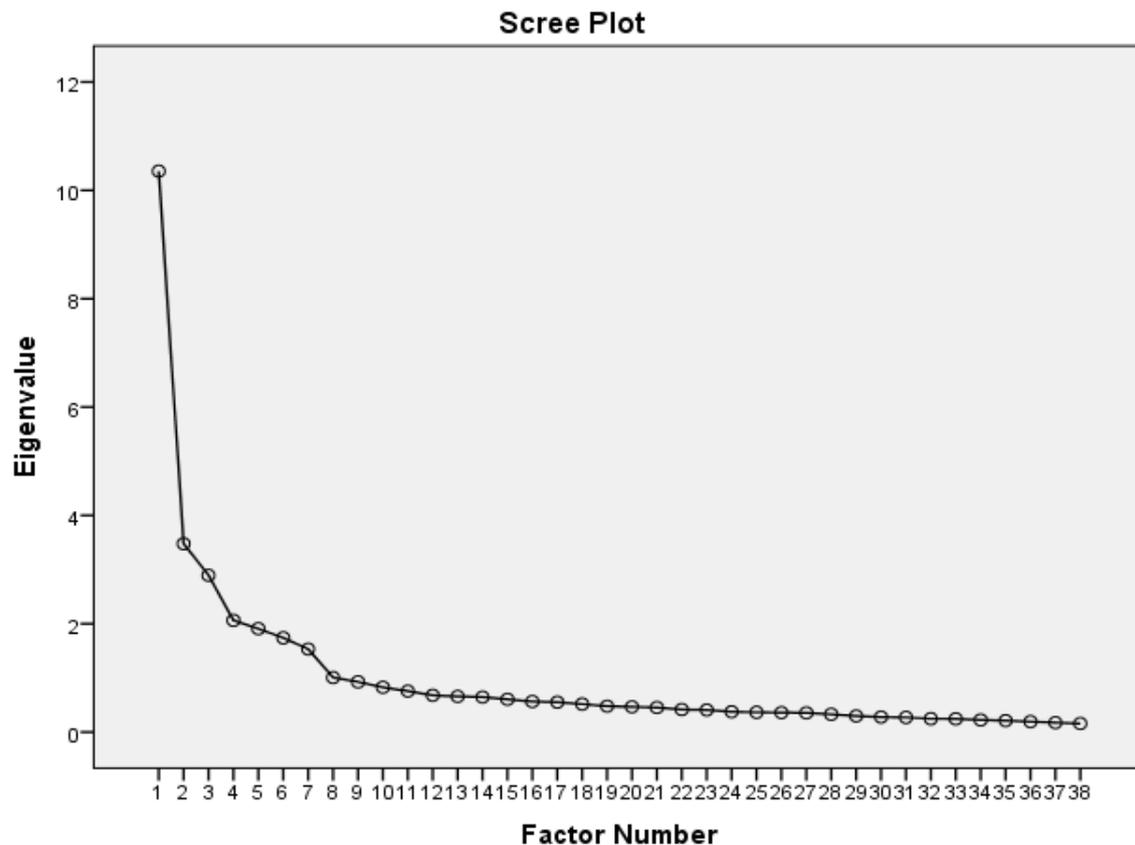


Figure 4.1. Scree plot showing support for a seven factor solution.

In total, thirty-nine items were retained. All thirty nine items loaded onto one of seven factors, with factor loadings ranging from .51 to .85 (see Table 4.2). These seven factors are thought to represent the three stigma constructs; stereotypes, prejudice and discrimination. From the original measures which were hypothesised to tap the stereotypes component (Dangerousness, Helplessness, Warmth, Competence, Responsibility, General Attitude), four factors were retained. These four factors consisted of Perceptions of

Dangerousness (3-items), Warmth & Competence (8-items), Perceptions of Responsibility (3-items) and Negative Attributes (4-items). Prejudice was found to be composed of only one factor, which contained six-items assessing expressions of fear and anger toward the target. Finally, for the Discrimination component, two separate factors reflecting behavioural intentions to engage with the target were found. One factor appeared to represent discrimination toward engaging in general Classroom-Type Behaviour (5-items) with the target, while the other factor appeared to depict reluctance toward engaging in Friendship-Type Behaviour (10-items) with the target. The grouping of these items appeared to make conceptual sense, thus, all seven factors were retained.

Table 4.1

Factor Loadings for the Exploratory Factor Analysis - Final Seven Factor Rotation

Code	Item	Factors						
		Dangerousness	Warmth & Competence	Responsibility	Negative Attributes	Prejudice	Friendship Discrimination	Classroom Discrimination
D1	Michelle/Michael is dangerous	.566	.000	.003	.040	.037	.082	.064
D2	Michelle/Michael is Aggressive	.683	.039	.086	.127	.017	-.064	.135
D3	Michelle/Michael is frightening	.636	-.006	.076	-.028	.132	.018	.043
W1	Michelle/Michael is warm-hearted	.057	-.604	-.027	.110	-.091	.092	.033
W2	Michelle/Michael is good-natured	.135	-.711	-.025	.035	-.033	.051	.078
W3	Michelle/Michael is honest	.141	-.534	-.032	-.022	-.050	.044	-.076
W4	Michelle/Michael is friendly	.188	-.526	-.030	.153	-.039	.165	-.045
W5	Michelle/Michael is competent	-.053	-.741	.104	.084	.046	-.076	.094
W6	Michelle/Michael is capable	-.125	-.578	.021	.045	.110	-.067	.082
W7	Michelle/Michael is intelligent	-.147	-.739	.025	.018	.077	-.010	.095
W8	Michelle/Michael is skilled	-.153	-.626	.041	.055	.103	.103	-.030

Code	Item	Factors						
		Dangerousness	Warmth & Competence	Responsibility	Negative Attributes	Prejudice	Friendship Discrimination	Classroom Discrimination
R1	Michelle/Michael acts like this because she copies other teenagers	-.017	.124	.793	.051	-.021	.003	.054
R2	Michelle/Michael acts this way just because she wants to and thinks it's cool	.063	.015	.845	-.026	.007	.060	.003
R3	Michelle/Michael acts like this to show off or get attention	.086	-.235	.662	-.021	.064	.022	-.091
N1	Terrible/Excellent	-.094	-.087	.084	.710	.015	.034	-.011
N2	Horrible/Wonderful	-.032	-.032	.084	.777	.027	.026	.017
N3	Nasty/Joyful	.114	.036	-.092	.555	.006	.025	-.044
N4	Awful/Great	.019	-.073	-.013	.818	-.022	-.045	.020
P1	I would be afraid of Michelle/Michael	.183	-.157	-.031	-.011	.666	-.051	-.024
P2	I would feel embarrassed by Michelle/Michael	-.028	-.164	.057	-.053	.714	.018	.006
P3	Michelle/Michael would make me feel insecure	.002	-.077	-.028	.004	.672	-.016	.087
P4	I would make fun of Michelle/Michael	-.059	.142	.067	-.005	.712	-.038	.018
P5	Michelle/Michael would make me angry	.025	.130	.006	.075	.773	.051	-.028
P6	Michelle/Michael would irritate me	.073	.003	.000	.033	.707	.098	-.108
F1	Hang out after school with Michelle/Michael	.033	-.051	.016	.026	.040	.749	.089
F2	Share a secret with Michelle/Michael	.068	.028	.039	.004	-.011	.791	-.124
F3	Invite Michelle/Michael to my house	-.011	-.022	.030	.013	.024	.833	-.033

Code	Item	<u>Factors</u>						
		Dangerousness	Warmth & Competence	Responsibility	Negative Attributes	Prejudice	Friendship Discrimination	Classroom Discrimination
F4	Sit next to Michelle/Michael in class	-.076	-.053	-.036	.037	.072	.584	.227
F5	Hang out with Michelle/Michael during free time	-.008	-.036	.017	.044	.111	.634	.191
F6	Share part of my lunch with Michelle/Michael	.014	-.011	.016	-.014	-.061	.614	.146
F7	Call on the phone	-.087	.035	-.007	.017	.039	.852	.013
F8	Sit next to on bus on a field trip	-.051	-.060	.054	.072	.010	.668	.134
F9	Tell Michelle/Michael something nobody knows	.130	-.066	.006	-.022	-.055	.719	-.160
F10	Choose Michelle/Michael as a partner in a game	-.025	.034	.025	.112	.072	.540	.239
C1	Tell Michelle/Michael a homework assignment	.032	-.098	-.028	-.055	-.030	.099	.511
C2	Lend Michelle/Michael a pencil	.099	-.042	-.007	.044	-.013	-.095	.684
C3	Help Michelle/Michael with a math problem	.049	.056	.105	.089	-.004	.017	.693
C4	Say hello to Michelle/Michael	-.019	-.037	-.108	.002	.075	.207	.526
C5	Help Michelle/Michael with a class project	.070	-.057	.067	-.072	-.013	.189	.646

Note: Factor Loadings >.50 appear in bold

4.5.3 Scale Modifications Following EFA Results from the EFA supported the removal of several items from the original measures and the retention of a seven factor solution (Dangerousness, Warmth & Competence, Responsibility, Negative Attributes, Prejudice, Classroom Discrimination and Friendship Discrimination). In order to outline how these new factors were constructed, this section will outline the changes that were made to the original measures following the findings from the EFA. For example, in relation to the

stereotypes measures, three items were removed from the original Dangerousness factor; this left a new scale which was composed of the remaining three items from the original scale. Higher scores on this Dangerousness factor reflected greater perceived dangerousness associated with the target. Although Warmth and Competence were originally conceptualised as two separate factors, the EFA did not support this conceptualisation. Results from the EFA indicated that these two scales composed one larger factor which was named Warmth & Competence and was comprised of all eight items from the original two scales. Higher scores on the Warmth & Competence factor reflected more negative responses toward the target character (i.e. less warmth and competence). In relation to Responsibility, one item was deleted which left a new Responsibility factor, composed of three items. Higher scores on this new factor were seen to reflect greater perceived responsibility. For the General Attitude scale, all items from the original measure were retained, however, for interpretation purposes this factor was renamed as the Negative Attributes factor, as scores on this factor were indicative of ascribing negative attributes to the target. Specifically, higher scores on the factor were representative of associating the target with more negative than positive adjectives. No support was found for the Helplessness scale; hence, this factor was not retained following the EFA.

Prior to the EFA, four scales were thought to represent the Prejudice component of Stigma; Anger, Pity, Fear, and Liking. However, results from the EFA indicated that the Fear and Anger scales were not separate constructs and should be collapsed to form one overall factor; Prejudice. The EFA did not support the retention of the Pity or Liking items. Thus, the Prejudice factor was found to be composed of six-items which assessed adolescents' expressions of fear and anger toward the target. Higher scores on this factor reflected more fearful and angry emotional responses toward the target character.

The original conceptualisation of Discrimination, as measured by the FAS, proposed that Discrimination could be measured as either one overall factor, comprised of 21 items, or as five separate subscales. However, results from the EFA identified two separate factors; Classroom Discrimination (5-items) and Friendship Discrimination (10-items). Six items were removed from the original measure. Higher scores on the Classroom Discrimination factor appeared to reflect greater intentions to discriminate against the target in a classroom setting. Higher scores on the Friendship Discrimination factor appeared to indicate greater intentions to express discriminatory behaviours toward the target in more intimate friendship settings.

4.5.4 Descriptive Statistics for the Seven Stigma Factors A summary of the descriptive statistics for each of the observed new factors, including means, standard deviations, internal reliability and tests of skewness and kurtosis is provided in Table 4.3. High Cronbach's alpha coefficients were observed for each stigma factor, indicating that each new factor showed evidence of good internal reliability. For the Friendship Discrimination Factor, an overly high alpha coefficient of .93 was observed (see Table 4.3). However, upon inspection of sub-scale item correlations, correlations between items on this factor were found to be at appropriate levels. All item correlations ranged between .42 and .73, and thus did not suggest item redundancy. Hence, all items in the factor were retained. As can be seen in Table 4.3, several of the new factors (Dangerousness, Responsibility, Prejudice and Classroom Discrimination) showed some significant degrees of skewness ($> .80$), while all factors showed acceptable levels of kurtosis (< 3 ; Tabachnick & Fidell, 2007). However, significant levels of skewness are common in large sample sizes and it is argued that this non-normality is often not enough to make substantive difference in the analysis (Tabachnick & Fidell, 2007). Hence, no transformations were performed on the factors. As can be seen in Table 4.3, responses on the Dangerousness, Responsibility and Classroom Discrimination factors appeared to be at the lower end of the spectrum. This appears to indicate that adolescents do not endorse overly stigmatising responses on these constructs. Adolescents' endorsements on the remaining stigma constructs also appeared to be moderate, as scores seemed to fall in the middle range of these scales.

Table 4.3

Descriptive Statistics, Reliability and Normal Distributions for the Observed Seven Factors in the EFA

Factor	M	SD	Possible Range	Attained Range	α	Skewness	Kurtosis
Dangerousness	5.47	2.38	3-15	3-12	.73	.84	.05
Warmth & Competence	21.83	5.83	8-40	8-38	.87	.02	-.11
Responsibility	4.83	2.14	3-12	3-12	.82	1.18	.13
Negative Attributes	11.78	2.54	4-20	4-20	.82	.22	1.63
Prejudice	12.16	5.90	6-30	6-30	.85	1.13	.82
Classroom Discrimination	7.89	2.74	5-20	5-20	.80	1.30	2.25
Friendship Discrimination	26.17	6.96	10-40	10-40	.93	-.31	-.42

A summary of the correlations observed between all seven factors is provided in Table 4.4. As can be seen in this table, significant, inter-factor correlations were found between the seven factors suggesting that they measure inter-related yet distinct constructs. All inter-factor correlations ranged from .17 to .54. For each inter-factor correlation the valence of the correlation matched the expected direction. All factors had a positive correlation with each of the six other factors, suggesting that higher negative endorsements in one factor were associated with higher negative endorsements in another factor.

Table 4.4

Summary of Inter-Correlations between the Seven Stigma Factors Observed in Study 1A

	1	2	3	4	5	6
1 Dangerousness	1					
2 Warmth & Competence	.19***	1				
3 Responsibility	.26***	.17**	1			
4 Negative Attributes	.27***	.45***	.18**	1		
5 Prejudice	.24***	.25***	.31***	.22***	1	
6 Classroom Discrimination	.26***	.34***	.14*	.22***	.16**	1
7 Friendship Discrimination	.29***	.43***	.22***	.32***	.23***	.54***

*Note: * $p < .05$, ** $p < .01$, *** $p < .001$*

4.5.5 Convergent Validity In the current EFA study, convergent validity was measured by testing hypotheses derived from previous research on mental health stigma. It was hypothesised that if the factors identified during the EFA represented components of stigma, then higher scores on the Knowledge scale should be associated with less stigmatising endorsements on these measures.

Approximately 246 participants completed the Knowledge scale. Descriptive Statistics for the Knowledge scale are displayed in Table 4.5. Higher scores on this measure are indicative of lower levels of knowledge about mental illness. As can be seen in Table 4.5, results suggested that adolescents displayed relatively low levels of mental illness knowledge.

Table 4.5

Descriptive Statistic, Reliability and Normal Distributions for the Knowledge of Mental Illness Scale

	M	SD	Possible Range	Attained Range	α	Skewness	Kurtosis
Knowledge	61.03	5.91	17-85	44-77	.45	-.13	.30

In order to assess the relationship between knowledge and each of these seven factors, Spearman's rho correlations were conducted. Results showed that Knowledge was significantly correlated with Dangerousness, Negative Attributes, Responsibility, Prejudice, Classroom Discrimination and Friendship Discrimination. Specifically, the results indicated that more knowledge was significantly associated with less stigmatising responses on all these measures, as per the expected trend. However, knowledge did not correlate significantly with the Warmth & Competence factor (see Table 4.6). Although not significant, a negative correlation was observed between these two measures; this is consistent with the expected trend. Overall, the factor structure produced by the EFA appeared to evidence good convergent validity. However, it is important to acknowledge that the Knowledge scale evidenced poor reliability in the current study and this could impact on the results obtained.

Table 4.6

Summary of Correlations between Knowledge and the Stigma factors Observed in Study 1A

	Dangerousness	Warmth & Competence	Responsibility	Negative Attributes	Prejudice	Classroom Discrimination	Friendship Discrimination
Knowledge	-.24***	-.11	-.23**	-.16*	-.24***	-.20***	-.13***

*Note: * $p < .05$, ** $p < .01$, *** $p < .001$*

4.5.6 Known-Groups Validity In the current study, known-groups validity was assessed through comparisons of participants who had prior contact with a person with depression and participants who had no previous contact. For study 1A, approximately 40% of participants indicated that they knew someone similar to the target character whereas 60% of participants indicated that they had no such previous contact. Five participants neglected to respond to this question. Group comparisons were conducted using independent t-tests to

assess the relationship between contact and no contact groups on each of the seven stigma factors.

T-tests showed no significant differences between the groups. The only significant difference observed was on the Friendship Discrimination Factor ($p = .02$), where individuals who had experienced contact showed less negative responses ($M = 25.01$, $SD = 7.04$) than individuals who had no contact ($M = 26.90$, $SD = 6.88$). Differences between scores on both the Warmth & Competence ($p = .07$) and Negative Attributes ($p = .06$) factors across the two groups also approached significance. Although these differences were not significant, those in the contact group demonstrated less stigmatising responses on these measures than those who had experienced no contact. Differences between the groups on all other measures were miniscule. Overall, the general trend of differences in scores between the two groups provides some partial evidence to support the validity of these factors as a measurement of stigma. See Table 4.7 for a summary of t-test results.

Table 4.7

Group Differences between Participants who had Contact and those with No Contact in Study 1A

Measure	Contact			No Contact			<i>t</i>	<i>p</i>	<i>d</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>			
Dangerousness	127	5.62	2.43	197	5.36	2.34	.99	.32	.11
Warmth & Competence	127	21.09	5.94	197	22.29	5.79	-1.80	.07	.20
Responsibility	127	4.96	2.24	197	4.77	2.11	.79	.43	.08
Negative Attributes	127	11.46	2.27	197	12.01	2.70	-1.91	.06	.22
Prejudice	127	12.69	6.01	197	11.76	5.70	1.39	.16	.16
Classroom									
Discrimination	127	7.56	2.65	197	8.06	2.82	-1.60	.11	.18
Friendship									
Discrimination	127	25.01	7.04	197	26.90	6.88	-2.40	.02	.27

4.6 Study 1B (CFA Study)

The main aim of Study 1B was to re-evaluate the factor structure of the seven stigma factors observed in Study 1A. The measurement model was re-examined using Confirmatory Factor Analyses (CFA) on a separate sample of adolescents. Additionally, higher order CFAs were conducted in order to investigate whether the observed stigma model provided empirical support for the tripartite conceptualisation of stigma.

4.6.1 Confirmatory Factor Analysis Confirmatory Factor Analysis (CFA) is a powerful multivariate analytic tool that belongs to the same family as structural equation modelling (SEM). CFA tests theoretical hypotheses by evaluating the fit of specified models to the observed data (Brown & Moore, 2006). CFA is the primary means of assessing the nature of associations between latent constructs and is recommended when knowledge of the underlying latent variable structure is available based on theory and/or empirical research (i.e., after EFA has been conducted; Brown & Moore, 2006; Fabrigar et al., 1999). Unlike other statistical procedures (e.g., multiple regression, EFA), CFA allows relatively “error free” latent variables to be specified by correcting for biases that could result from random error and variance not attributable to the targeted constructs (MacCallum & Austin, 2000). Both Fabrigar et al. (1999) and Brown and Moore (2006) recommend the specification and testing of a confirmatory factor model based on the results of an EFA that has been carried out with a different sample/data set. Thus, CFA was considered an appropriate technique to use on the current data set in order to 1) further examine the factor structure of the stigma measures which emerged from the EFA and 2) test empirically whether these measures fit the theoretical construction of stigma (i.e. Stereotypes, Prejudice and Discrimination). This confirmatory factor model was specified and estimated using MPlus 7.1 (Muthen & Muthen, 2011) software. Model parameters were estimated using Maximum Likelihood (ML).

4.7 Participants for Study 1B

A total of 265 (115 male and 149 female; 1 unspecified) secondary school adolescents were recruited to this study. Participants ranged in age between 14 and 18 years ($M = 16.06$, $SD = .69$). Two participants did not provide information regarding their age and are not included in the age range analysis. Participants were screened using the SDQ and 27 participants displaying characteristics similar to the vignette character were removed from further analyses. This left a sample size of 238 (111 male and 124 female; 1 undisclosed) participants, aged between 14 to 18 years ($M = 16.07$, $SD = .70$).

4.8 Data Analytic Strategy

4.8.1 Missing Data In order to examine whether missing values in the current measures were MCAR, Little’s (1988) MCAR test was applied to the current sample. In the current study, Little’s test was found to be non-significant ($\chi^2 [469] = 504.94$, $p = .122$), indicating that the data was missing completely at random. Additionally, the highest level of

missing data for the current study was low (i.e. <5%). Thus, the data was deemed suitable for EM and the EM algorithm for imputing missing values was employed on the data.

4.8.2 Normality Distributions of scores on the measures being utilised in the current study were inspected for both univariate and multivariate normality. Prior to conducting CFA, data were inspected for multivariate normality, an assumption of factor analysis. Using Mahalanobis distance analysis, multivariate outliers were identified. Two cases from this data set were found to exceed the critical value and thus were removed from further analyses. Following the removal of these outliers, maximum likelihood (ML) estimation was used (Byrne, 2012).

The seven-factor structure, identified in the EFA, was also examined for univariate normality. All scales showed acceptable kurtosis levels (< 3) and while the majority of scales also showed acceptable skew levels (<.80; Tabachnick & Fidell, 2007), three factors showed evidence of skewness. These factors are as follows: Responsibility, Prejudice and Classroom Discrimination. Deviations from normal skewness are to be expected in large sample sizes due to the decrease in standard error that results from an increased sample size (Tabachnick and Fidell, 2007). Therefore, no transformations were carried out on the data. Additionally, all factors were assessed for internal consistency. Although all factors were found to show evidence of good reliability (i.e. Cronbach's α for all factors > .70), it is important to note that the Friendship Discrimination factor evidenced a high level of internal consistency ($\alpha = .91$), suggesting there might be some evidence of item redundancy. However, inspection of the inter-item correlations for this factor showed all inter-item correlations were within an acceptable range and thus all items were retained for this factor.

4.8.3 Model Fit With SEM techniques, such as CFA, the adequacy of a proposed conceptual model is assessed by comparing the extent to which the empirical covariance matrix is equivalent to the estimated population covariance matrix, produced by the proposed model (Schermelel-Engel, Moosbrugger & Muller, 2003). 'Model fit' refers to the degree to which the structural equation model fits the sample data provided (Schermelel-Engel et al., 2003). As there is no single statistical test that identifies a correct model based on the sample data, researchers rely on a combination of numerous 'exact/absolute' and 'relative' fit indices to evaluate the adequacy of model fit. Following guidelines recommended by Byrne (2012) and Kline (2011), several criteria were used in order to assess the goodness of fit of the Stigma model which emerged from the EFA.

Chi-Square The Chi-square test statistic is the traditional measure for evaluating the overall fit of the proposed a priori model and assesses the magnitude of observed discrepancy between the fitted covariance matrix and the covariance matrix from the sample data (Hu & Bentler, 1999). Good model fit is indicated by a statistically non-significant ($p > .05$) chi-square result. However, caution is advised upon relying on the chi-square test as a measure of model fit (Hooper, Coughlan & Mullen, 2008). This is due to its sensitivity to sample size; chi-square is likely to be significant when large sample sizes (e.g., $N > 200$) are used (Kline, 2011). Thus, it is possible that a well fitting model may still result in a statistically significant chi-square (Byrne, 2012). Due to the restrictiveness of the Chi-Square test statistic, it is recommended that additional fit indices are also used as indicators of overall fit of a model (Hooper et al., 2008).

Relative/ Normed Chi Square (χ^2/df ; Q) Wheaton et al. (1977) formulated an alternative approach to assess the absolute fit of a model, which minimises the impact of sample size on the Chi-Square test statistic. This is known as the Relative Chi-Square statistic or chi-square/ df ratio (Q). Wheaton et al. (1977) proposed that this value was acceptable if the subsequent ratio was below five. However, the current study employed the more stringent rule that good model is represented by a $Q < 2.0$, as proposed by Tabachnick and Fidell (2007).

Root Mean Square Error of Approximation (RMSEA) RMSEA with 90% confidence intervals is a measure of the approximate fit of the model in the population and is concerned with the discrepancy due to approximation (Schermelleh-Engel et al., 2003). It is generally accepted that a RMSEA value less than or equal to .05 represents excellent model fit (Stieger, 1990). However, values close to .06 (Hu and Bentler, 1999) or as high as .07 (Stieger, 2007) can also indicate acceptable model fit. An advantage of RMSEA is that it calculates a confidence interval around its value, which enables an assessment of the precision of the RMSEA estimate. It is recommended that the lower boundary of the confidence interval should be 0 for exact fit or less than .05 for close fit (Schermelleh-Engel et al., 2003).

Bentler's Comparative Fit Index (CFI) The CFI statistic is a popular fit index as it is less susceptible to sample size problems (Fan, Thompson & Wang, 1999). The CFI statistic assumes that all latent variables are uncorrelated and compares the sample covariance matrix with this null model (Hooper et al., 2008). Values for this statistic range from 0 to 1 with

values closer to 1 indicating greater model fit. It is generally accepted that a CFI value $>.90$ is necessary for acceptable model fit, and a value of $>.95$ represents excellent model fit (Byrne, 2012).

Tucker Lewis Index (TLI) The TLI is a fit index that prefers simpler models (Hooper et al., 2008). Hu and Bentler (1999) have suggested that a TLI value $>.90$ is necessary for acceptable model fit and that a TLI value ≥ 0.95 should be set as the threshold for excellent model fit. A problem with the TLI index is that it is susceptible to small sample sizes and in such cases may evidence poor model fit despite other statistics indicating good model fit (Tabachnick and Fidell, 2007).

Standardised Root Mean Square Residual (SRMR) The SRMR is the standardised square root of the difference between the residuals of the sample covariance matrix and the hypothesised covariance model (Hooper et al., 2008). Hu and Bentler (1999) recommend the reporting of SRMR values when assessing model fit. Values for the SRMR range from zero to one, with values less than .08 indicative of acceptable model fit (Hu & Bentler, 1999).

Akaike Information Criterion (AIC)/ Delta (Δ) AIC The Akaike Information Criterion (AIC) and delta AIC (Δ AIC) are used to compare the relative fit of two competing models. The superior model is the one with the lower AIC value. The Δ AIC is calculated by subtracting the smaller AIC value from the larger AIC value. According to Burnham and Anderson (2002), support for the model with the higher AIC is indicated by Δ AIC values of 0 to 2, less support is suggested by values of 4 to 7, and values of 10 or greater indicate no support for the inferior model.

Item Redundancy/ Model Modification Item redundancy and model misfit are evidenced through an examination of modification indices (MIs) and regression weights of item pairs (Byrne, 2012). MIs can be conceptualised as a χ^2 statistic with one degree of freedom (Joreskog & Sorbom, 1993). For each fixed parameter specified, Mplus provides a MI, which represents the expected drop in overall χ^2 value which would result if the cited parameter were to be freely estimated in a subsequent run (Byrne, 2012). Accompanying each MI value is an Expected Parameter Change (EPC) value (Kline, 2011). The EPC represents the predicted estimated change in either a positive or negative direction for each fixed parameter in the model should it be freely estimated in a subsequent test of the model (Byrne, 2012). Essentially, the EPC value illustrates whether freeing an estimated parameter

would result in a substantive improvement in model fit. According to Byrne (2012) parameters should be respecified if both the MI and EPC values are substantively large and theoretically meaningful (Byrne, 2012).

In the current study, modification indices for all latent factors and observed items were reviewed and re-specifications were made to the model, provided theoretical justification for the changes was established (Byrne, 2012). Based on this content analysis, either new parameters were estimated between cited item pairs, or the item with the lowest standardised coefficient was deleted. Only one parameter was added to the model at a time. Model fit was reassessed after each change to the model in order to assess whether each new parameter made a significant improvement to the model. The χ^2 difference test (χ^2 diff) was employed in order to examine whether each respecified model significantly improved model fit. A significant χ^2 difference test lends support for the model with the lower χ^2 test statistic. If the additional parameter did not make a significant contribution to the model, then the most parsimonious model should be retained.

4.9 CFA Results

Model parameters were estimated using Maximum Likelihood (ML) estimation. An initial test of the seven-factor model of stigma proposed by the EFA, yielded poor to acceptable model fit, $\chi^2(681) = 1250.76$, $p < .001$; $Q = 1.83$; RMSEA = .06 (90% CI: .05, .07); CFI = .86; TLI = .85, SRMR = .06 and AIC = 21030.25. An examination of the modification indices (MIs), however, indicated that a number of additional parameters should be specified. Specifically, covariances were added between the item pairs P5 and P6 (MI = 102.85, EPC = .65), on the Prejudice factor, and F2 and F9 (MI = 35.55, EPC = .15), on the Friendship Discrimination factor. These covariances were added to the model as they were considered theoretically acceptable as item pairs were located within the same factor and were considered thematically related. Additionally, one item, C4, from the Classroom Discrimination factor showed evidence of cross-loading onto another factor (Friendship Discrimination; MI = 16.54, EPC = .28) and was removed from the analyses. The model was re-specified after each additional parameter was added, as per recommended guidelines (Byrne, 2012). Parameters were specified according to which item pairs showed the highest levels of misfit, based on their MI and EPC values. An analysis of both Δ AIC values and the χ^2 difference test showed that each parameter change significantly improved model fit. For each re-specified model a Δ AIC value greater than 10 was observed, this indicated support

for the re-specified model as each parameter change produced a model with a lower AIC value. Additionally, each new model was found to produce a significantly lower χ^2 value, as indicated by the χ^2 difference test (see Table 4.8). Hence, the respecified model was retained. The final model was found to consist of 38-items, with two inter-item covariances and seven latent variables (factors). Acceptable model fit was found for this final model; $\chi^2(642) = 1011.15, p < .001; Q = 1.57; RMSEA = .049$ (90% CI: .04, .06); CFI = .909; TLI = .900, SRMR = .059 (see Model D in Table 4.8). Figure 4.2 contains a diagrammatic outline of this final model.

Table 4.8

Model Specifications for First Order CFA of the Stigma Factors in Study 1B

Model	Parameter Change	$\chi^2(df)$	Q	RMSEA (CIs)	CFI	TLI	SRMR	AIC	Delta AIC	χ^2 diff (df)
A	EFA Model	1250.76 (681)***	1.83	.06 (.05, .07)	.86	.85	.06	21030.25	-	-
B	Covariance with P5 and P6	1133.47 (680)***	1.67	.05(.05, .06)	.89	.88	.06	20914.97	115.28	117.29 (1)***
C	Covariance with F9 and F2	1096.66 (679)***	1.62	.05 (.05; .06)	.90	.89	.06	20880.16	34.81	36.81 (1)***
D	C4 Removed	1011.15 (642)***	1.58	.05 (.04; .06)	.91	.90	.06	20420.77	459.33	85.51 (37)***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

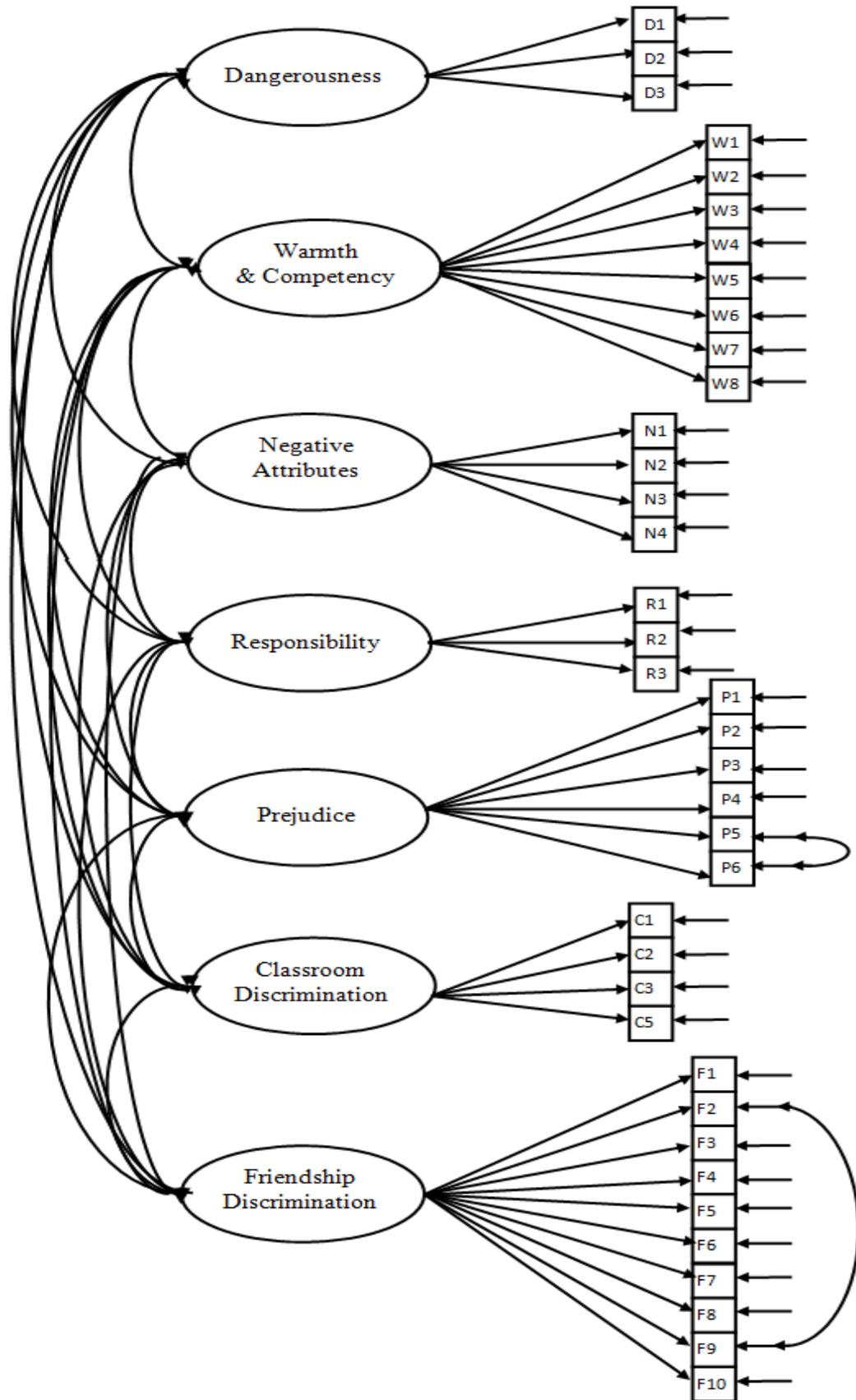


Figure 4.2. Final First-Order CFA Model Showing the Seven Stigma Factors Observed in Study 1B.

Factor loadings for the final first order CFA model are summarised in Table 4.9 below. As can be seen in this table, all items showed significant factor loadings. One item, P2, was found to exert a high factor loading ($\beta = 1.01$, $p < .001$) on the Prejudice factor. However, review of this item indicated that this was not due to problems with multicollinearity. All other standardised coefficients ranged from .43 to .89.

Table 4.9

Standardised and Non-Standardised Factor Loadings (Standard Errors) for First Order CFA Model in Study 1B

Item	β	B	SE
Dangerousness			
D1 Michelle/Michael is dangerous	.83	1.00	---
D2 Michelle/Michael is Aggressive	.70	.85	.11
D3 Michelle/Michael is frightening	.67	.82	.11
Warmth & Competence			
W1 Michelle/Michael is warm-hearted	.56	1.00	---
W2 Michelle/Michael is good-natured	.58	1.04	.12
W3 Michelle/Michael is honest	.59	1.06	.16
W4 Michelle/Michael is friendly	.65	1.17	.13
W5 Michelle/Michael is competent	.77	1.37	.14
W6 Michelle/Michael is capable	.63	1.12	.16
W7 Michelle/Michael is intelligent	.69	1.05	.13
W8 Michelle/Michael is skilled	.59	1.05	.12
Responsibility			
R1 Michelle/Michael acts like this because she copies others	.62	1.00	---
R2 Michelle/Michael acts this way because she wants to and thinks it's cool	.67	1.09	.10
R3 Michelle/Michael acts like this to show off or get attention	.66	1.06	.11
Negative Attributes			
N1 Terrible/Excellent	.49	1.00	---
N2 Horrible/Wonderful	.58	1.18	.13
N3 Nasty/Joyful	.43	.87	.12
N4 Awful/Great	.59	1.19	.13
Prejudice			
P1 I would feel afraid of Michelle/Michael	.80	1.00	---
P2 I would feel embarrassed by Michelle/Michael	1.01	1.27	.10
P3 Michelle/Michael would make me feel insecure	.89	1.11	.11
P4 I would make fun of Michelle/Michael	.66	.82	.09
P5 Michelle/Michael would make me angry	.62	.78	.11
P6 Michelle/Michael would irritate me	.62	.78	.11

Item	β	B	SE
Classroom Discrimination			
C5 Help Michelle/Michael with a class project	.56	1.00	---
C3 Help Michelle/Michael with a math problem	.50	.89	.10
C2 Lend Michelle/Michael a pencil	.44	.78	.10
C1 Tell Michelle/Michael a homework assignment	.58	1.04	.11
Friendship Discrimination			
F1 Hang out after school with Michelle/Michael	.68	1.00	---
F2 Share a secret with Michelle/Michael	.56	.81	.08
F3 Invite Michelle/Michael to my house	.68	1.00	.08
F4 Sit next to Michelle/Michael in class	.61	.89	.07
F5 Hang out with Michelle/Michael during free time	.66	.97	.07
F6 Share part of my lunch with Michelle/Michael	.59	.86	.09
F7 Call on the phone	.64	.94	.08
F8 Sit next to on bus on a field trip	.65	.95	.08
F9 Tell Michelle/Michael something nobody knows	.48	.70	.07
F10 Choose Michelle/Michael as a partner in a game	.63	.92	.08

All seven factors also showed significant correlations with all other stigma factors. These correlations ranged from (.17 to .53), with the valence of associations between factors being in the expected trend for all correlations. Positive correlations were found between all seven factors indicating that higher endorsements of one factor were significantly associated with higher endorsements of another factor. These factor correlations are displayed in Table 4.10. Descriptive Statistics for the final first order CFA factors, including the modified Classroom Discrimination factor, are presented in Table 4.11.

Table 4.10

Summary of Inter-Correlations among the First Order CFA Stigma Factors in Study 1B

	1	2	3	4	5	6
1 Dangerousness	1					
2 Warmth & Competence	.17***	1				
3 Responsibility	.20***	.23***	1			
4 General Evaluations	.22***	.53***	.26***	1		
5 Prejudice	.39***	.31***	.36***	.37***	1	
6 Friendship Discrimination	.25***	.42***	.25***	.43***	.33***	1
7 Classroom Discrimination	.21***	.29***	.28***	.25***	.24***	.47***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4.11

Descriptive Statistics, Reliability and Normal Distributions for Final First Order CFA Stigma Factors for Study 1B

Factor	M	SD	Possible Range	Attained Range	α	Skewness	Kurtosis
Dangerousness	6.17	2.58	3-15	3-14	.73	.62	.16
Warmth & Competence	22.07	5.48	8-40	9-39	.85	.28	.10
Responsibility	4.98	2.17	3-12	3-12	.81	1.17	.79
Negative Attributes	12.04	2.40	4-20	5-20	.77	.33	1.18
Prejudice	12.02	5.20	6-30	6-30	.85	1.15	1.24
Classroom Discrimination	6.65	2.38	4-16	4-16	.78	1.02	1.30
Friendship Discrimination	26.59	6.49	10-40	10-40	.91	-.33	-.11

4.9.1 Higher-Order CFA Model A higher-order CFA is one where higher-order constructs or latent variables are indicated by first-order latent variables and are considered to be a level of abstraction above first-order constructs (Marsh & Hocevar, 1985). A higher order CFA was carried out on the data in order to 1) Examine whether the seven stigma factors finalised in the first order CFA represented the constructs of Stereotypes, Prejudice and Discrimination and 2) Establish empirical evidence in support of the theoretical proposition that Stigma is composed of the three constructs Stereotypes, Prejudice and Discrimination.

First, a second-order CFA was specified denoting two second-order constructs; Stereotypes and Discrimination. The Stereotypes factor was specified to be composed of four first order factors; Warmth & Competence, Dangerousness, Responsibility and Negative Attributes. The first order factors Friendship Discrimination and Classroom Discrimination were specified to converge onto the higher-order factor, Discrimination. A higher-order factor was not specified for the Prejudice component as results from both the EFA and first order CFA indicated that this Stigma component was already represented by just one factor. Results from the second order CFA showed acceptable model fit; $\chi^2(654) = 1061.25, p < .001$; $Q = 1.62$; RMSEA = .051 (90% CI: .05, .06); CFI = .899; TLI = .892, SRMR = .07. However, an examination of the modification indices and EPC values indicated that the second order model should be re-specified with a covariance added between the factors Warmth & Competence and Negative Attributes (MI = 16.00, EPC = .800). As a covariance between these two factors also made conceptual sense, the second order model was

respecified to include this additional parameter. Acceptable model fit was observed; χ^2 (653) = 1043.97, $p < .001$; $Q = 1.60$; RMSEA = .050 (90% CI: .05, .06); CFI = .903; TLI = .896, SRMR = .07. Although this covariance improved the fit of the second order CFA model, the overall model still did not significantly improve upon the first order CFA model.

Results from this second order CFA showed that the factors Dangerousness ($\beta = .56$, $p < .001$), Warmth & Competence ($\beta = .52$, $p < .001$), Responsibility ($\beta = .52$, $p < .001$) and Negative Attributes ($\beta = .65$, $p < .001$) converged onto the higher-order factor of Stereotypes. This Stereotypes factor appeared to be associated with higher endorsements on these four factors. The factors Classroom Discrimination ($\beta = .75$, $p < .001$) and Friendship Discrimination ($\beta = .81$, $p < .001$) were found to converge onto the higher-order factor, Discrimination. This Discrimination Factor was seen to reflect higher endorsements on these two factors.

Next, a third-order factor model was specified to assess whether the three constructs of Stereotypes, Prejudice and Discrimination could be subsumed under a higher-order stigma factor. Results from the Third-Order CFA also showed acceptable model fit; χ^2 (654) = 1058.80, $p < .001$; $Q = 1.61$; RMSEA = .051 (90% CI: .05, .06); CFI = .900; TLI = .892, SRMR = .07. Hence, results provided empirical support for the tripartite theoretical model of stigma as it demonstrated acceptable model fit. However, the third-order model was not found to significantly improve upon the first order or second order models, as the first order model produced a significantly lower χ^2 test-statistic and AIC value, as indicated by the χ^2 difference test and Δ AIC values, respectively. A summary of fit indices for each higher-order CFA model is displayed in Table 4.12. As can be seen in this table, although all models showed acceptable model fit, the First Order CFA appears to be the best empirically fitting model, as it shows the best fit statistics, in comparison to the higher order models.

Table 4.12

Model Specifications for Higher-Order CFA of Stigma Models in Study 1B

Model	Parameter Change	$\chi^2(df)$	Q	RMSEA (CIs)	CFI	TLI	SRMR	AIC	Delta AIC	χ^2 diff (df)
D	First Order CFA	1011.15 (642)***	1.58	.05 (.04; .06)	.91	.90	.06	20420.77	459.33	85.51 (37)***
E	Second-Order CFA	1061.25 (654)***	1.62	.05 (.05, .06)	.90	.89	.07	20446.87	26.10	50.10 (8)***
F	Second Order with Covariance	1043.97 (653)***	1.60	.05 (.05, .06)	.90	.90	.07	20431.59	15.28	17.28 (1)***
E	Third Order CFA	1058.80 (654)***	1.61	.05 (.05, .06)	.90	.89	.07	20444.43	12.81	14.83 (1)***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Results from the third-order CFA showed that the factors, Stereotypes ($\beta = .93$, $p < .001$), Prejudice ($\beta = .44$, $p < .001$) and Discrimination ($\beta = .97$, $p < .001$), together converged onto the higher order factor of Stigma. Hence, this model indicated that stigma is composed of Stereotypes, Prejudice and Discrimination, which is consistent with the theoretical proposition. Parameter estimates for the Higher-order CFA model are displayed in Table 4.13. Correlations between Stereotypes, Prejudice and Discrimination are presented in Table 4.14. The path diagram for the third-order Stigma model with parameter estimates can be seen in Figure 4.3.

Table 4.13

Standardised and Non-Standardised Factor Loadings (Standard Errors) for Third-Order Stigma Model

Item	β	B	SE
Dangerousness			
D1 Michelle/Michael is dangerous	.83	1.00	---
D2 Michelle/Michael is Aggressive	.70	.85	.12
D3 Michelle/Michael is frightening	.67	.81	.11
Warmth & Competence			
W1 Michelle/Michael is warm-hearted	.57	1.00	---
W2 Michelle/Michael is good-natured	.59	1.03	.12

Item	β	B	SE
W3 Michelle/Michael is honest	.60	1.05	.15
W4 Michelle/Michael is friendly	.66	1.15	.13
W5 Michelle/Michael is competent	.77	1.36	.14
W6 Michelle/Michael is capable	.63	1.11	.16
W7 Michelle/Michael is intelligent	.69	1.21	.13
W8 Michelle/Michael is skilled	.58	1.03	.12
Responsibility			
R1 Michelle/Michael acts like this because she copies others	.61	1.00	---
R2 Michelle/Michael acts this way because she wants to and thinks it's cool	.68	1.10	.10
R3 Michelle/Michael acts like this to show off or get attention	.66	1.08	.11
Negative Attributes			
N1 Terrible/Excellent	.50	1.00	---
N2 Horrible/Wonderful	.58	1.17	.13
N3 Nasty/Joyful	.43	.87	.12
N4 Awful/Great	.59	1.20	.13
Prejudice			
P1 I would feel afraid of Michelle/Michael	.79	1.00	---
P2 I would feel embarrassed by Michelle/Michael	1.02	1.29	.11
P3 Michelle/Michael would make me feel insecure	.88	1.12	.11
P4 I would make fun of Michelle/Michael	.66	.83	.10
P5 Michelle/Michael would make me angry	.63	.80	.11
P6 Michelle/Michael would irritate me	.63	.79	.11
Classroom Discrimination			
C5 Help Michelle/Michael with a class project	.56	1.00	---
C3 Help Michelle/Michael with a math problem	.51	.90	.11
C2 Lend Michelle/Michael a pencil	.44	.79	.10
C1 Tell Michelle/Michael a homework assignment	.58	1.04	.11
Friendship Discrimination			
F1 Hang out after school with Michelle/Michael	.68	1.00	---
F2 Share a secret with Michelle/Michael	.56	.82	.08
F3 Invite Michelle/Michael to my house	.68	1.00	.08
F4 Sit next to Michelle/Michael in class	.60	.89	.08
F5 Hang out with Michelle/Michael during free time	.66	.97	.07
F6 Share part of my lunch with Michelle/Michael	.59	.87	.10
F7 Call on the phone	.64	.94	.08
F8 Sit next to on bus on a field trip	.65	.96	.08
F9 Tell Michelle/Michael something nobody knows	.48	.71	.07
F10 Choose Michelle/Michael as a partner in a game	.62	.92	.08

Item	β	B	SE
Stereotypes			
Warmth & Competence	.63	1.00	---
Negative Attributes	.71	.98	.16
Responsibility	.52	.89	.20
Dangerousness	.48	1.10	.28
Discrimination			
Friendship Discrimination	.78	1.00	---
Classroom Discrimination	.73	.77	.12
Stigma			
Stereotypes	.93	.34	.05
Prejudice	.44	.35	.07
Discrimination	.97	.51	.06

Note: All factor loadings were significant at $p < .001$.

Table 4.14

Summary of Inter-Correlations Among Stereotypes, Prejudice, Discrimination and Stigma

	1	2	3
1 Stereotypes	1		
2 Prejudice	.48***	1	
3 Discrimination	.52***	.34***	1
4 Stigma	.86***	.69***	.79***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

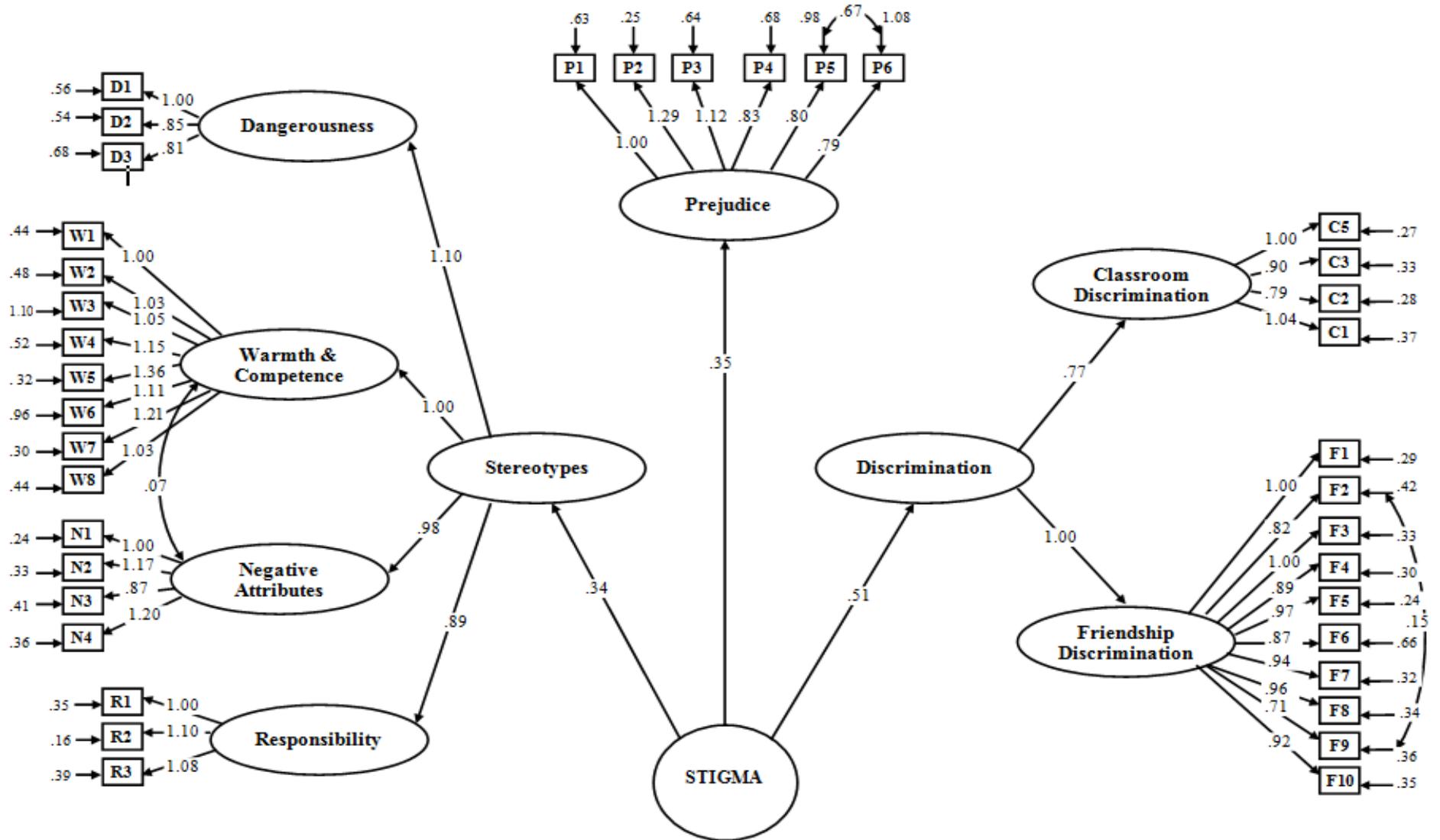


Figure 4.3. Path Diagram Showing Final Third-Order Stigma model for Study 1B.

4.10 Conclusions

Exploratory and Confirmatory factor analyses were conducted in order to examine the validity of a selection of instruments as a measurement model of stigma among adolescents and to explore whether the observed model empirically fit the tripartite conceptualisation of stigma. The EFA found support for a seven factor model of stigma, assessing the constructs of Dangerousness, Warmth & Competence, Responsibility, Negative Attributes, Prejudice, Classroom Discrimination and Friendship Discrimination. High item loadings and inter-factor correlations were observed for each of these factors. However, these factors did not show evidence of Known-Groups validity, although some evidence of convergent validity was observed. Results from the CFA indicated acceptable model fit for this observed model, providing further support for the validity of this seven factor model of stigma. Furthermore, the results from the Higher-Order CFAs provided evidence to suggest that these seven factors empirically represent the three stigma constructs; Stereotypes, Prejudice and Discrimination, as proposed by the tripartite model of stigma. Nonetheless, results indicated that the first order (seven factor) CFA model appeared to be superior to the higher order stigma models.

Chapter 5

Study 1 Discussion

5.1 Aim of Chapter

This chapter provides a detailed discussion and synthesis of the findings which emerged from Study 1 (A & B). First, this chapter provides a detailed discussion on the validity of the stigma model which emerged from this research. Next, the observed empirical support for the tripartite conceptualisation of stigma is discussed. In addition, the theoretical and practical implications of this research are reviewed. Finally, limitations and recommendations for future research are outlined.

5.2 Brief Overview of Research Aims

The overall aim of this study (A & B) was to develop a valid and reliable model of stigma that could be used to assess adolescents' stigmatising responses toward peers with depression. Specifically, a selection of stigma measures were subjected to exploratory (EFA; Study 1A) and confirmatory (CFA; Study 1B) factor analyses in order to establish the most parsimonious factor structure of these measures as a tool to measure depression stigma among adolescents. An additional aim of Study 1B was to use higher-order confirmatory factor analyses to investigate whether the observed measurement model empirically fit the theoretical, tripartite structure of stigma (i.e., Stereotypes, Prejudice and Discrimination) as proposed by Corrigan et al., (2003; 2005).

5.3 Evaluation of the Seven Factor Model of Stigma

Overall, the results from Study 1 supported the psychometric validity of an initial seven factor measurement model of adolescent depression stigma. Specifically, exploratory factor analyses were initially conducted to assess the dimensionality of a selection of stigma measures (58 items which collectively comprised 16 separate stigma facets) among a sample of adolescents, where each scale was hypothesised to tap into one of the three proposed stigma constructs (e.g. Stereotypes, Prejudice and Discrimination). Following guidelines recommended by Kline (2011) a total of 39 items were retained, with results suggesting that a seven factor solution best represented these items. These factors were identified as; Perceptions of Dangerousness (3-items), Warmth & Competence (8-items), Perceptions of Responsibility (3-items), Negative Attributes (4-items), Prejudice (6-items), Classroom Discrimination (5-items) and Friendship Discrimination (10-items). This seven factor

solution was found to account for 62.84% of the total variance. Cronbach's alpha coefficients suggested scores on these factors were internally consistent. Although the upper bound estimates for Cronbach's alpha for the Friendship Discrimination factor indicated possible item redundancy, corresponding inter-item correlations suggested adequate variability of item content (Kline, 2005). Hence, the factor was retained.

From a theoretical perspective, the clustering of the observed items into seven separate stigma factors appeared to make conceptual sense as similar items appeared to be grouping together. Additionally, these observed factors appeared to be conceptually consistent with the types of factors that emerged from other thematically similar research within the adult literature. For example, Brown (2008) used EFA to examine the factor structure of the Attribution Questionnaire (AQ; Corrigan et al., 2004) and, similar to the current findings, observed that Dangerousness and Responsibility appeared to represent two separate factors. Brown (2008) also found that positive and negative emotional responses appeared to load onto two separate components. This finding might help to explain why the Prejudice factor in the current study was found to be comprised of items from the Anger and Fear subscales, but not any of the Pity items. If positive and negative emotions tend to cluster onto separate factors, there may have been too few items assessing positive emotional responses to detect a 'Positive Emotions' or an 'Anti-Prejudice' factor, in the current research, as the Pity sub-scale only consisted of three items. Similarly, Madianos et al. (2012) used factor analysis to develop a measure of public attitudes toward mental illness and found evidence to suggest that stigma includes both positive and negative stereotypes. This finding that intergroup attitudes may contain both positive and negative aspects appears to be robust within the general attitude literature (Pacilli et al., 2013) and helps account for why Warmth & Competence appears as a separate component from Dangerousness, Responsibility, and Negative Attributes. Furthermore, other research that has attempted to design perceived or internalised mental health stigma measures with adults also suggest that items which reflect cognitive, affective and behavioural aspects of stigma tend to cluster separately (King et al., 2007; Martin, 2010; Ritsher, Otilingam & Grajales, 2003), which is consistent with the current findings.

As the emerged factors in the current research appeared to make conceptual sense and all items exhibited high factor loadings (ranging from .51 to .85), good reliability and strong inter-item correlations; the EFA results were considered to provide initial empirical support for a seven factor measurement model of stigma. Thus, all seven stigma factors were retained and subjected to a confirmatory factor analysis using a separate sample of adolescents. The

purpose of this first-order CFA was to further assess the validity of the observed measurement model and to consolidate understanding of the empirical fit of these stigma factors among an adolescent sample. The results from the first-order CFA also provided evidence to support the psychometric soundness of a seven factor measurement model of stigma. First, acceptable model fit was observed across all fit indices (e.g. RMSEA $<.05$, CFI $>.90$, TLI $>.90$). In addition, significant correlations were observed between all seven factors, providing further evidence to suggest that these domains measured distinct but related concepts. Results from the CFA also revealed that all seven factors possessed good scale-score reliability. However, possible item redundancy on the Friendship Discrimination factor was suggested by an upper bound estimate of Cronbach's alpha. Nonetheless, corresponding inter-item correlations on this factor suggested adequate variability of item content (Kline, 2005). Hence, all items were retained. Thus, by replicating psychometric support for this seven factor measurement model of stigma in a separate sample of adolescents, the results from the CFA strengthen confidence in the observed factor structure and increase the validity of this measurement model of stigma.

It is important to note, however, that one item (P2: I would feel embarrassed by [target name]) on the Prejudice factor was found to evidence a factor loading greater than 1 ($\beta = 1.01$). Deegan (1978) argues that coefficients greater than 1 can be suggestive of item redundancy or multicollinearity issues. According to Kline (2005), multicollinearity is likely in situations where variables are operationalised using similar metrics. Although all items in the Prejudice factor possessed a negative connotation (e.g. I would feel afraid of [Target], I would make fun of [Target]), all items in this factor aimed at assessing different emotional responses (e.g. [Target] would make me angry). Moreover, an examination of the inter-item correlations between the items in this factor did not indicate evidence of item redundancy as all correlations ranged between $.28 - .75$, thus, multicollinearity was not thought to be an issue. Researchers such as Pilgrim et al. (2006) argue that standardised path coefficients greater than 1 can occur and are not necessarily problematic or indicative of a methodological limitation. This phenomenon is described in detail by Joreskog (1999) who also outlines why standardised solutions can produce structural coefficients greater than 1 in magnitude. In the current study, the P2 item assesses the emotional response of 'embarrassment', it is possible that this item may conceptually differ from the other items in the Prejudice factor, which attempt to assess other emotional reactions such as anger, fear, insecurity, irritation and teasing. This may explain why the coefficient for this item differs from the coefficients of the

remaining items in the factor. Nonetheless, overall, the results from the first-order CFA appeared to provide additional empirical support for the seven factor stigma model.

Crucially, although the EFA and CFA results supported the validity of a seven-factor model of stigma, adolescents in these studies were not found to endorse overly negative responses on any of these factors. Specifically, stigma responses appeared to fall within the mild to moderate range on all seven factors, while endorsements of Dangerousness and Responsibility appeared to be particularly low. However, other research has indicated that the nature of stigmatising responses may vary across different disorders (Ebnetter & Latner, 2013; Parcesepe & Cabassa, 2013) and there is some evidence to suggest that adolescents with depression may not be as readily stigmatised (on certain domains) as people with other mental health disorders (Watson et al., 2004; Walker et al., 2008). For example, although individuals with personal histories of depression often report experiencing blame or feelings of shame as a result of their condition (Barney et al., 2009; Moses, 2010), other research has indicated that the public may regard people with depression as being less responsible for their disorder than people with other conditions (Ebnetter & Latner, 2013). Notably, research by Walker et al. (2008) reported that child respondents attributed more blame to parents, when responding to a child target with depression. Moreover, Perry et al. (2007) found that the public tended to view adolescents with depression as being less dangerous than younger children with depression. However, it is difficult to compare the current findings with that of other research as adolescents' responses to targets with other mental health conditions were not assessed in this research. Additionally, it is difficult to quantify the level of stigmatisation expressed by the adolescents in the current study, as these factors did not include specified cut-off points for denoting 'stigmatising' responses. Hence, future research may benefit from establishing specific cut-off points or by comparing adolescents' responses toward peers with different conditions.

5.3.1 Overview of the Construct Validity of the Stigma Model It is important to note that Study 1A also examined the construct (convergent and known-groups) validity of the observed seven-factor stigma model. Specifically, convergent validity was established by assessing whether higher levels of knowledge about mental illness would be associated with lower stigmatising responses on the observed stigma factors, as per previously established trends (Holmes et al., 1999). Evidence of convergent validity was found in that higher scores on the knowledge scale were significantly correlated with lower scores on each of the stigma factors, except for Warmth & Competence. Although no significant association was found

between knowledge and Warmth & Competence, a negative correlation between these factors was still observed, which is consistent with the expected trend.

Researchers such as Abele, Cuddy, Judd and Yzerbyt (2008), Kervyn, Yzerbyt and Judd (2010) and Cuddy et al. (2008) claim that warmth and competence are universal dimensions of social perception. It is proposed that judgments about individuals or social groups are made through consideration of their perceived friendliness, trustworthiness or kindness (e.g. Warmth) and their intelligence, skill, power or efficacy (e.g. Competence) and that these stereotypes account for important variations in the type of prejudicial and discriminatory responses that individuals express in numerous intergroup contexts (Fiske et al., 2002; Cuddy, Glick & Beninger, 2011; Sadler et al., 2012). As these dimensions appear to reflect more universal forms of social judgment, it is possible that the association between these constructs and knowledge about mental illness may differ from the relationship observed between knowledge and the other more mental health specific stigma factors (e.g. Perceptions of Dangerousness, Responsibility). This could help account for why no significant correlation was observed between the Warmth & Competence factor and knowledge of mental illness in the current study.

Additionally, it is important to note that knowledge in the current study was assessed using the Wahl et al. (2012) Knowledge of Mental Illness scale. This scale was designed to assess adolescents' knowledge of the biological causes and consequences of 'mental illness', generally. Conversely, the stigma measures utilised in the current study focused on assessing adolescents' responses toward a peer with a specific mental health condition; depression. Although significant correlations were observed between knowledge and all Stigma factors, apart from the Warmth & Competence factor, these correlations were weak (-.15 to -.23). It is possible that the discrepancy between the global focus of the knowledge measure and the specific focus of the Stigma measures may also help account for why the observed correlations were low or why the relationship between the Warmth & Competence factor and knowledge was non-significant. Higher associations between knowledge and the stigma factors may have been observed if the research had been more focused on assessing adolescents' specific knowledge of depression. Furthermore, it is important to note although research has suggested that higher levels of mental illness knowledge are associated with lower levels of stigma, this research has largely been carried out on adult populations (Crisp, Cowan & Hart, 2004; Jorm et al., 2006; Sartorius, 2005). Therefore, it is difficult to compare the relationship observed between these two constructs in the current study with that of other research. On the other hand, it is important to note, that other research has also found

evidence to suggest that knowledge about mental illness and stigmatising attitudes may, at times, be unrelated or inversely related (Angermeyer, Holzinger & Matschinger, 2009; Martin et al., 2007).

Finally, it is important to acknowledge that the Knowledge of Mental Illness scale was found to possess poor levels of reliability in the current study. There is a possibility that the low levels of reliability observed in the current study may have impacted on the accuracy of the research findings reported here, hence, it is recommended that some caution is expressed when generalising these findings. The low scale reliability observed in the current research was unexpected as the authors of the scale, Wahl et al. (2012), had previously reported good scale reliability. One possible explanation for the discrepancy between the reliability observed in Study 1A and that reported by previous research is that this scale was originally validated for use with adolescents from the United States (US), whereas the respondents in the current study were all residents within Ireland. Thus, there may be cultural differences between these two samples which may have impacted on the reliability and validity of this measure. Hence, future research may benefit from examining the validity and reliability of this scale in contexts outside of the US.

Known-groups validity, the second form of construct validity examined in the current research, was assessed by comparing the stigmatising responses of adolescents who had reported experiencing prior contact with a person with depression, with the responses of participants who had no previous contact. The only significant difference observed between these two groups was on the Friendship Discrimination factor. Results suggested that individuals who had experienced contact showed less negative responses than individuals who had no previous contact. No significant findings were observed on any of the other six factors, although the pattern of differences between the groups was in the expected direction, for the majority of Stigma factors. Thus, these results provided initial, weak support for known-groups validity. However, it is important to note that 'contact' in the current study was measured using a one item question which established whether participants 'knew someone like [the target]', with a forced yes/no response option. Thus, neither the type of relationship nor the quality of contact the participant had with the person who resembled the target was assessed. Previous research has found that these factors can moderate the relationship between contact and stigma responses (Angermeyer, Matschinger & Corrigan, 2004; Pettigrew & Tropp, 2000). Hence, it is possible that if this study had employed a more dynamic measure of the type of contact adolescents had with a person who resembled the

target peer, greater associations between contact and the stigma responses would have been observed.

In addition, the contact item did not explicitly refer to depression. Therefore, it is possible that when adolescents indicated whether or not they knew someone who resembled the target character, this perceived similarity or dissimilarity may have been based on some characteristic other than the target's prescribed emotional issues. Thus, this lack of clarification on what criterion adolescents used to judge similarity may potentially explain why no significant differences were observed between the 'contact' and 'non-contact' groups. This issue could be rectified in future research through the use of a manipulation check to ensure participants' ratings were based on the prerequisite behavioural characteristics of the target.

While there are some limitations associated with the way in which construct validity was assessed in the current research, these results provide some initial support for the validity of the seven factor measurement model of stigma which emerged from the EFA. Although a limitation of Study 1B is that it did not also include an assessment of construct validity, the inclusion of these validity checks in Study 1A is a key contribution to the current research base. Numerous researchers, such as Link et al. (2004) and Pinto et al. (2012), have contended that in order to advance the scientific measurement of mental illness stigma, greater evidence to support its construct validity is needed. As assessments of the validity of measures are scarce in the adolescent mental health stigma literature (Pinto et al., 2012), the inclusion of both known-groups and convergent validity assessments in this research represents an important advance in this research field.

5.4 Evaluation of the Empirical Support for the Tripartite Model of Stigma

Once the seven factor model of stigma had been validated and found to possess acceptable model fit in a separate sample of adolescents, a series of higher order CFAs were carried out using data from the adolescents who participated in Study 1B. The aim of these higher-order CFAs was two-fold: 1) To examine whether this seven factor measurement model empirically represented the constructs of Stereotypes, Prejudice and Discrimination and 2) To establish empirical evidence to support the theoretical proposition that these three constructs (e.g. Stereotypes, Prejudice and Discrimination) represented the higher order construct of Stigma.

In order to assess the theoretical construction of stigma, a second-order CFA was specified by denoting two second-order constructs; Stereotypes and Discrimination. The Stereotypes factor was specified to be composed of the four first order factors; Warmth & Competence, Dangerousness, Responsibility and Negative Attributes. A second higher-order factor, Discrimination, was specified to be composed of the first order factors, Friendship Discrimination and Classroom Discrimination. No higher order factor was specified for the Prejudice factor as results from the EFA and first-order CFA had suggested that this factor was only composed of individual indicators. Although results from this higher-order CFA model did show acceptable model fit, model fit was significantly poorer for the higher-order CFA than the First Order CFA. However, an examination of the modification indices indicated that an additional co-varying path should be added between the first order factors of Warmth & Competence and Negative Attributes. Although the Warmth & Competence and Negative Attributes factors empirically appear to represent separate constructs, both these constructs measure a form of general bias directed by adolescents toward the target. Hence, a content analysis of the factors was seen as supporting the conceptual link between these two constructs at a higher order level and thus the additional path was specified. The resulting respecified model showed significantly improved model fit. Hence, results from this higher order CFA provided empirical evidence to suggest that the seven first-order stigma factors could be subsumed under three constructs: Stereotypes, Prejudice and Discrimination as acceptable model fit was observed for this model. Additionally, all four Stereotype factors (Dangerousness, Responsibility, Warmth & Competence and Negative Attributes) and both Discrimination factors (Friendship Discrimination and Classroom Discrimination) were found to evidence significant factor loadings greater than .40 on their respective higher order factors. All individual indicators also retained significant factor loadings greater than .40, which provides additional evidence in support of this higher order structure.

As the second order CFA model was found to evidence acceptable model fit, a third-order CFA model was specified in order to examine whether the three Constructs, Stereotypes, Prejudice and Discrimination, could also be empirically represented by one higher order component; Stigma. Results suggested that this third order CFA model demonstrated acceptable model fit, indicating that stigma is composed of three separate constructs Stereotypes, Prejudice and Discrimination. All three constructs were found to correlate significantly with one another, as well as with the stigma construct, further suggesting that these factors measured related yet distinct aspects of stigma. The model results also indicated that the Stereotypes ($\beta = .93$) and Discrimination ($\beta = .97$) factors

appeared to have stronger associations with the stigma construct than the Prejudice factor ($\beta = .44$). This could suggest that Stereotypes and Discrimination are more influential elements of stigma than Prejudice.

Due to the lack of research that empirically examines the tripartite structure of stigma, there are few competing models in which to compare the current findings, and none that provide a comparison with other adolescent populations. Notably, Martin and Gallio (2015) used CFA to test the tripartite model of workplace stigma toward people with depression and also found empirical support to suggest that stigma is represented by three separate cognitive, affective and behavioural facets. Additionally, results indicated that stronger correlations existed between the cognitive and discrimination factors, than with the affective component (Martin & Gallio, 2015). Thus, these results may lend credence to the proposition that Stereotypes and Discrimination form a more dominant role in the composition of stigma, than Prejudice. However, Martin and Gallio (2015) suggested that, in their research, the relationship between the cognitive and discrimination domains may actually be reflective of a lack of discriminant validity between the two constructs, and contended that further work developing items to assess these constructs was warranted. Given the lack of other comparative models in this area, future research would benefit from further investigating the tripartite structure of stigma among adolescents, in order to draw more conclusive inferences about the interplay between stereotypes, prejudice and discrimination and their empirical relationship with stigma.

On a related note, research from the classic attitude literature suggests that although the three components of attitudes are expected to display a certain degree of positive inter-correlations (Allport, 1954); some independence between the constructs should be anticipated (Breckler, 1984; Pratkanis, Breckler & Greenwald, 1989). It is argued that cognition, affect and behaviour differ in their developmental roots and may be affected by different antecedents (Greenwald, 1982; Zajonc, 1980). Therefore, some discrepancy in the expression of these constructs may be expected (Olson & Zanna, 1993; Pratkanis et al., 1989). Researchers who adopt the tri-component view of attitudes also contend that the cognitive and affective components of attitudes can also differ in terms of their accessibility to the individual (Ajzen, 2001; Verplanken, Hofstee & Janssen, 1998), which may have a resultant effect on the expression of behaviour (Esses & Maio, 2002). It is proposed that in certain situations, individuals' evaluations or behaviour may be more guided by their beliefs regarding a particular object or social group and, at other times, their feelings may predominate (Ajzen, 2001; Lawton, Connor & McEachan, 2009; Tropp & Pettigrew, 2005).

It is proposed that the influence exerted by each attitude domain is dependent upon the behavioural context under assessment (Weiss, 2002). Thus, it is argued that while the tripartite framework provides a useful heuristic for thinking about the antecedents and consequences of attitudes, endorsements across the three domains may vary for a given attitude object or social situation (Olson & Zanna, 1993). This may help explain why Stereotypes and Discrimination appeared to have a stronger relationship with stigma, in the current research, than Prejudice.

However, researchers also argue that understanding about the relationship between cognition, affect and behaviour, and the knowledge gained by assessing these three components, is linked to the manner in which these constructs are assessed (Esses & Maio, 2002). Thus, another potential explanation for why Prejudice appears to have a lower association with stigma in the current research could be due to discrepancies in the way in which the three constructs were measured. Both Stereotypes and Discrimination are second order factors, which are composed of several first order latent constructs and numerous individual indicators. It is therefore possible that these factors appear to be exerting a more substantial influence on stigma because these factors are represented by a substantially larger amount of indicators than the Prejudice factor, which was composed of just six individual first order items. It is also important to note that the results of this study may indicate that these six indicators of Prejudice do not reflect the full potential dimensionality of the construct and that is why this construct appears to have a lower association with stigma than the other two factors. For example, social researchers, such as Rutland et al. (2005), propose that children and adolescents are more likely to show intergroup biases through their lack of positive, rather than their endorsement of negative, responses. However, in the current research, the Prejudice factor exclusively assessed adolescents' endorsements of fear and anger toward the target. Thus, the narrow focus of this factor on these negative emotions may account for its apparent lower association with stigma. According to Breckler (1984) no single measure can be assumed to capture the full nature of these stigma constructs and that in order to generate a full understanding of the relationship between the cognitive, affective and behavioural components of stigma, multiple, independent measurements of these dimensions are needed. Therefore, it is strongly recommended that future research should investigate whether there are additional aspects of adolescents' prejudicial responses that are not represented in the current stigma model, and whether assessing additional aspects of Prejudice, influences its relationship with the overall stigma construct.

Another crucial finding from this research is that while both the second and third order CFA models exhibited acceptable model fit, both models appeared to produce significantly lower fit than the first order CFA model. Thus, the results seem to suggest that while the seven observed factors conceptually represent the constructs of Stereotypes, Prejudice and Discrimination, which in turn represent the construct of stigma, the detected decrease in model fit for these higher order models may indicate that from a measurement perspective at least, stigma may be best represented in terms of these seven first-order factors, as this was the best fitting model. However, it is important to note that in order to test the empirical construction of stigma, it was necessary to specify higher order constructs. In order to identify these higher order constructs, it was necessary to specify additional parameters for both the second order and third order models. Importantly, these parameters were not needed in order to test the first order constructs. According to Tabachnick and Fidell (2007) a sample size of 200 in CFA is considered fair and Shah and Goldstein (2006) identified 200 as the typical sample size employed in published CFA and SEM studies. However, it is argued that a sample size of 200 cases may be too small for the analysis of complex models (Kline, 2011). As Kline (2011) notes, one of the problems associated with low sample size is the resultant loss of statistical power. Thus, while the current sample size ($n=236$) may have provided adequate power to assess the first order stigma model, it is possible that, as a result of the addition of the higher order parameters, the second and third order CFAs may have lacked sufficient power to detect a better fitting model. Hence, it is possible that better model fit may have been observed for these models had a larger sample size been employed. Overall, the higher-order CFAs provide initial support for the tripartite model of stigma among adolescents but further work on model refinement may be prudent for future research

5.5 Strengths and Implications of the Research Findings

Although numerous researchers have advocated for the need to develop more comprehensive, standardised measures of public mental health stigma, there are only a few empirical studies that have attempted to do this (Madianos et al., 2012; Martin, 2010; Martin & Gallio, 2015; Pinto et al., 2012). The current research is novel and advances the field of adolescent mental health stigma research as it is among the first to evaluate the validity of measures used to assess stigma among an adolescent sample. These stigma factors were independently validated among two separate samples, through the use of exploratory and confirmatory factor analyses. Statisticians readily argue that when analysing the factor

structure of psychometric instruments both exploratory and confirmatory approaches should be employed as both forms of analyses are necessary in order to be able to draw substantiated conclusions about the observed results (Byrne, 2012; Costello & Osborne, 2005). The few existing studies which have attempted to examine the validity of mental health stigma model have rarely utilised both methodologies, typically employing either an exploratory or a confirmatory factor analytic approach (King et al., 2007; Madianos et al., 2012; Martin, 2010). Thus, a major strength of this research is that it included both exploratory and confirmatory factor analytic techniques to explore the validity of the observed measurement model. This in turn helps to strengthen confidence in the psychometric properties of the observed stigma factors and increase the generalisability of the research findings.

Another novel advantage of the current research is that it assessed the validity and reliability of a wide selection of stigma measures as indicators of public mental health stigma among adolescents. Although researchers such as Pinto et al. (2012) also carried out research examining the factor structure of measures used to assess stigma among adolescents, these researchers only examined the validity of one stigma instrument; the revised – Attribution Questionnaire (r-AQ; Watson et al., 2004; Corrigan et al., 2003). The r-AQ proposes to measure seven different facets of stigma (e.g., dangerousness, pity, anger, responsibility, fear, help and avoidance); however, each of these factors is measured by a single item (Corrigan et al., 2005a). Notably, although Pinto et al. (2012) established some support for the validity of the r-AQ, their amended model was found to account for only one-third of the observed variance. This appears to indicate that there may be important aspects of adolescents' stigma responses not accounted for by the r-AQ. Conversely, the results from the EFA indicated that the current stigma model accounted for almost 63% of the total variance. Although this finding still suggests that there may be aspects of adolescents' stigma responses not captured in the current model, the increase in the amount of variance accounted for in the current research shows the value of assessing numerous aspects of the type of stereotypes, prejudice and discriminatory responses adolescents display toward their peers with depression. Thus, the current research helps to address limitations with the current approaches to stigma measurement among adolescents. Simultaneously, this research highlights the importance of identifying additional aspects of stigma that may be uniquely expressed by adolescents. This is an important issue for future research to address; further qualitative research in this area may be particularly useful in this regard.

The empirical support observed for the seven factor model of stigma in the current research is an important finding and has several notable implications. First, it is important to

note that although the EFA initially included 58 items, which collectively assessed 16 different aspects of stigma, the final stigma model was only found to contain 38 items; representing seven separate facets of stigma. Notably, the majority of the instruments used in this research were tools that were designed to either measure mental health stigma among adults or stigma more generally. Due to the number of modifications that were necessary to make to the original factor structure of these measures, the results indicate that there may be important discrepancies between how adults stigmatise individuals with mental health problems (such as depression) and the type of stigma expressed by adolescents. Hence, the findings from the current research point to potential limitations associated with current measurements of stigma among adolescents, and highlight the importance of establishing new, valid measures of mental health stigma among children and adolescents.

These findings also have important implications for anti-stigma initiatives. It is argued that the establishment of valid methods of assessing stigma is an essential, pre-requisite for effective anti-stigma programmes (Emerton, 2010). It is only through using accurate measures of stigma that researchers and practitioners will be able to gain greater understanding and insight into the factors that influence or maintain stigma (Mukolo & Heflinger, 2010). For example, standardised stigma measurements allow researchers to examine the individual and contextual correlates of stigmatising attitudes, which are pertinent for informing intervention design (Martin, 2010). Moreover, valid and reliable measurements are also important in order to enable the synthesis and comparison of findings across the various research studies (Link et al., 2004) and anti-stigma programmes. Thus, this research represents an important, initial step toward the establishment of better, standardised measurements of mental health stigma, and serves as a foundation in the advancement of the evaluation, understanding and reduction of stigma in adolescents.

Additionally, as discussed throughout this study, although stigma is widely proposed to be comprised of three inter-related constructs; Stereotypes, Prejudice and Discrimination (Corrigan et al., 2000), this research is the first to empirically assess the validity of this tripartite conceptualisation among adolescents. Theoretical formulations about mental health stigma can contribute significantly to scientific understanding by providing a conceptual framework around which researchers can systematically assess the construct (Corrigan, 2000; Madianos et al., 2012). Thus, given the value placed on theoretical framework in programme evaluation (Costa & Kahn, 2013; Pinto-Foltz & Logsdon, 2009), the support evidenced for the tripartite model of stigma in the current study has several important implications. First, the results provide empirical evidence to suggest that stigma is comprised of separate

cognitive, affective and behavioural aspects. Thus, these results suggest that in order to gain a thorough understanding of the construct, stigma should be assessed according to this tripartite conceptualisation. It is important to recognise this multidimensional nature of stigma and use this tripartite model to inform future research (Jorm & Wright, 2008).

This finding may have particular utility for future anti-stigma research or intervention design as it is hypothesised that factors which affect the maintenance or expression of one stigma component may not influence another component (Earnshaw & Chaudoir, 2009; Hinshaw, 2007). It is important that researchers and practitioners are cognisant that stigmatising attitudes may reflect or operate through different cognitive, affective and behavioural components; therefore, it may be necessary to employ different strategies in order to reduce stigmatising responses in each of these domains (Martin, 2010). In other words, although some interventions may be successful at reducing overt discriminatory behaviours directed toward people with mental health problems, they may have no impact on other cognitive or affective aspects of stigma, which may exert more subtle effects on behaviour (Martin & Gallio, 2015). Additionally, this tripartite structure of stigma also implies that mental health disorders that are stigmatised on one component may not necessarily be stigmatised on another component (Jorm & Wright, 2008). Thus, the current research appears to support the utility of adopting a more multidimensional approach to stigma research and intervention design. Therefore, it is proposed that future research should recognise and assess all three dimensions of stigma in order to gain a more thorough understanding of how endorsements of public stigma vary across these three dimensions, depending on which mental health condition is targeted. This may help inform the development of more effective anti-stigma strategies.

This finding that Stereotypes, Prejudice and Discrimination represent separate cognitive, affective and behavioural constructs of stigma, also has important theoretical implications as these three components are thought to work in tandem to influence and maintain stigma (Earnshaw & Chaudoir, 2009). Specifically, Corrigan (2000) and Rusch et al. (2005) proposed that endorsement of a negative stereotype causes an emotional, prejudicial response, which in turn leads to the behavioural expression of discrimination (i.e. social distance). Previous research supports this claim, indicating that the type of stereotypes individuals endorse toward people with mental health problems influences the type of prejudicial responses expressed, as well as the type of discriminatory actions taken. For example, beliefs of ‘responsibility’ or ‘dangerousness’ are thought to produce feelings of ‘anger’ and ‘fear’ which lead to the rejection of persons with mental health problems

(Angermeyer & Matschinger, 2011; Ellison, Mason & Scior, 2015; Schomerus, Matschinger & Angermeyer, 2014). Theorists adopting this attribution perspective argue that individuals may hold different stereotypic beliefs about people with different mental health disorders which may lead to the endorsement of different prejudicial or behavioural responses. This may help explain why such variability is observed in stigma responses across the different disorders (Crisp et al., 2000; Schomerus et al., 2014), which in turn has important implications for the understanding and reduction of mental health stigma. Thus, this research is insightful as it addresses an important gap in the conceptualisation of stigma among adolescents and is among the first to highlight the importance of assessing all three cognitive, affective and behavioural components of stigma.

5.6 Limitations & Recommendations for Future Research

While this research is novel and makes key contributions to the literature, it is also important to discuss the limitations associated with the current research. First, although a variety of stigma instruments were used to comprehensively explore the validity of this construct among adolescents, all these measures were selected from pre-established stigma measurements. Attempts were made to select a range of measures that assessed various aspects of each of the hypothesised components of stigma (e.g. Stereotypes, Prejudice and Discrimination). However, according to the scale development guidelines outlined by DeVellis (2003), measurement development should also be informed by qualitative research and content analysis from field experts (Davis, 1992). This research did not employ either of these techniques and does not claim to have developed a measure of stigma; rather these findings indicate an initial, valid representation of some aspects of adolescents' stigmatising attitudes toward their peers with depression. These observed factors are restricted by the measurement tools and pool of items employed in this research and thus, it would be beneficial for future research to employ additional qualitative methods or utilise different measures of stigma, in order to investigate whether there are other relevant aspects of stigma that are not captured within the current model.

A further limitation associated with this research is that in order to express more confidence in the stigma model observed the factor structure of this model needs to be investigated and replicated in independent research. Although acceptable model fit was observed for the stigma models in the CFA component of the current study, these stigma models were subjected to a number of modifications. In the first order CFA two additional

covarying paths were added and one item was deleted from the original EFA model. Additionally, in the second order CFA one additional parameter was added between two of the first order latent constructs located on the Stereotype dimension. These parameters were identified by high modification indices and EPC values and also were considered theoretical viable based on a content analysis. Although modifications of this nature are common practice (Martin & Giallo, 2015) and recommended by numerous researchers (Brown & Moore, 2010), researchers, such as Byrne (2012), note that once modifications are made to a confirmatory factor model, the model can no longer be considered completely confirmatory. Hence, the factor structure of the respecified stigma model should be reassessed in a separate sample to confirm the factor structure observed in this study. Similarly, longitudinal data may be needed in order to determine whether this factor model is invariant over time.

Additionally, it is also important to comment on the method of participant screening utilised in this research. In particular, the SDQ was employed as a screening tool to identify participants who may have been experiencing symptoms of emotional difficulties and removed them from the EFA and CFA analyses. The rationale for this procedure was based on findings from previous research which have suggested that individuals with a personal history of emotional problems may endorse different stigmatising responses toward other individuals with mental health difficulties than the general population (Rusch et al., 2011a). This resulted in the removal of 49 participants from Study 1A and 27 participants from Study 1B. As is common in other research (O'Driscoll et al., 2012), participants were screened using a self-report measure (the Strengths and Difficulties Questionnaire; SDQ) as opposed to a specialised assessment or clinically-based tool. Hence, results from this screening tool may not be as valid as other diagnostic oriented measures (Kovacs & Sharp, 2014). However, it is important to note that there are conflicting reports from the literature investigating the differences in stigma responses between those with mental health diagnoses and the general public. For example, although Rusch et al. (2011a) found significant differences in stigma responses between individuals with mental health issues and the public, other researchers, such as Teachman et al. (2006), found no significant differences. Moreover, this limited research base does not compare differences in attitudes among adolescents with and without mental health issues. Thus, an important aim for future research should be to specifically compare potential differences in the stigma responses of young people with emotional/behavioural difficulties to those in the normal range.

Lastly, there are also limitations associated with the characteristics of the sample employed in the current research. First, although a large sample size was employed in both

the EFA and CFA components of this study, the adolescents recruited may not be representative of adolescents with different cultural backgrounds. A convenience sample of adolescents was recruited to this study from secondary schools located within the west of Ireland. Thus, the majority of adolescents participating in this research were of Irish heritage. Future studies should examine the factor structure of this model in other populations in order to enhance the generalisability of study findings. Additionally, although a total of 626 participants participated in this research, twice as many females ($n = 418$) participated in this research than males ($n = 227$). As previous research has observed gender differences between male and females stigmatising responses (Fox et al., 2008; O'Driscoll et al., 2012), future assessments of the factor structure of this model should strive to include more equal amounts of male and female response, or investigate the validity of this model among separate male and female sub-samples. Finally, this research also included a wide age range of participants (13-18 years). However, as previous research has indicated discrepancies in stigma responses between older and younger adolescents, it is possible that differences in the factor structure of this stigma model may have been determined if assessed separately for younger and older adolescents. This is an important factor to consider in the interpretation of these results and may be an important avenue to explore in future studies.

5.7 Conclusion

Mental health stigma has been identified as a pervasive phenomenon which acts as a critical barrier to mental health treatment access and can exert substantial distress among individuals with mental health problems (Griffiths, Carron-Arthur, Parsons, & Reid 2014; Hay et al., 2004; Link et al., 2004; Norman et al., 2008). The reduction of mental illness stigma among adolescents has been identified as a priority area of research by numerous health governing institutions and research bodies (U.S. Surgeon General, 1999). However, it has been argued that in order for anti-stigma strategies to be effective they need to be informed by research evidence and theory (Emerton, 2010; Murman et al., 2014). It has also been proposed that reliable and valid measures of mental illness stigma must be established before researchers can evaluate the effectiveness of interventions designed to combat stigma among adolescents (Pinto et al., 2012; Martin, 2010). This research attempted to establish a valid and reliable measurement model of depression stigma in adolescents and to assess the empirical fit of the tripartite theory of stigma.

Overall, the research provided initial support for the validity and reliability of a seven factor model of stigma and represents an important, initial step in the establishment of better, standardised measurements of mental health stigma in adolescents. These findings are important as they highlight discrepancies between the validity of adult and adolescent measurements of stigma and thus may serve as a useful foundation for advancing understanding of this construct among adolescents. This research also has important theoretical implications as it provided empirical support for the tripartite conceptualisation of stigma among an adolescent population. This research highlights the complex, multidimensional nature of stigma and suggests that assessments of stigma among adolescents should include measurements of the separate cognitive, affective and behavioural components. This tripartite approach to stigma measurement may have particular utility for intervention studies as separate strategies may need to be employed in order to effectively reduce stigma across all three domains. However, future research should evaluate the reliability and validity of this model among more diverse groups of adolescents. Future research should also strive to develop and evaluate other multidimensional measurement models of stigma that may account for a greater proportion of the variance than that explained in the current study. Nonetheless, these findings serve as an important foundation in which to advance the science and evaluation of stigma. Future research may benefit from using the stigma model identified in this research as a basis for investigating what factors influence the expression of stigma among adolescents. This is the aim of the second study of this doctoral thesis

Chapter 6

Study 2 Introduction

6.1 Aim of Chapter

The aim of this chapter is to identify factors which may contribute to the expression of stigma among adolescents. Specifically, this chapter will focus on outlining the importance of investigating antecedents of public mental health stigma and will concentrate in particular on exploring the potential role that empathy and peer norms may play in predicting how adolescents respond to their peers with depression.

6.2 Why investigate predictors of stigma?

As has been previously discussed in detail in the preceding chapters of this thesis (see Chapter Two, pp.9-27), research has shown that children and adolescents who experience mental health difficulties are often stigmatised by their peers (O'Driscoll et al., 2012; Moses, 2010; Swords et al., 2011), and this stigma has been found to exert detrimental effects on individuals' help-seeking, psychological well-being, self-esteem and developmental outcomes (Hennessy, Swords & Heary, 2008; Link et al., 2002; Norman et al., 2008). Hence, organisations such as the U.S. Department of Health and Human Services (USDHHS, 1999) identified stigma as one of the most formidable obstacles to future progress in the area of mental illness and health, and researchers have proclaimed the reduction of mental health stigma as a priority area for future research and policy (Calear et al., 2011; Pinto et al., 2012; WHO, 2013). Similarly, the World Psychiatric Association (WPA; 2005) also outlined the importance of reducing mental health stigma and identified a strategy for implementing several activities in this area. However, although the reduction of mental health stigma has been identified as an important global initiative (WHO, 2013), establishing effective anti-stigma strategies is considered to be one of the greatest challenges facing the mental health field today (Crisp et al, 2000; Norman et al., 2008).

Over the last decade, there has been a significant increase in the production of anti-stigma techniques and strategies (Corrigan, Michaels, Rafacz & Rusch, 2012). However, current anti-stigma strategies are often criticised for a variety of reasons. First, it is argued that stigma reduction strategies are hindered by a lack of investigation into the factors which may contribute to the expression of stigma among targeted groups in the first instance (Emerton, 2010; Stier & Hinshaw, 2007). Furthermore, the generalisation of the findings from these anti-stigma interventions may be restricted due to a lack of rigorous appraisal and

evaluation of these strategies (Quinn et al., 2013). Moreover, current anti-stigma efforts are also criticised for the lack of research focused on reducing stigma among children and adolescent populations. For example, it is approximated that only 25% of studies focus on interventions with adolescents (Pinto et al., 2014), despite adolescence being a significant period in the onset of mental health disorders. Additionally, researchers maintain that the evidence-base to support anti-stigma interventions for adolescents is generally not well established. In fact, it is suggested that any clinical implications of these stigma reduction interventions need to be interpreted with caution until more evidence is made available and rigorous appraisal of this research evidence has been undertaken (Pinto-Foltz & Logsdon, 2008; Griffiths et al., 2014). Thus, it is now widely contended that in order for anti-stigma strategies to be effective, these interventions and programmes need to be informed and evaluated by empirical research evidence (Corrigan et al., 2010; 2012; Pinto et al., 2014; Sidani, 1998).

Researchers, such as Bigler and Liben (2007) and Stier and Hinshaw (2007), have proposed that in order to develop effective, evidence-based strategies to reduce mental illness stigma, it is essential to first understand the proponents of stigma and to elucidate on the reasons for its expression. Although researchers from other domains have attempted to investigate different factors that may influence the expression of stigma toward a variety of out-groups (Dovidio & Gaertner, 2010; Monteiro, De Franca & Rodriguez, 2009; Rutland, Killen & Abrams, 2010), relatively little research has been done with respect to how mental illness stigma manifests (Hinshaw, 2005; O'Driscoll et al., 2014). Thus, identifying the processes which promote the expression of stigma toward people with mental illness is critical because these mechanisms are likely to affect the efficacy of interventions aimed at reducing stigma. Crucially, despite the large array of evidence documenting how children and adolescents with mental health disorders tend to be excluded from their peer groups (Bagwell et al., 2001; Moses, 2010; Platt, Kodish & Lau, 2013; Walker et al., 2004), there is a scarcity of research has focused on examining the reasons why these children and adolescents may be excluded (O'Driscoll et al., 2014). Stigma researchers now stress the need to conduct further research in the field that specifically focuses on examining the factors or attributes that may influence the development and expression of stigma (Gulliver et al., 2010; Emerton, 2010; Sidani, 1998; Sierksma et al., 2015).

6.3 Implicit and Explicit Stigma

6.3.1. The Operationalisation of Stigma As described in Chapter Two, stigma is defined as a social-cognitive process that is theoretically conceptualised as being composed of three separate, but inter-linked, constructs; Stereotypes, Prejudice and Discrimination (Corrigan & Watson, 2002; Martin & Gallio, 2015; Munoz et al., 2011), see pages 9-27 for more detail. Additionally, Study 1 of this doctoral thesis evaluated the validity of this tripartite model and found empirical evidence to support the tricomponent conceptualisation of stigma among adolescents (See Chapters 4 & 5, pp. 41-88).

6.3.2 Explicit Measures of Stigma To date, the most widely used method of measuring public stigma is through self-report assessments, such as questionnaires (Denenney, Bentley, & Schiffman, 2014; Rusch, Corrigan, Todd & Bodenhausen, 2010; Wittenbrink & Schwarz, 2007). As these measures require respondents to report their own cognitive or affective attitudes and/or behavioural intentions toward a person or persons with mental health problems, they are conceptualised as assessing a form of ‘explicit’ stigma. Explicit measures are conceptualised as assessing attitudes or behaviours that people can overtly report, or whose expression can be consciously controlled (Rydell, McConnell, Mackie, & Strain, 2006). However, despite the prevailing popularity of these measures, it is widely agreed that there are some limitations associated with reliance on these explicit measures (O’Driscoll et al., 2012).

Past research has indicated that self-reported, explicit measures of bias, prejudice, or stigma can be problematic. For example, self-report measures are limited by certain response factors which appear to influence participants’ willingness, or reluctance, to provide explicit responses that may violate perceived ‘acceptable’ norms (O’Driscoll et al., 2012). In particular, it has been noted that explicit measures are often subject to social desirability biases (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Greenwald & Banaji, 1995), and that these biases are heightened for measures assessing stigma or prejudice or other socially-sensitive topics (Payne & Gawronski, 2010). Self presentation biases are problematic in attitudinal research generally and are a key reason why floor effects are often observed in assessments of inter-group attitudes (Dovidio & Gaertner, 2000). Research has indicated that children and adolescents are also sensitive to social desirability and self-presentation biases (Cvencek, Meltzoff, & Baron, 2012). Evidence suggests that when children are conscious that they may be made publically accountable for their stigmatising

responses, they appear motivated to control them, and the expression of prejudice subsequently declines (Abrams, Rutland, Cameron, & Ferrell, 2007; Monteiro, Franca, & Rodrigues, 2009; O'Driscoll et al., 2012).

It is also argued that explicit measures are limited in their ability to assess attitudes as individuals' responses on these measures are contingent upon the individual's self-awareness regarding his/her beliefs (Monteith & Petit, 2011). These measures are criticised for their underlining assumption that individuals are able to provide accurate responses to the targeted subject matter and for restricting assessments to that of the attitude structure to which individuals are consciously aware of (Kepner, 2014). This is problematic as researchers have stipulated that much of the expression of bias may not in fact be overt, but rather may occur covertly or implicitly, and operate outside of the individual's conscious awareness (Greenwald & Nosek, 2001; Stier & Hinshaw, 2007). Research has shown that explicit measures often correlate poorly with alternative measures of stigma that focus on less consciously expressed attitudes or on behavioural discrimination (Dovidio et al., 1997; Greenwald & Banaji, 1995). Thus, in sum, measures of explicit attitudes are often prone to social desirability bias, subject to conscious and unconscious representations, and may also be poor in predicting spontaneous discrimination (Michaels & Corrigan, 2013). These limitations associated with explicit measures of attitudes have spurred researchers to look towards alternative instruments that can more readily assess individuals' automatic associations (Asendorpf et al., 2002; Cunningham, Preacher & Banaji, 2001). It is argued that these automatic associations may reveal important aspects of attitudes that are neglected by explicit measures. These automatic or unconscious associations are referred to as implicit attitudes.

6.3.3 Implicit Measures of Stigma Due to the limitations associated with explicit assessments, researchers have begun developing new methods of assessing social cognition. It is proposed that implicit measures can capture certain levels of bias that may fail to be detected through the use of traditional, explicit measures (Greenwald et al., 2002; Teachman, Gregg, & Woody, 2001). One of the most popular methods of assessing implicit bias is through the use of response latency or reaction time assessments (Rudman, 2004). According to Nosek, Banaji and Greenwald (2002), these types of implicit assessments are designed to reduce deliberate judgments and decrease the probability of individuals being able to hide their undesired reactions or elicit socially desirable responses. In other words, it is presumed that by not explicitly asking participants their attitude toward a particular construct, implicit

measures avoid the problems associated with introspection and thus reduce the possibility of confounding self-presentation biases (O'Driscoll et al., 2012; De Houwer, 2006).

Importantly, the increased interest in the development of implicit measures has also led to an increased interest in the differences that may exist between explicit and implicit attitudes (Rudman, 2004). Implicit attitudes are now viewed as theoretically different from explicit attitudes (Dovidio et al., 2002; Fazio et al., 1995; Greenwald & Banaji, 1995; Lane et al., 2007; Wilson et al., 2000). Conceptually, explicit attitudes are considered to be conscious, controllable and reflective responses (Monteith & Petit, 2011). In contrast, implicit attitudes are defined as evaluative tendencies that are considered to be outside an individual's conscious introspection or control (Asendorpf et al., 2002; Cunningham et al., 2001), and thus are assumed to reflect more automatic, intuitive or subconscious beliefs (Greenwald & Banaji, 1995).

Researchers have argued that both explicit and implicit assessments of inter-group attitudes are crucial for a number of reasons. For instance, in recent years, researchers assessing inter-group attitudes have noticed that individuals' explicit endorsements of negative stereotypes, or attitudes, towards certain marginalised groups, appear to have diminished (Heiphetz, Spelke & Banaji, 2013; Rohmer & Louvet, 2011). However, these observed reductions in the expression of stigma appear to be limited to assessments of conscious cognition only. Research has revealed that when social group attitudes or beliefs are measured using implicit assessments individuals still appear to indicate robust intergroup preferences (Heiphetz et al., 2013; Nosek, 2007). It is also believed that explicit and implicit attitudes may be predictive of different forms of behaviour and thus should be assessed separately (Teachman et al., 2001). For example, implicit measures may be more predictive of automatic or spontaneous behaviour, such as non-verbal behaviours, whereas explicit measures are thought to be more predictive of controlled behaviours (Monteith & Petit, 2011). Additionally, it is argued that as explicit and implicit bias are separate constructs, and may operate through different mechanisms, factors that influence the expression of one form of bias may not influence the other form of bias (Stier & Hinshaw, 2007). Hence, researchers now advocate that assessments of stigma should include measures of both explicit and implicit attitudes (Stier & Hinshaw, 2007).

6.3.4 Limitations of Current Research Base Over the last decade, there has been a huge increase in the amount of social research conducted on assessing implicit bias

(McKeague et al., 2014). As a result, there is now a burgeoning research base on the type of implicit stigmatising responses that individuals hold toward a variety of out-groups (Devine et al., 2002; Heiphetz et al., 2013; Nosek et al., 2007; Rohmer & Louvet, 2011). In comparison to research conducted in other social domains, such as that relating to gender, age, and ethnic prejudice, assessments of implicit attitudes toward people with mental health issues, are far less frequent (Hinshaw, 2005; Monteith & Pettit, 2011). There are currently only a handful of published studies that have included assessments of both implicit and explicit stigma (Norman et al., 2012; O'Driscoll et al., 2012; Teachman, Wilson & Komaroskaya, 2006). Although the common trend observed in this research appears to indicate that individuals hold negative implicit attitudes toward mental health problems, there are some limitations associated with the way in which these implicit assessments have been conducted that have important implications for the advancement of knowledge in this area (Monteith & Pettit, 2011; O'Driscoll et al., 2012; Rusch et al., 2010; Teachman et al., 2006).

Firstly, it has been noted that, in addition to the already sparse amount of implicit assessments conducted in the area, the vast majority of the existing research appears to focus on assessing individuals' implicit responses toward psychiatric labels. For example, researchers such as Rusch et al. (2010) and Teachman et al. (2006) assessed individual's implicit stigma by measuring their implicit responses toward general category labels such as 'Mental Illness' or 'Crazy'. Other researchers, such as Monteith and Pettit (2011), have concentrated more on assessing individuals' implicit responses toward specific mental health disorders, such as depression, but have also relied on the use of psychiatric labels in the method of assessment. As a result, very little is known about the type of implicit stigma that individuals may express toward people who are described as experiencing a mental health issue, but not given a specific label (O'Driscoll et al., 2012). Additionally, a huge percentage of the research conducted thus far has focused on assessing implicit attitudes among adult populations. While this body of research is useful in highlighting that individuals do appear to have negative implicit attitudes toward 'mental illness', as well as to specific mental health disorders, there is very little information on the type of implicit stigma that children and adolescents may express toward people with mental health issues (Kopera et al., 2015; Monteith & Pettit, 2011; Peris, Teachman & Nosek, 2008; Teachman et al., 2006). One of the very few studies investigating implicit stigma among children and adolescents was conducted by O'Driscoll et al. (2012). This study revealed that both children and adolescents expressed negative implicit attitudes toward fictional peers who were described as experiencing

symptoms of ADHD and depression. In particular, O’Driscoll et al. (2012) noted that adolescent boys appeared to be motivated to inhibit their explicit stigma responses toward the peer with depression and demonstrated significantly more negative implicit bias toward this target. However, further research needs to be conducted in this area in order to establish a greater understanding of this construct.

Thus, in sum, stigma is conceptualised as being composed of separate cognitive, affective and behavioural components (Corrigan & Watson, 2002; Hinshaw, 2005). However, it is now argued that in addition to these psychological dimensions, stigma is also constructed at both an explicit and an implicit level (Stier & Hinshaw, 2007). Hence, researchers now advocate that in order to provide a full representation of the construct, researchers attempting to assess stigma should ideally include measures of both explicit and implicit attitudes (Stier & Hinshaw, 2007). Despite this recommendation, nearly all research conducted on the stigmatisation of mental illness focuses on assessing explicit attitudes and stereotypes (Monteith & Pettit, 2011). Not only is there a paucity of implicit assessments of stigma, but implicit assessments of stigma among children and adolescents are particularly sparse in this area (O’Driscoll et al., 2012). The lack of information available on children and adolescents’ implicit attitudes toward people with mental health represents a major limitation of the research area and may present as a crucial barrier in our understanding of stigma.

6.4 Factors that Influence the Expression of Stigma

As a main aim of stigma research is to identify effective mechanisms that can reduce the stigmatisation of mental health disorders among adolescents, an important step in this process is to first identify the factors that may influence the expression of explicit and implicit stigma. It is anticipated that once the factors that promote bias are identified, they can then be targeted in evidence-based interventions. Researchers maintain that by identifying and targeting the variables that contribute to the expression of stigma, this will increase the effectiveness of stigma reduction strategies (Mukolo & Heflinger, 2010; Emerton, 2010). As stigma is constructed as a social-cognitive process it is proposed that a variety of individual and situational factors may influence the type of explicit and implicit attitudes, beliefs or discriminatory behaviours that individuals express toward particular out-groups (Nesdale et al., 2005). Two factors which have been implicated in the literature to exert a considerable influence on the type of stigmatising responses people exhibit toward a

wide variety of marginalised groups, and thus deserve further investigation in the mental health field, are group norms and empathy.

6.4.1 Social Norms Allport's seminal text on *The Nature of Prejudice (1954)* argues that the expression of prejudice is largely influenced by social norms and conformity. In his seminal paper on stigma, Goffman (1963) also highlighted the potential importance that cultural and social norms may play in influencing individuals' stigmatising responses toward a variety of marginalised groups. Since the early postulations of these researchers, a small but strong body of research has emerged which has focused on examining the concept of 'social norms' and the potential power that normative influence may exert on individuals' attitudes and behaviours (Eriksson, Strimling, & Coultas, 2014; Walker, Sinclair & MacArthur, 2015). Researchers, from various social domains, now appear to agree that stigma should be investigated within the cultural or situational context in which it is expressed (Crandall et al., 2002; Norman et al., 2008). More specifically, it is now widely proposed that social norms play a pivotal role in the expression of stigma in a variety of inter-group contexts (Crandall et al., 2002; Norman et al., 2008; Stangor et al., 2001; Walker et al., 2015).

Definition of Social Norms According to Rimal and Real (2003), the term social norms is often used inter-changeably with terms such as group norms, subjective norms, normative influence or perceived norms, where these terms are all considered synonymous with each other. Traditionally, the literature refers to these social norms as informal rules that different social groups adopt in order to regulate and regularise group members' behaviour (Feldman, 1984). More recent operationalisations of social norms have utilised similar definitions, describing social norms as socially learned rules that prescribe the type of attitudes, values or behaviours that are appropriate for group members to display in specific social situations (Aronson, Wilson & Akert, 2005; Rutland et al., 2005). Guerra, Huesmann and Hanish (1994) described social norms as shared proscriptions about behaviour, which are accepted by the majority of group members. Similarly, Higgs (2015) described social norms as implicit codes of conduct that are used as guides for appropriate action. Hence, in their review of the literature, Rimal and Real (2003) proposed that in their broadest sense, norms can be construed as codes of conduct that prescribe or proscribe the behaviour or attitudes that are acceptable for group members to enact or endorse. In other words, social norms are construed as individuals' expectations about the type of behaviours that are appropriate or expected to be displayed in various social situations (MacDonald & Crandall, 2015).

According to researchers, such as Hogg (2006), social norms refer to regularities in attitudes and behaviour that characterise particular social groups and differentiate one social group from the other. It is argued that norms not only detail what appropriate attitudes or behaviours should be displayed, but these normative expectations in turn define what the group does and who the group is (MacDonald & Crandall, 2015). Researchers propose that one way in which individuals construct meaning of their world is through interactions with other people (Rieber & Robinson, 2004; Shamblaw, Botha & Dozois, 2015), and begin to categorise individuals as either 'in-group' or 'out-group' members from an early age (Brown & Bigler, 2005). It is argued that as individuals assimilate into their 'in-group', they begin to internalise the social norms of the group (Rieber & Robinson, 2004). Researchers argue that as group norms are internalised, they become interchangeable with an individual's own personal attitudes and behaviours and thus operate through a process of cognitive internalisation as opposed to behavioural compliance (Hogg & Smith, 2007; Smith & Hogg, 2008; Shamblaw et al., 2015). Some traditional and modern conceptualisations of social norms also propose that norms may exert their influence on behaviour when deviations from the norm are expected to be sanctioned (Bendor & Swistak, 2001). However, it is important to emphasise that social norms are still considered to be separate from societal laws, in that while laws are explicitly codified, norms are understood through social interactions and deviations from these norms may result in a form of social punishment as opposed to binding legal sanctions (Rimal & Real, 2003). Thus, an important aspect of social norms is that they are thought to exert a consistent, powerful effect on the behaviour of group members (Feldman, 1984; Stok et al., 2014). However, it is generally agreed that in order for norms to influence individuals' behaviour they must prescribe the behaviour or beliefs of a valued social group (Sherif, 1953; Terry & Hogg, 1996).

Within the areas of social psychology and sociology a significant amount of research has focused on investigating this concept of social norms, the processes through which norms operate and the potential influential effect that norms may exert on individuals' attitudes and behaviour (Eriksson et al., 2014). Findings from this research has provided compelling evidence for the existence of several distinct forms of social norms and suggested that these various forms of norms appear to play different roles in influencing behaviour (MacDonald & Crandall, 2015). Specifically, research on social norms typically distinguishes between two main forms of norms; Descriptive Norms and Injunctive Norms (Aronson et al., 2007; Cialdini, Kallgeen, & Reno, 1991; MacDonald & Crandall, 2015). Descriptive norms refer to

individuals' beliefs about how referent others think or behave and are indicative of what the 'normal' or 'typical' response should be, in a certain situation (Cialdini et al., 1991). It is proposed that the greater the perceived prevalence of a behaviour, the greater the likelihood that individuals will also believe that engaging in this behaviour is normative (Rimal & Real, 2003). Definitions of injunctive norms are somewhat more variable in the literature; however, it is generally proposed that injunctive norms refer to individuals' beliefs about what others consider to be appropriate or other people's expectations of how the individual should respond in certain situations (Cialdini, 2003; Cialdini et al., 1991). Injunctive norms refer to what is commonly approved or disapproved of (Cialdini et al., 2006) or the pressures an individual experiences to conform to the normative behaviour of the referent group (Rimal and Real, 2003). In other words, descriptive norms describe what members of a group commonly *do or (how they) behave* and injunctive norms refer to individuals' expectations about what members of a group *should do* or what would be socially or morally *approved or disapproved of* (Eriksson et al., 2014; MacDonald & Crandall, 2015; Cialdini et al., 2006).

Research has shown that both descriptive and injunctive norms can influence individuals' attitudes and behaviour (Rimal & Real, 2003; Stok et al., 2014). However, researchers argue that these social norms should be investigated separately as each type of norm appears operate differently and thus may have differential effects on individuals' attitudes and behaviour (Stok et al., 2014; Cialdini et al., 2006). For instance, it is argued that descriptive norms influence behaviour through education and conversion which may result in the formation of attitudes or behaviour that are more genuine or unstrained than that resulting from injunctive norms (Eriksson et al., 2014). It is contended that as injunctive norms operate through the expectation of some form of social sanction, they may operate through the process of conforming and thus the attitudes that form may be less genuine and more conflicting (Eriksson et al., 2014). Furthermore, researchers also propose that these two types of norms may influence conduct differently because they each call upon a separate source of human motivation (Cialdini et al., 2006). While descriptive norms are thought to influence responses through example setting or social comparison, injunctive norms are thought to influence responses or behaviour via the promise of informal social rewards or sanctions (Cialdini et al., 2006).

It is also imperative to note that, theoretically, social psychological research proposes that social norms operate at two distinct levels; a generic or distal level, which refers to beliefs about what the wider societal group condones, and a group-specific or proximal level,

which refers to beliefs about what a specific group supports (Killen et al., 2013). Generic norms are defined as rules and values that are not only acknowledged by a specific group but hold greater weight within the larger society, whereas group-specific norms are those that are particular to the local group and may not be ascribed to by the larger society (Abrams, Rutland, Ferrell, & Pelletier, 2008; Nesdale & Lawson, 2011). It is argued that group-specific norms may be more salient in certain contexts and thus have more of an effect on behaviour.

Role of Social Norms in Influencing Stigma In his seminal writings on stigma, Goffman (1963) proposed that stigma was a socially constructed concept and it's expression was influenced by social 'rules' or 'norms', that act as a guide for individuals concerning what type of attitudes or behaviours are appropriate to display at particular points in time and place. This viewpoint is still supported in the literature today with researchers such as Cialdini et al. (2006) claiming that as people operate within a social environment, rather than as isolated individuals, the social norms that exist within that individual's environment can exert a powerful effect on the types of attitudes and behaviour expressed by that individual. Additionally, researchers such as Puhl, Schwartz and Brownell (2005) and Norman et al., (2008) have suggested that prejudice and discrimination can occur as a function of individuals' perceptions of other people's stereotypical or stigmatising attitudes. In Sherif's (1953) Group Norm Theory (GNT) it is proposed that values, attitudes, beliefs and prejudices are all acquired and expressed as part of the socialisation process and appear to be congruent with the social groups that individuals value. Hence, numerous researchers have proposed that group or social norms play a crucial role in influencing the expression of stereotypes, prejudice or behaviour amongst individuals and the empirical evidence which has emerged from the general literature on stigma and prejudice appears to support this claim.

Within the adult literature, there is an abundance of psychological research evidence to suggest that norms can have a powerful impact on the type of stigmatising responses that individuals express toward a variety of marginalised groups. For instance, a number of correlational studies have suggested that individuals' expression of prejudice is strongly related to their perceptions of what is considered to be acceptable by the wider society (Crandall et al., 2002). Other experimental studies have indicated that manipulating individuals' perception of what is normative can increase or reduce the expression of stigma (Walker et al., 2015). For example, Stangor et al. (2001) indicated that individuals' perceptions of other people's beliefs influenced the type of stereotypes that adults endorsed toward racial minority groups. Specifically, these researchers found that when participants

were induced to believe that other members of the ‘in-group’ endorsed more positive attitudes toward members of this ‘out-group’, participants also showed significantly more positive responses. Additionally, Puhl et al. (2005) found that perceived norms influenced the type of stereotypes and attitudes that undergraduate students endorsed toward a target who appeared to be obese. When participants believed that other students held positive attitudes toward the target they also displayed more positive attitudes toward the obese target. Another powerful example of the role that norms can play in influencing individuals’ prejudicial inter-groups attitudes can be found in Paluck’s (2009) field experiments. In this study, Paluck (2009) created an in-group norm highlighting the acceptance of inter-group friendship among two rival ethnic groups (Hutus and Tutsis) in Rwanda. In this study a radio ‘soap opera’ was used to promote friendly intergroup interactions between these two groups. The researchers found that individuals who were exposed to this ‘soap opera’ norm showed a number of positive changes in attitudes, including greater acceptance of intergroup marriage and more empathy toward out-group members (Paluck, 2009). It is important to note, however, that the vast majority of this research has relied solely on the use of explicit measures of stigma. Thus, the potential role that social norms may exert on implicit measures of inter-group bias is less clear.

Role of Social Norms in Influencing Stigma in Adolescents There is now also a growing body of research that suggests social norms in the expression of stigma among children and adolescents. It is widely agreed in the literature that children and adolescents’ intergroup attitudes and behavioural intentions are particularly influenced by their perceived peer group norms (Bigler, Jones & Lobliner, 1997; Sierksma et al., 2014). According to Baumeister and Leary (1995) children have a basic desire to be accepted and to belong. Research suggests that from school-age onwards children exhibit considerable concern and awareness about their social reputation (Banerjee, Bennett & Luke, 2010). Peers play an important role in the school context as they function as important sources of social information which children and adolescents can use to discern the appropriate or expected behaviour or responses to express (Killen, Lee--Kim, McGlothlin, Stangor, & Helwig, 2002; Tropp, O’Brien & Migacheva, 2014). As children grow older, peer group norms appear to become increasingly more salient and children become more sensitive toward which types of behaviour are sanctioned by their peers (Abrams et al., 2003). By the time that children reach adolescence peers are considered to be one of the most important factors in establishing the

type of opinions expressed by adolescents and predicting the type of behaviour they will engage in (Prinstein & Dodge, 2008; Schofield & Eurich-Fulcer, 2001; Turner et al., 2013).

Numerous empirical studies have highlighted the strong role that peer norms play in influencing children and adolescents' attitudes and behaviours across various domains. For instance, the literature on adolescents' bullying behaviour in schools is replete with evidence to suggest that children and adolescents' tendency to engage in and support bullying behaviour is influenced by their perception of pro-bullying norms amongst their peers and friendship groups (Nickerson, Mele & Princiotta, 2008; Perkins, Craig & Perkins, 2011; Salmivalli, Huttunen & Lagerspertz, 1997). Similarly, empirical investigations by both Rigby and Johnson (2006) and Pozzoli and Gini (2010) found that classroom norms influenced the likelihood that children would engage in defending behaviour. Furthermore, research has also indicated that adolescents' perceptions and misperceptions of peer norms play a crucial role in adolescents engagement in risky behaviours such as binge drinking (Bosari & Carey, 2006; Teunissen et al., 2014), risky sexual behaviour (Martens et al., 2006) and the development of eating disorders (Clemens et al., 2008).

Several studies have also indicated that perceived peer norms can influence adolescents' actual friendship formation and inter-group relations (Jugert, Noack & Rutland, 2011). For example, an empirical investigation by Aboud and Sankar (2007) found that negative in-group norms that prohibited cross-ethnic mixing significantly hindered cross-group friendships among school aged children. Feddes, Noack and Rutland (2009) also found that adolescents who believed that engaging in cross-ethnic friendship was the perceived social norm also showed more positive intergroup attitudes. A similar trend was also reported by Thijs and Verkuyten (2011) who also indicated that adolescents' ethnic attitudes were distinctly related to the out-group attitudes that they perceived to be endorsed by their classmates. Moreover, a research study carried out by Poteat (2008) provided evidence to suggest that peer norms influence the expression of homophobic attitudes among adolescents and was a stronger predictor of homo-negativity than their own ideological beliefs. Nesdale and Dalton (2011) observed that when children had an in-group norm of exclusion they displayed significantly more negative attitudes to out-group members than when the in-group norm promoted inclusion. Furthermore, Kiesner, Maass, Cadinu and Vallese (2003) found that younger adolescents provided evaluations of stigmatised out-groups that were similar to the attitudes expressed by other members of their self-nominated friendship groups.

Crucially, although research of this kind is sparse, there is some preliminary evidence to suggest that social norms may exert differential effects on children and adolescents' explicit and implicit attitudes. For instance, Rutland et al. (2005) conducted a study examining the role that social norms played in influencing children and adolescents' explicit and implicit stigmatising attitudes toward a racial out-group. Findings from this study showed that when participants were provided with a norm that required them to suppress the expression of stigma, both children and adolescents showed lower explicit endorsements of stigma. However, while younger children also showed reduced implicit stigma, older adolescents did not. This research highlights the importance of examining the relationship between social norms and both explicit and implicit bias.

6.4.2 Empathy Although stigma is a socially constructed phenomenon (Goffman, 1963), in that social interactions are necessary in order for stigma to occur, it is proposed that other factors also play an influential role in promoting the expression of stigma among individuals. Researchers such as Rubin, Bukowski and Parker (1998) have acknowledged that when individuals engage in social interactions, they also bring their own set of dispositional traits or emotions to each social situation or interaction. Numerous other researchers have suggested that, similar to the influential role of social norms, social emotions can influence individuals' social behaviour (Roberts, Strayer & Denham, 2014; Smith, 2014). One important social emotion or dispositional factor, which has been evidenced to exert an important impact on the types of attitudes and behaviours exhibited by individuals toward a variety of stigmatised groups, is that of empathy (Eisenberg, 1992; Malti, Gummerum, Keller, & Buchmann, 2009; Stephen & Finlay, 1999).

Definition of Empathy The concept of empathy has been of prime interest to researchers for decades and numerous researchers, from various disciplines and sub-disciplines, have concentrated on investigating the effect that empathy may have individuals' attitudes and behaviour in a number of different contexts. As a result, empathy has been defined in numerous diverse ways over the years and with researchers from different disciplines evoking different operationalisations of the construct, it is difficult to find a single, unifying operational definition of empathy in the literature (Eisenberg, Eggum & De Giunta, 2010; Konrath, O'Brien & Hsing, 2011).

Early conceptualisations of the construct viewed empathy as an affective response that stems from the apprehension or comprehension of another's emotional state or condition

and can be described as being similar to what another person is feeling or would be expected to feel in a certain situation (Eisenberg & Lennon, 1983). Generally, empathy has been described as the process whereby an individual shares another person's emotional state (Eisenberg & Strayer, 1987; Gini, Albiero, Benelli & Altoè 2007). Empathy is sometimes viewed as being similar to sympathy, but can be differentiated in that empathic responding requires a stronger component of relating to another person or taking his or her perspective (Teachman et al., 2003). Current approaches typically describe empathy as a multi-dimensional construct that is constructed of both cognitive and affective (emotional) components (Davis, 1994; Feshbach, 2014; Gini et al., 2007; Jolliffe & Farrington, 2006). For example, Dwrecki, Moore, Ward and Prkachin (2011) described empathy as a cognitive-emotional process that fosters an understanding of others' emotional states. Similarly, Cohen and Strayer (1996) defined empathy as the understanding and sharing of another's emotional state or context.

In order to provide a full understanding of the concept of empathy it is important to distinguish between its affective and cognitive components. According to Gini et al. (2007) the cognitive component of empathy reflects a person's ability to identify and understand another person's perspective. Bellman and Flanagan (2010) described cognitive empathy as the process whereby individuals' attempt to intentionally see things from another person's point of view. Similarly, Jolliffe and Farrington (2007) also described cognitive empathy as an individual's ability to understand the emotions of others. Moreover, a similar conceptualisation was also outlined by Feshbach (2014) who emphasised cognitive empathy as the ability to discriminate the affective states of others and to assume the perspective or role of another person. On the other hand, affective empathy is conceptualised as the emotional component of empathy. It has been characterised as the tendency to experience feelings of concern or sympathy toward others (Davis, 1994; Gini et al., 2007). Other researchers propose that affective empathy refers to individual's ability to share the emotions and feelings of another person (Jolliffe & Farrington, 2007). Stephan and Finlay (1999) proposed that affective empathy can be both reactive and parallel. Specifically, they defined affective empathy as an emotional response, which is either similar to the emotions that another person is experiencing (parallel empathy) or occurs as a reaction to the emotional experiences of another person (reactive empathy). Likewise, Feshbach (2014) referred to emotional empathy as the affective ability to experience emotions in an appropriate manner. Both cognitive and affective empathy can be conceptualised as dispositional traits or as an

emotional state (Burke et al., 2015). Modern conceptualisations now propose that although these different components can be measured and investigated separately, both affective and cognitive empathy need to be considered together in order to gather a full understanding of the construct and how it may influence behaviour (Hoffman, 2001).

Role of Empathy in Influencing Stigma The role that empathy plays in influencing individuals' attitudes and behaviour has been considered an important area of research among social scientists for many decades (Feshbach, 2014; Stephen & Finlay, 1999; Turner et al., 2013). For instance, Eisenberg et al. (2010) proposed that individuals' abilities to encode and experience others' emotional states can affect their perceptions of these individuals, as well as their behavioural responses toward them. A substantial amount of research has been conducted investigating the effects of empathy on inter-group relations. This research has concentrated on examining the effects of empathy both as a dispositional trait and when it is experimentally induced (Stephen & Finlay, 1999). As a result, there is now a strong body of empirical evidence to suggest that empathy plays a powerful role in influencing individuals' pro-social behaviour and inter-group attitudes and is increasingly recognised as an important mechanism for improving intergroup relations (Batson & Ahmad, 2009; Hughes, Campbell, Lolliot, Hewstone & Gallagher, 2013).

Research has indicated that empathy can have a host of beneficial and pro-social effects on individuals' attitudes and behaviour (Davis, 2015). Findings from numerous cross-sectional and experimental research studies have indicated that individuals who display higher levels of empathy also tend to display higher levels of inter-personal helping (Dovidio, Allen & Schroeder, 1990), show greater sensitivity and caring (Johnson, Brems & Alford-Keating, 1997), and engage in more altruistic behaviour (Eisenberg et al., 2010). Additionally, a study by Richardson, Hammock, Smith, Gardner & Signo (1994) found that higher levels of dispositional empathy were associated with greater inhibitions of aggressive behaviour and more constructive responses to interpersonal conflict. On the opposite end of the spectrum, research has shown that lower levels of cognitive and affective empathic responding are linked to a host of negative inter-personal processes (Belman & Flanagan, 2010), such as showing greater levels of anti-social behaviour (Stephen & Finlay, 1999) and higher levels of aggression (Miller & Eisenberg, 1988). For example, in a meta-analysis of 35 studies investigating the effect of empathy on individuals' behaviour Joliffe and Farrington (2004) reported that, overall, low levels of empathy appeared to be associated with higher levels of anti-social behaviour. Similarly, Stephen and Finlay (1999) carried out a review of

the literature in which they critically analyzed the role that empathy played in influencing intergroup relations. In this review, the authors also noted that higher levels of empathic responding appeared to be strongly associated with greater pro-social attitudes and behaviour and that lower levels of empathy in individuals appeared to be linked with more anti-social behaviours.

Research has provided substantial evidence to suggest that higher levels of empathy are associated with eliciting more positive attitudes and lower stigmatising responses toward a wide variety of stigmatised groups. For example, Pedersen, Beven, Walker and Griffiths (2004) conducted a study investigating Australian residents' prejudicial responses toward Indigenous Australians. These researchers found that lower levels of empathy were associated with greater prejudice towards the Aboriginal out-group (Pedersen et al., 2004). A similar pattern of results was observed by Karacanta and Fitness (2003) who found that empathy levels significantly predicted individuals' positive behavioural intentions toward gay/lesbian victims of violence. Furthermore, Johnson et al. (1997) found that dispositional cognitive and affective empathy were associated with endorsements of more positive attitudes and behaviours toward homosexuals. Other experimental research has also demonstrated that evoking empathic responses in individuals can also reduce out-group stigma. For example, Batson et al. (1997) found that evoking empathy caused individuals to show more positive attitudes toward an array of stigmatised targets, including AIDS victims, homeless individuals, and people with criminal convictions. Batson et al. (1997) noted that the participants in this study still evidenced these positive changes in attitudes at a 2 week follow-up assessment. The authors concluded that this finding suggested that increasing empathy could lead to long term changes in attitude. Finlay and Stephan (2000) also employed a perspective taking method to induce empathy in a group of Caucasian college student. Results from this research indicated that increases in empathy levels were significantly associated with a corresponding reduction in the expression of racial prejudice toward African American targets. Shih et al. (2013) also indicated that empathy arousal was an effective method of improving liking of racial out-group members. Furthermore, Wang, Tai, Ku and Galinsky (2014) investigated whether inducing empathy would increase individuals' willingness to engage with stereotyped out-group members. Results from this study indicated that individuals who engaged in perspective taking showed less desire for social distance and increased willingness to engage with a 'hooligan'. Countless other studies have also documented the positive effects that empathy appears to exert on intergroup

attitudes and behaviours (Galinsky, Maddux, Gilin & White, 2008; Vescio, Sechrist & Paolucci, 2003; Vezzali, Stathi, Giovannini, Capozza & Trifiletti, 2015).

The majority of work investigating the effects of empathy on influencing intergroup attitudes and behaviour has focused exclusively on measuring explicit forms of stigma (Batson et al., 1997; Galinsky et al., 2008; Finlay & Stephan, 2000; Wang et al., 2014). However, over the past decade or so, there has been an increasing amount of research conducted that has begun investigating the role empathy may play in influencing more implicit or unconscious forms of stigma. Findings from a number of studies indicate that empathy may also play an important role in influencing individuals' implicit attitudes or biases. For example, Teachman et al. (2003) found that evoking empathy toward an obese person resulted in significant reductions in the amount of implicit bias that overweight individuals directed toward themselves and other members of this stigmatised group. Similarly, Shih et al. (2013) found that inducing empathy toward a member of a racial out-group was effective in reducing implicit in-group bias in comparison to a control condition. Due to these suggestive findings a number of researchers maintain that inducing empathy appears to be a robust form of stigma reduction, in that it appears to improve both explicit and implicit attitudes (Shih et al., 2013). However, a number of studies have also found conflicting results which suggest that the relationship between empathy and implicit attitudes may not be as strong as the relationship between empathy and explicit stigma. For instance, a study by Burke et al. (2015) found that although cognitive and affective empathy were associated with showing more positive explicit attitudes toward gay and lesbian targets, neither form of empathy was found to significantly predict implicit attitudes. Additionally, Lai et al. (2014) carried out a research study in which they experimentally compared the effectiveness of seventeen different types of interventions on reducing the expression of implicit racial prejudice. Results from this comparison also indicated that inducing empathy was not effective in significantly reducing implicit bias toward a racial out-group (Lai et al., 2014). Thus, taken together, these findings highlight the importance of investigating the effects of empathy on both explicit and implicit forms of stigma, for separate out-groups, as there may be differing relationships.

Role of Empathy in Influencing Stigma in Adolescents It is important to note that the empirical evidence suggests that dispositional and state empathy are also associated with higher levels of pro-social behaviour and intergroup processes among children and adolescents (Gini et al. 2007; Wentzel, 2014). Research has shown that empathy is linked

with children's pro-social behaviour from an early age (Malti, et al, 2009). For instance, Byrant (1982) was among the first to find evidence that empathy was positively associated with school children's acceptance of individual differences between group members. Similarly, Litvack-Miller, McDougall and Romney (1997) found that higher levels of affective and cognitive empathy among children were related to higher levels of helpfulness. A study by Abrams, Van De Vywer, Pelletier and Cameron (2014) showed that children with higher levels of dispositional empathy also displayed higher levels of prosocial intentions toward out-group members, in both competitive and non-competitive intergroup contexts. In addition, Nesdale, Milliner, Duffy and Griffiths (2009) found that higher levels of dispositional empathy were associated with lower levels of aggression toward out-group members. Furthermore, Sierksma, Thjis and Verkuyten (2015) found that inducing empathy in children and adolescents was effective in stimulating helping across peer group boundaries. Empathy has also been found to be associated with other forms of helping behaviour among adolescents. For example, Caravita, Di Blasio and Salmivalli (2009) examined the effect of dispositional empathy in boys in relation to bystander intervention in bullying interactions. These researchers found that boys who showed greater levels of dispositional empathy were more likely to come to the defence of the victims of bullying. Other research has also indicated that higher levels of empathy are associated with lower engagement in bullying behaviour and greater defending of victims of bullying (Gini et al., 2007; Salmivalli, 2010).

Although there is an abundance of research linking empathy with intergroup processes such as pro-social behaviour and helping intentions, research investigating the interplay between adolescents' empathic responses and stigmatising responses toward out-group members is more limited (Wolfer, Cortina & Baumert, 2012). However, there is still some evidence available to suggest that empathy can exert an influential role on inter-group attitudes or behaviours and other stigmatising processes in adolescents, as well as adults. Wentzel (2014) proposed that empathy plays an important role in children and adolescents' social cognitions and in the quality of behaviour directed toward members of various out-groups. Malti, Ongley, Dys and Colastante (2012) carried investigated the role that empathy played in influencing children and adolescents' inclusion of a peer with disabilities. These researchers found that children and adolescents who displayed higher levels of dispositional empathy showed greater acceptance of the peer with disabilities and exhibited greater desire to help this peer. A Study by Poteat, DiGiovanni and Scheer (2013) showed that higher levels

of empathic concern in adolescents were associated with a lower display of homophobic prejudice. Additionally, Nesdale et al. (2005) demonstrated that children who demonstrated higher levels of empathy also endorsed greater levels of liking for a peer from a marginalised ethnic group.

Further evidence identifying the importance of empathy in influencing stigmatising responses in adolescents comes from the findings of a meta-analysis conducted by Beelmann and Heinemann. Beelmann and Heinemann (2014) conducted a meta-analytic review of 122 intervention programmes that were designed to reduce prejudice or promote positive intergroup attitudes among children and adolescents. Of these 122 interventions, 24 were found to include an empathy or perspective taking training component. A review of the effect sizes of each intervention type revealed that the highest effect sizes were found for interventions with direct contact elements ($d = .43$) and perspective taking/empathy training ($d = .44$). These findings further indicate that empathy plays an important role in influencing stigma responses in adolescents. However, given the limited research available that has focused exclusively on assessing the strength of this relationship, further research which directly investigates this effect appears warranted.

It is also crucially important to note, however, that although the literature appears to demonstrate a strong link between empathy and stigmatising responses in adolescents, this research appears to have concentrated exclusively on assessing the relationship with explicit aspects of stigma only. As a result relatively little is known about how empathy may impact on implicit stigma in children and adolescents. Although research assessing the link between empathy and implicit stigma is also limited in the adult literature, the findings which have already emerged from this research highlight the importance of investigating the association between both explicit and implicit stigma, as these relationships may differ (Burke et al., 2015; Teachman et al., 2003). Thus, the lack of research investigating the association between empathy and implicit stigma in adolescents may thus represent an important limitation of the current research base and an important area of pursuit for future research.

6.4.3 Importance of Investigating the Effects of Both Empathy and Social Norms on Stigmatising Responses in Adolescents It is clear from examining the research listed above that both empathy and social norms appear to exert considerable effects on the type of responses and stigmatising attitudes that adolescents express in a variety of intergroup contexts (Crandall et al., 2002; Johnson et al., 1997; Poteat et al., 2013; Puhl et al., 2005;

Sechrist et al., 2001). However, while the majority of these studies have concentrated on examining these factors individually, there appears to be some evidence to suggest that it may be important to compare the effect that these two factors exert on intergroup processes and stigmatising responses in adolescents. For example, Sierksma, Thijs and Verkuyten (2015) conducted a study examining the role that both empathy and group norms would play in influencing the type of helping behaviours that children and adolescents expressed toward out-group members. Although these researchers observed that both empathy and group norms appeared to influence participants' helping intentions, when children and adolescents perceived the need to help the out-group member to be high, empathy appeared to out-weigh group norm considerations (Sierksma et al., 2015).

Another study by Hughes et al. (2015) examined the factors which promoted cross-group integration between Catholic and Protestant adolescents in Northern Ireland. These researchers found that cross-group contact outside school was associated with both higher levels of empathy and more positive group norms. However, when investigating the beneficial effects that increasing school diversity would have on adolescents' cross-group friendship or intergroup attitudes, this relationship appeared to be more mediated by positive perceived norms (Hughes et al., 2015). Similarly, Nesdale et al. (2005) compared the effects that empathy and group norms exerted on children's liking of a member of an ethnic out-group and indicated that group norms might conflict with, or enhance, the power of empathy. Specifically, these researchers found that when the in-group had a norm of exclusion, children reported liking the ethnic out-group less, and this effect was largely unaffected by empathy levels. In contrast, when the in-group had a norm that promoted inclusion, higher levels of liking were found to be associated with higher levels of empathy (Nesdale et al., 2005). Thus, the results of these studies appear to indicate that empathy and group norms may exert differential effects in different intergroup context. Given that both these factors are considered to be influential in influencing stigma responses and both have individually been tipped as important factors to consider in anti-stigma strategies, it may be worthwhile for researchers to consider which of these factors exert the strongest influence on stigma or whether these factors should be investigated in tandem.

6.4.4 Summary on the Role of Empathy and Social Norms in Influencing Stigmatising Responses toward People with Mental Health Problems.

Critical Reflection on the role of Social Norms Currently, there is ample evidence available in the literature which highlights the important role that social norms play

in influencing both adults and adolescents' stigmatising responses toward a variety of marginalised groups (Aboud & Sankar, 2007; Paluck, 2009; Norman et al., 2008; Tropp et al., 2014). However, only a small body of work appears to have examined this relationship in the context of public mental health stigma. Within the adult literature, although the number of studies conducted in this area is limited, evidence has recently begun to emerge which suggests that social norms also play an important role in influencing individuals' stigmatising responses toward people with mental health problems. For instance, Norman et al. (2008) found that perceived norms significantly predicted participants' behavioural intentions toward targets experiencing symptoms of both schizophrenia and depression. More specifically, Norman et al. (2008) found that individuals' perceptions of social norms were the single best predictor of the amount of desired social distance that individuals expressed toward these targets, even after accounting for illness related beliefs, such as personal responsibility, character weakness and low expectancy of recovery. Additionally, another study by Shamblaw et al. (2015) examined the role that perceived social norms played in influencing the amount of stigma that individuals expressed toward a person with depression. These researchers observed that social norms were a significant predictor of the amount of depression stigma exhibited by individuals of both an Asian and Canadian cultural background (Shamblaw et al., 2015).

Crucially, an examination of the child and adolescent literature indicates that research examining the link between norms and public mental health stigma in adolescents is even more limited than the adult literature base. Although there is a wealth of research examining the influence social norms exert on adolescents' attitudes and behaviour toward numerous out-groups, there appears to be no research examining the predictive role that norms may play in influencing adolescents' stigmatising responses toward their peers with mental health disorders, such as depression. However, findings from an amalgamation of other research provides initial evidence to suggest that social norms may also play a powerful role in influencing mental health stigma in adolescents and this relationship warrants further investigation. To illustrate, in one of the few studies conducted on this concept, O'Driscoll et al. (2014) carried out a qualitative investigation in which the researchers explored children and adolescents' reasoning behind their exclusion of their peers with mental health issues from various social situations. The researchers found that most participants in this study were motivated to exclude their peers with depression and ADHD from social (group) situations because they perceived these peers as not being able to behave in accordance with the pre-

established group norms. Additionally, given the evidence from the adult literature which suggests that social norms may play a role in influencing public mental health stigma (Norman et al., 2008), as well the wealth of information from the general adolescent literature which also suggests that norms exert a powerful influence on the type of attitudes and behaviours that adolescents express in a variety of inter-group contexts (Aboud & Sankar, 2007; Kiesner et al., 2003), there appears to be substantial evidence to suggest that peer norms may play an important role in the expression of mental health stigma in adolescents.

Critical Reflection on the role of Empathy A review of the research conducted in both the adult and adolescent literature points to the important role that empathy plays in influencing interpersonal processes and stigmatising responses in inter-group situations (Batson et al., 1997; Finlay & Stephan, 2000; Malti et al., 2012; Wentzel, 2014). Although the strength of this relationship has been evidenced across a wide variety of out-groups, there is a striking paucity of research which has examined this relationship in the context of mental health stigma. Within the adult literature, some scholars have hinted at the role empathy may play in influencing individuals' stigmatising responses toward people with mental health difficulties. For example, Hsiao, Lu and Tsai (2015) found that mental health nurses who were older, had more clinical experience and possessed greater empathy expressed more positive attitudes toward people with mental health problems. McKeever (2014) also conducted an experimental study which indicated that empathy was significantly associated with individual's attitudes toward people with severe depression. Additionally, a study by Mann (2010) provided some further evidence to suggest that changes in empathy may play an important role in influencing individuals' stigmatising responses toward people with mental health problems. In this study, Mann (2010) investigated what effects inducing empathy would have on college students' behavioural intentions toward a target with Bipolar Depression. Mann (2010) found that increases in empathy were associated with a lower desire for social distance and more positive behavioural intentions toward the target.

Within the adolescent literature base, research examining the link between empathy and mental health stigma is even more limited. Some evidence supporting the potential role that empathy may play in influencing mental illness stigma in adolescents comes from a study conducted by Murman et al. (2014). In this investigation, Murman and colleagues examined the effect that a (youth lead) discussion and empathy based school anti-stigma programme would have adolescents' attitudes and desired social distance from persons with mental illness. Although this study did not directly measure the effects that empathy exerted

on adolescents' stigma responses, the semester long anti-stigma programme asked adolescents to engage in perspective taking during discussions about stigma scenarios. In comparison to a control group, the researchers noted that adolescents who engaged in this anti-stigma programme showed significantly more positive attitudes and lower social distance (Murman et al., 2014). Although these results suggest that empathy may play an important role in the expression of mental health stigma in adolescents, no study has yet investigated whether empathy directly influences adolescents' stigmatising responses toward persons with mental health issues, such as depression. Given the evidence which has emerged from the adult literature as well as the evidence from other research areas linking empathy with more positive intergroup attitudes and behaviour among adolescents, there appears to be sufficient evidence to suggest that an important relationship empathy and stigma within the adolescent mental health context.

6.4.5 Age and Gender Effects on Mental Health Stigma When investigating potential factors which might influence individuals' stigmatising responses toward out-group members, it is important to also consider the background characteristics or socio-demographic variables innate in the person. Two socio-demographic variables which have been found to exert a fundamental effect on the type of stigmatising responses that individuals exhibit toward people with mental health disorders, such as depression, are the gender and age of the respondent.

Gender Differences Numerous research studies have stipulated that males and females often express significantly different responses toward individuals with mental health problems, such as depression. For example, Farina (1981) found that men and women displayed different behavioural responses toward people with mental health problems, with women tending to show more positive or benign responses than men. Roberts, Wisikin and Roalfe (2008) found that young adult men also displayed more negative attitudes and greater desired social distance from a character displaying symptoms of a mental health disorder than females. Rusch et al. (2011b) also demonstrated that females tended to display more positive attitudes toward people with mental illness than males. Furthermore, Holzinger, Floris, Schomerus, Carta and Angermeyer (2011) conducted a systematic review assessing gender differences in public attitudes and beliefs about mental disorders in western countries. This review revealed that women tended to hold people with mental health disorders less responsible for their condition than men and tended to show more positive emotional reactions toward these individuals than men. However, women also tended to express more

fearful reactions toward individuals with mental illness, while no gender differences were found in desire for social distance (Holzinger et al., 2011).

A similar pattern of responding has been observed between male and female adolescents. To demonstrate, Ng and Chan (2000) found that, in comparison to girls, Chinese adolescent males showed more stereotyping and stigmatising attitudes toward mental illness. Additionally, two studies carried out by Pinfold et al. (2003) and Martinez-Zambrano et al. (2013) both found that females showed significantly greater changes in stigmatising attitudes toward people with mental health disorders than males during anti-stigma interventions. In relation to depression stigma, Reavley and Jorm (2011) found that adolescent males endorsed stronger stigmatising beliefs, such as considering peers with depression to be more dangerous and unpredictable and that depression was a sign of a personal weakness, than adolescent females. A study by Arbanas (2008) investigated adolescents' stigmatising responses toward three mental health disorders; PTSD, schizophrenia and depression. Results from this study indicated that gender differences were only observed for attitudes in relation to depression, where males showed more negative attitudes than females. Similarly, Calcar, Christensen, Mackinnon, Griffiths, and O'Kearney (2009) also found that adolescent males reported higher levels of personal stigma toward depression. Furthermore, other research has also indicated that although females may express more positive responses than males generally, both female and male adolescents tend to respond more negatively toward males with depression than females with depression (Dolphin & Hennessy, 2014; O'Driscoll et al., 2012; Swords et al., 2011). This further indicates the importance of the perceiver's gender in predicting adolescents' stigmatising responses toward peers with depression and other mental health conditions.

However, it is important to note that although the majority of studies appear to indicate that stigmatising responses vary according to the gender of the respondent, where the general trend appears to be that males express more negative responses than females (Emerton, 2010); other research has reported inconsistent or non-significant gender differences (Griffiths et al., 2008; Law et al., 2007; Watson et al., 2005). It is possible that this observed variability could be indicative that gender could also be contingent on other factors, such as differences in the type of mental health disorder or stigma component being assessed. Nonetheless, this previous research shows the importance of considering gender effects when assessing stigmatising responses in adolescents.

Age Differences Age also appears to be an important characteristic to account for in research investigating stigma toward people with mental health disorders. Researchers propose that as adolescence is associated with rapid cognitive development, differences in developmental stages are likely to have an impact on attitudes. Typically, the research has indicated that although knowledge about mental health disorders appears to become more sophisticated with age (Fox, Buchanan-Barrow & Barrett, 2010; Hennessy et al., 2008), older adolescents and adults also tend to show more stigmatising responses than younger adolescents or children (Griffiths et al., 2008). Similarly, findings from a systematic review conducted by Parcesepe and Cabassa (2013) examining the public stigma of mental illness in the United States also revealed that the age of respondents appeared to have significant effects on the type of stigmatising responses observed. In this case, older respondents viewed people with mental illness as being less competent than younger respondents. Additionally, the authors of the review noted that as age increased, respondents' preference for social distance from a child with a mental health condition also increased (Parcesepe & Cabassa, 2013). Furthermore, O'Driscoll et al. (2012) noted that, compared with children, adolescents appeared to be less accepting and more prejudiced toward their peers with ADHD and depression. Thus, age may also be an important factor to consider when investigating adolescents' responses toward peers with depression.

6.5 Conclusions

Research has shown that adolescents who experience mental health issues such as depression are often stigmatised by their peers (Moses, 2010; Platt et al., 2013). Given the negative effects that such stigmatisation can exert on adolescents' developmental and psychological well-being, anti-stigma interventions have been identified as a focal area of research (WHO, 2013). However, although demand for interventions that are effective in reducing prejudice and stigma are increasing, there is still a paucity of applied research to guide practitioners toward best practice (Sierksma et al., 2014). Social scientists have specified that an important step in designing effective strategies to promote intergroup solidarity and reduce stigma in children and adolescents is to generate an understanding of the factors that influence the expression of stigma (Emerton, 2010; Gulliver et al., 2010; Sierksma et al., 2015; Stier & Hinshaw, 2007). Within the general social psychological literature, there is a plethora of research indicating that factors such as group norms and empathy exert a substantial effect on adolescents' stigmatising responses toward a variety of out-groups (Kiesner et al., 2003; Malti et al., 2012). Although there is evidence to suggest

that empathy and group norms may also exert an influential effect on stigmatising responses toward people with mental health difficulties in adults, the effect of these variables on an adolescent population has yet to be investigated. In particular, there is very limited information available about the relationship between these variables and the expression of stigma toward peers with depression among adolescents.

6.6 Aims of the Current Research (Study 2)

Study 2 has several aims and objectives. First, this study aims to compare adolescents' responses toward 'typically developing' peers with their responses toward their peers characterised as experiencing symptoms of 'depression'. Specifically, this study aims to investigate whether adolescents express more explicit and implicit stigmatising responses toward their peers with depression, than toward other 'typically developing' adolescents. It is hypothesised that adolescents will direct greater levels of (explicit and implicit) stigmatising responses toward their (male and female) peers with depression than toward their typically developing peers.

Secondly, the current study proposes to assess whether empathy and peer-group norms influence the type of stigmatising responses that adolescents express toward male and female peers with depression. In particular, this research will focus on assessing the individual role that affective empathy, cognitive empathy, descriptive peer norms and injunctive peer norms play in predicting the type of explicit and implicit stigma that adolescents express toward a male and female peer with depression. It is hypothesised that when (cognitive and affective) empathy is higher, and (descriptive and injunctive) peer norms are more positive, adolescents will express less explicit and implicit stigmatising responses toward the male and female targets with depression.

A final aim of this research is to assess which of the four predictors (affective empathy, cognitive empathy, descriptive norms and injunctive norms) appears to exert the strongest influence on stigma reactions in adolescents. Additionally, this research is interested in investigating whether these predictors exert differential effects on explicit and implicit stigma depending on whether the target is male or female. It is also anticipated that the age and gender of the participant will exert some influence on adolescents' stigma responses. Thus, this research intends to employ Hierarchical Multiple Regression (HMR) analyses in order to examine the additional effect that the four predictors exert on stigma responses after controlling for possible age and gender effects.

Chapter 7

Study 2 Method

7.1 Aim of Chapter

The aim of this chapter is to describe the research design and methodological features of Study 2. This chapter will describe the measures and procedure that were utilised to assess the stigmatising responses that adolescents express toward typically developing peers and peers experiencing symptoms of depression. Additionally, a detailed account of the methods used to assess (affective and cognitive) empathy and (descriptive and injunctive) peer group norms will be presented. Ethical considerations pertinent to the current study will also be outlined.

7.2 Design

Study 2 employed a cross-sectional design in order to compare how male and female adolescents responded to male and female vignette targets. Targets were portrayed as typically developing peers or peers with symptoms of depression.

7.3 Participants

Participants who participated in this study are the same as those who participated in Study 1 (A & B), as Study 2 addresses separate research questions. A total of 646 (227 male, 418 female, 1 non-specified) adolescents were recruited to this study. Participants ranged in age between 13 to 18 years ($M = 15.49$, $SD = 1.14$; 8 non-specified). All participants were secondary school (2nd, 4th or 5th year) students attending secondary schools located within the West of Ireland, with a student population greater than 200, as listed on the Department of Education & Skills webpage. All participants supplied written parental consent as well as verbal assent to participate in this study.

7.4 Measures

7.4.1 Demographic Variables Participants were asked to provide information on their age, gender and school year.

Development of Typically Developing and Depression Vignettes Vignettes were employed in the current study in order to assess how adolescents responded toward peers with depression in comparison to those experiencing ‘normal issues’. For more information on the advantages and limitations of vignette based research see Study 1 (pp. 28-29).

As in Study 1, the vignettes employed in the current study provided a brief description of either an age-matched, hypothetical peer displaying behavioural characteristics of depression or a behavioural description of a typically developing, age-matched, hypothetical peer. Two versions of each vignette were created, where the targets were depicted as being either male or female. No diagnostic labels accompanied either the depression or typically developing vignettes. All other details were identical between these male and female versions, apart from the gender of the target. The depression vignette employed here was identical to that used in the previous study (Study 1). The typically developing vignette was also adapted from behavioural descriptions used in previous research studies (O’Driscoll et al., 2012; Swords et al., 2011). Modifications were made to these original vignettes for several reasons. Firstly, it was observed that in the original research, the ‘typically developing’ vignette was a different length than the ‘depression’ vignette and that the two vignettes varied in the amount and type of hobbies that each character engaged in. Specifically, the ‘typically developing’ vignette was considered to be depicted as possessing only positive characteristics. Thus, a decision was made to portray both the ‘Depression’ and ‘Typically Developing’ peers as being as similar as possible, where both positive and negative characteristics would be described for both characters. The one distinguishing feature between the two characters was that one target appeared to be experiencing symptoms of depression. Furthermore, it was ensured that both the depression and ‘typically developing’ vignette contained approximately the same word count. The modifications made to the typically developing vignette can be compared below.

O’Driscoll et al. (2012) ‘Typically Developing’ (Male) Vignette:

David is in the same class year as you. He likes school because he has good friends in his class, but would like it better if his teachers didn’t give him so much homework. He plays with his friends after school one or two times during the week and at weekends. He has several hobbies, including playing sports and listening to music. David usually gets on well with other children, but sometimes they have arguments. However, he always makes up with them. Most of the time, David does well in school but has to work hard at some subjects especially Maths and Irish. He is well behaved in school and rarely gets in trouble from his teachers.

Adapted ‘Typically Developing’ (Male) Vignette:

Nick is in the same year as you. He likes socialising with his friends and spends a lot of his spare time hanging around with them and chatting to them online. Nick tends to get on well with most of his classmates at school and there are one or two people in particular that he gets on really well with. However, there are some people in Nick’s year that he doesn’t like as much as he likes others, and so Nick doesn’t hang out with these classmates very much. Nick normally gets on well in school. Occasionally, he gets into trouble with his teachers for not having his homework fully completed, but in general Nick’s teachers don’t have any real problems with him. Out of all of the teachers in the school, Nick said that he likes his English teacher the best, but that he would like her even more if she didn’t give the class quite as much homework. Outside of school, Nick has several hobbies. He plays on his school’s basketball team and has been taking guitar lessons for the past few months as well. Nick really enjoys playing basketball for the school team, but he would still like to be better at it than he is now. Nick used to really enjoy learning to play the guitar as well, but he has recently started to think that the lessons take up too much of his free time and so he has decided to give them up.

Following these modifications, the ‘typically developing’ vignette was subjected to a validation process. This validation process was identical to that carried out on the depression vignette and both processes were carried out simultaneously (see Chapter 3, pp. 29-31, for more details; see also Appendices A & B). In this instance, in order to ensure that vignette depicted above portrayed a ‘typically developing’ peer and was not descriptive of an adolescent experiencing signs of any mental health disorder, a selection of qualified clinical psychologists and trainee clinical psychologists from within Ireland were asked to assess the internal validity of this vignette. The feedback provided by the reviewers was predominantly positive. None of the clinical reviewers identified this character as meeting the diagnostic criteria for any mental health disorder and the majority of reviewers commented that the vignette character appeared to be characteristic of a ‘normal/typical teenager’. Two reviewers noted that the character appeared to have some ‘self-esteem issues’, which may not be unusual for a teenager, while another reviewer suggested that the readability of the vignette might be strengthened if some sentences were “‘tightened up’”. In response to these comments, some minor refinements were made to the typically developing vignette; several

sentences were reconstructed in order to increase the readability of the vignette. Additionally, an effort was made to attempt to defuse any inadvertent emphasis on ‘self-esteem issues’. The male vignette employed in the current study is as follows. An identical female vignette was also employed:

Nick

Nick is in the same year as you. He likes socialising with his friends and spends a lot of his spare time hanging around with them and chatting to them online. Nick tends to get along well with most of his classmates at school and there are one or two people in particular that he gets on really well with. However, there are still a couple of people in Nick's year that he doesn't especially like or click well with. Overall, Nick usually gets on well in school. Sometimes he gets into trouble with his teachers for talking in class but, in general, Nick's teachers don't have any real problems with him. Out of all of the teachers in the school, Nick said that he likes his English teacher the best, but that he would like her even more if she didn't give the class quite as much homework. Nick also has several hobbies. He likes sport and is a member of the school's basketball team. Nick is also trying to learn to play the guitar and has been taking guitar lessons for the past few months. Nick really enjoys playing basketball for the school, but he wishes that the team were slightly better than they are now. Nick also used to really enjoy learning to play the guitar as well, but he has recently started to think that the lessons take up too much of his free time and so he has decided to give them up.

For each participant, the gender of the target characters was matched. In other words, if a participant read about a male peer with depression, then they also read about a typically developing male peer. Approximately half the sample read about female targets and the other half read about male targets. The order of vignettes was counter-balanced with approximately 47.6% of the sample reading the description of the depressed target first with 52.4% of participants first reading the vignette containing the description of the typically developing target. In total, 316 participants read about male vignette targets and 330 participants read about female vignette targets.

7.4.2 Stigma Stigma was assessed using an array of different explicit and implicit measures. Explicit Stigma was assessed using the model of Stereotypes, Prejudice and Discrimination that was identified in Study 1 (see Chapters 2-5, pp. 9-88). Implicit stigma was assessed using the Implicit Association Test (IAT; Greenwald, Nosek & Banaji, 2003).

Stereotypes A number of stereotype measures were subjected to exploratory and confirmatory factor analyses in Study 1 of this doctoral thesis (see pages 28-88). Results from this study revealed that stereotypical beliefs in adolescents were represented by four separate factors. Hence, these four factors were employed in the current study as a method of assessing stereotypic beliefs toward ‘typically developing’ and depressed peers. Specifically, the four types of stereotypes assessed here were Perceptions of Dangerousness (3-items), Warmth & Competence (8-items), Perceptions of Responsibility (3-items) and Negative Attributes (4-items). Responses on each stereotype factor were scored on a Likert-Type Scale. The Dangerousness scale ranged from 1 -5, with higher scores reflecting higher endorsements of the perceived dangerousness of the target character. Warmth & Competence also ranged from 1 – 5 with higher scores being indicative of lower perceived warmth and competence. Responsibility ranged from 1-4 with higher scores reflecting greater attributions of perceived responsibility to the target character. Finally, the Negative Attributes factor was measured on a semantic differential scale, ranging from 1- 5. For this factor higher scores were indicative of more negative evaluations of the target.

Prejudice Prejudice was assessed using the items which emerged from the stigma model developed in Study 1. Specifically, prejudicial responses toward each of the vignette characters were measured through one single factor, comprising six-items assessing expressions of fear and anger toward the target. All responses were scored on a 5-point Likert type scale ranging from 1 (Definitely the case) to 5 (Definitely not the case). Items were reversed scored so that higher scores on this factor represented higher endorsements of more fearful and angry reactions toward each target.

Discrimination Results from the Study 1 stigma model indicated that adolescents’ behavioural intentions toward the vignette target were best represented as two separate types of discriminatory intentions. Thus, discrimination in the current study was measured by two factors. One factor measured discrimination toward engaging in general Classroom-Type Behaviour (4-items) with the target. The other factor measured adolescents’ reluctance towards engaging in Friendship-Type Behaviour with the target (10-items). Participants indicated their intentions of engaging in a specific activity with the target character by recording their responses on a four point scale, (1, Yes – 4, No). Responses were then summed to reveal a total sub-scale score, where higher scores on each of the two factors were indicative of less positive behavioural intentions.

Implicit Attitudes In the current research, extensive time requirements were needed when carrying out the implicit assessments, as it was not possible to carry out these assessments in a large group context, due to a lack of available computers. Therefore, a pragmatic decision was made to assess implicit attitudes in a sub-sample of participants. Based on an a priori power analysis, a total of 173 adolescents (73 male; 99 female; 1 non-specified) from the overall sample were asked to also complete an implicit assessment of stigma.

Implicit Association Test (IAT; Greenwald et al., 1998; 2003) In order to assess participants' implicit attitudes toward the vignette targets, the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998; Greenwald et al., 2003) was employed. The IAT is the most widely used measure of implicit social cognition among adults and is also one of the most widely used implicit measures among children and adolescents (McKeague et al., 2014). The IAT “seeks to measure implicit attitudes by [assessing participants’] underlying automatic evaluations” (Greenwald et al., 1998, p.1464). The IAT assesses the strength of associations between two concepts by observing participants’ response latencies through a computer-administered categorisation task (Greenwald, Poehlman, Uhlmann & Banaji, 2009). The IAT is a dichotomous association test that asks participants to sort four types of stimuli into two response options by pressing the correct response on a keyboard or response pad (e.g., ‘d’ or ‘k’ key). These stimuli act as exemplars of two target categories (e.g. peer with Depression versus ‘Typically Developing’ peer) and two contrasting attribute categories (e.g. ‘good’ versus ‘bad’). Based on timed response latencies between stimulus presentation and participants’ reactions, the task rests on the assumption that it is easier for participants to sort stimuli from two categories that are closely associated with one another, than it is to associate stimuli from categories that are not associated. Baron and Banaji (2006) state that the rationale for the IAT is that “the more strongly two concepts have become associated with one another, the faster and more accurately they can be paired” (p.54).

In a typical IAT, the stimuli in the target categories are usually presented as images or labels (Greenwald et al., 1998). As it was not possible to portray the peer with depression by means of an image, and in order to avoid the use of psychiatric labels, the names of the vignette peers were used as the target stimuli in the current study (e.g. *Nick/Nicola* and *Michael/Michelle*). In order to represent these target stimuli, behavioural descriptions of each character were extracted from the corresponding vignette (e.g. feels down, gets on well in

school). Participants then had to indicate which behaviour was descriptive of which Target. In this way the name of the target characters were used to categorise the depression and typically developing vignettes and the behavioural descriptions were the stimuli used to represent these categories. This procedure is identical to that employed by O’Driscoll et al., (2012).

The two attribute categories chosen for the current IAT task were ‘good’ and ‘bad’. These attribute stimuli were represented by the items which composed the explicit Negative Attributes factor in the current study. These items were adapted from the Teachman et al. (2003) attitudes scale as they have been used previously to measure implicit attitudes. The two attribute categories were represented by the following words; Terrible, Excellent, Horrible, Wonderful, Nasty, Joyful, Awful and Great. Adolescents had to indicate which words belonged to the ‘good’ category, and which words were representative of the ‘bad’ category.

Following the guidelines specified by Greenwald et al. (2003) the IAT employed in the current study consisted of seven ‘blocks’ or ‘tasks’. In Task 1, participants were presented with the attribute concepts and were asked to distinguish between words that had a ‘good’ (press ‘d’ response key) or a ‘bad’ (press ‘k’ response key) connotation. In Task 2, participants were presented with the target stimuli and asked to discriminate between ‘Nick/Nicola’ (Typically Developing Target) and ‘Michael/Michelle’ (Depressed Target; e.g. press ‘d’ for sentences associated with Nick/Nicola, press ‘k’ for sentences associated with Michael/Michelle). Task 3 combined the target stimuli with the attribute concepts for a series of 20 practice trials. Participants were instructed to map specific combinations of target and attribute words onto the same response key (e.g. press ‘d’ for ‘Nick/Nicola’ or ‘good’ words and press ‘k’ for ‘Michael/Michelle’ or ‘bad’ words). In Task 4, participants were asked to sort the same combination of target and attribute words again, however, the number of trials increased from 20 to 40. Additionally, while Task 3 acted as a practice trial, participants were informed that Task 4 was a test. In Task 5, participants were asked to categorise the attribute concepts, however, the response order for these concepts had been reversed (e.g. press ‘d’ for bad, press ‘k’ for good). Following the recommendations of Nosek, Greenwald and Banaji (2005) the number of practice trials in Task 5 was increased from 20 to 40. Nosek et al. (2005) suggest increasing the number of trials here in order to reduce the potential impact of the order of trials on responses. In Task 6, participants were asked to categorise both target stimuli and attribute concepts, however, the association between the target and attribute

words had now been reversed (e.g. press ‘d’ for ‘Nick/Nicola’ or ‘bad’ words and press ‘k’ for ‘Michael/Michelle’ or ‘good’ words). The final task, repeated this incompatible combination of target and attribute stimuli (e.g. press ‘d’ for ‘Nick/Nicola’ or ‘bad’ words and press ‘k’ for ‘Michael/Michelle’ or ‘good’ words).. Participants were again asked to categorise these stimuli for a series of 40 test trials. According to Greenwald et al. (2003) the difference in response latencies between Tasks 3 and 4 and Tasks 6 and 7 are indicative of an implicit attitudinal difference between the target categories. In order to control for order effects, approximately half the participants were asked to categorise ‘Michael/Michelle’ or ‘Bad’ and ‘Nick/Nicola’ or ‘Good’ first (Compatible Trial), and the remaining participants were asked to categorise ‘Michael/Michelle’ or ‘Good’ and ‘Nick/Nicola’ or ‘Bad’ first (Incompatible Trial).

Name Behaviour Training (NBT) Task for the IAT To ensure that the adolescents’ implicit attitudes were expressed in response to the characteristics of the vignette peers and not due to name preferences, a Name-Behaviour Training (NBT) procedure was carried out (see Appendix I). This procedure was similar to the attitude induction procedure used by Ranganath and Nosek (2008) and was developed by O’Driscoll et al., (2012). All participants completed this procedure prior to carrying out the IAT.

The NBT procedure carried out in this study was a pen-and-paper test, in which participants were asked to read the descriptions of both vignette characters as well as 12 named behavioural descriptions (e.g. Nick loves sport). Participants were then shown 12 unnamed behavioural descriptions (e.g. loves sport) and were asked to match the correct peer with the behavioural description. Ten correct responses were required before the adolescent was allowed to proceed on to the IAT. All participants produced at least ten correct answers.

Additionally, prior to commencing the IAT, participants were also asked to sort the attribute stimuli, in order to ensure that participants identified each attribute as belonging to the correct category. Specifically, participants were asked to indicate which attribute words are associated with ‘good’ and which attribute words they would associate with the term ‘bad’, using a pen-and-paper measure. Participants were asked to complete this task in order to ensure that the valence of each word was also understood. A similar procedure was also carried out by O’Driscoll et al. (2012).

7.4.3 Empathy The dispositional trait of empathy in this study was assessed using the Basic Empathy Scale (BES) developed by Jolliffe and Farrington (2007). Although several measures of empathy can be found in the literature, these measures are criticised for tending to focus on assessing either cognitive empathy (e.g. The Hogan Empathy Scale, HES; Hogan, 1969) or a vicarious other-oriented emotional response (e.g. The Questionnaire Measure of Emotional Empathy, QMEE, Mehrabian & Epstein, 1972; The Balanced Empathy Emotional Scale; BEES; Mehrabian, 1996; The Index of Empathy in Children and Adolescents, Bryant, 1982). Although the Davis Interpersonal Reactivity Index (IRI; Davis, 1980) is one of the most commonly used measures of empathy available in the literature, the validity of the IRI as a measure of both cognitive and emotional empathy has been questioned in recent years (see also Albeiro, Matricardi, Speltri & Toso, 2009 and Jolliffe & Farrington, 2007).

The BES consists of a 20-item scale that assesses both cognitive and affective empathy. Scores are measured on a 5-point Likert-type scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Some items are reversed scored so that higher scores on both the Affective and Cognitive Scales are indicative of greater levels of empathy. A relative advantage of the BES for use in the current study is that the scale was designed specifically for use with adolescents and was validated on 764 English adolescents aged approximately 15 years. The cognitive scale contains 9-items while the affective scale is composed of 11-items. Researchers now consider the BES to be a valid alternative to the IRI for research investigating empathy among adolescents (Gini et al. 2007). Jolliffe and Farrington (2007) reported good internal consistency for both the cognitive ($\alpha = .79$) and affective ($\alpha = .85$) sub-scales. The reliability for the current study was ($\alpha = .82$) for the cognitive scale and ($\alpha = .81$) for the affective sub-scale.

7.4.4 Peer-Group Norms Two types of peer-group norms were assessed in this study: *Descriptive Norms* and *Injunctive Norms*. Measures of group norms in this study were based on the conceptualisations of group norms proposed by Cialdini et al. (1990) and were modelled on items used by previous studies to assess such norms (Norman et al., 2010; Parks & Smith, 2007). Descriptive norms were conceptualised as adolescents' beliefs about what their friends may think or do and Injunctive Norms were operationalised as the pressure the adolescent feels to conform to these norms (Cialdini et al., 1990; Rimal & Real, 2003). Both the Descriptive Norms and Injunctive Norms in this study were measured on a 7-point Likert type scale from 1, Strongly Disagree, to 7, Strongly Agree. Higher scores on the Descriptive Norms scale (5-items) represented higher beliefs that the adolescent's friends would respond

positively to the target. Items on the Injunctive Norms scale (5-items) were reversed scored so that higher scores reflected greater endorsements that befriending the target would be associated with fewer negative social sanctions. Respondents completed these measures in relation to both the Depression and Typically Developing vignette target.

7.4.5 Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) As with Study 1, the Emotional Problems sub-scale of Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was utilised in the current study in order to identify adolescents who exhibited behaviours similar to the peer described in the depression vignette. Previous research has shown that individuals with emotional or behavioural disorders often express differential responses to people with disorders than the general population (Rusch et al., 2011a; 2011b). The Emotional Problems sub-scale consists of 5-items which can be summed to produce a total sub-scale score. Responses are scored on a 3-point Likert scale, ranging from 'Not True' to 'Certainly True'. In the current study, scores were dichotomised using the recommended cut off scores for 'normal/borderline' (≤ 7) and 'abnormal' (≥ 8) behaviour (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000). In order to ensure that participants' responses on the stigma measures were limited to adolescents who did not display signs of emotional difficulties, individuals who obtained above the identified cut-off mark on the SDQ were removed from the final analyses. This resulted in a total of 76 participants being removed from the final analysis. For the current study the internal reliability of the SDQ was $\alpha = .62$, and $\alpha = .62$ for the Emotional Problems sub-scale.

7.5 Procedure

7.5.1 Procedure for School Recruitment The procedure for recruiting Schools to the current study was identical to the protocol followed in Study 1 (see Chapter 3, pp.36-37, for a more detailed account of the procedure).

7.5.2 Recruiting Participants Post-primary school students in their 2nd, 4th or 5th year of participating secondary schools were invited to take part in Study 1 and Study 2. Recruitment to these studies was conducted simultaneously, in that students who took part in Study 1 (A or B) also took part in Study 2. The researcher introduced the research directly to students. The researcher provided students with a verbal description of what would be required of them should they choose to participate in the study. All students were informed that they would be asked to complete a questionnaire booklet which would ask them to read

two short stories about persons whom they did not know and to answer questions about how they would think, feel and act toward these teenagers. All students were also informed that the questionnaire would ask them to respond to questions about how they think and feel in general as well as their perceptions about how their friends would respond to each character.

Adolescents attending 7 out of the 16 recruited schools were also asked to complete the IAT. Schools were recruited to this aspect of the study on an incremental basis until a sufficient number of students had completed these implicit assessments. All adolescents at participating school were asked to complete these additional implicit stigma assessments. Adolescents attending these schools were informed that after completing the questionnaire, they would also be asked to complete a computer based task. Participants were told that this computer task would require them to sort words and sentences. Ethical considerations were adhered to by reminding participants that the research was voluntary, would require parental consent and all information collected would be anonymous and confidential. Participant information sheets (Appendix G) and Parental consent forms were distributed to interested parties (see Appendix H). For a more detailed account of the procedure see Study 1 (Chapter 3, pp. 36-38).

Completion of the Study The researcher returned to all participating schools within one to three weeks after distributing the Information Sheets and Consent Forms. All students who had returned signed parental consent forms, and were present in school on the day, were gathered in a classroom by the liaison teacher. All students were randomly administered a questionnaire booklet (see Appendix J). Half the questionnaires contained male vignette characters and the other half depicted female characters. On average, it took students approximately 35-45 minutes to complete the questionnaire. The procedure for completing the explicit assessments was identical to that carried out in Study 1 (see pages 36-38 for a more detailed account). Once all students in each class had completed the questionnaires, students in the classes who were not taking part in the IAT were thanked for their participation and given an opportunity to ask the researcher any questions they had in regards to the study

For the sub-set of participants who also completed the IAT, upon the completion of the questionnaire these students were informed that they would be called to take part in a computer task sometime within the next few hours/days. Students were then taken in groups of three to a quiet classroom to complete the implicit measures. Before commencing the IAT

students were asked to take part in the Name-Behaviour Training (NBT) task. It took participants approximately 5 minutes to complete this procedure. Once participants were familiar with this procedure they were allowed to commence the IAT. Participants were informed that the IAT was a computer-based categorisation task that would require them to sort words and behavioural descriptions into the relevant categories as quickly and correctly as possible. It took participants approximately 15-20 minutes to complete this section of the study. Once participants had completed the IAT they were thanked for their participation and debriefed.

7.5.3 Ethical Issues and Considerations Full ethical approval for Study 1 and Study 2 was granted by the Research Ethics Committee at the National University of Ireland, Galway on December 12th, 2012. For a review of the key ethical considerations affecting this study see Study 1 (Chapter 3, pp. 38-39).

Chapter 8

Study 2 Results

8.1 Aim of Chapter

The aim of this chapter is to outline the statistical analyses that were employed in Study 2 and to report on these research findings. First, this chapter reports on a series of paired samples t-tests which were conducted in order to establish whether adolescents expressed more stigmatising responses toward peers with depression than typically developing peers. This chapter also outlines the results from a series of Hierarchical Multiple Regression (HMR) analyses which were employed to assess whether Affective Empathy, Cognitive Empathy, Injunctive Norms and Descriptive norms exerted a predictive effect on adolescents' explicit and implicit stigma responses, after controlling for gender and age effects. Separate analyses were conducted in order to assess whether Affective Empathy, Cognitive Empathy, Descriptive Norms or Injunctive Norms exerted differential effects on stigma responses when the vignette target was male compared to when the target was female.

8.2 Screening

Using the SDQ to screen for adolescents who appeared to be experiencing emotional difficulties, a total of 76 participants were identified as scoring over the cut-off point on the Emotional Difficulties sub-scale. These participants were removed from the final analysis. This left a sample size of 570 (221 male and 348 female; 1 non-specified) participants, aged between 13 to 18 years ($M = 15.51$, $SD = 1.13$).

8.3 Missing Data

In order to examine whether missing values in the current measures were Missing Completely at Random (MCAR), Little's (1988) MCAR test was applied (see Chapter 4 for a more thorough description, pp. 42-43). In the current study, Little's test was found to be significant ($\chi^2 [10993] = 12110.26$, $p < .001$), indicating that the data was not missing completely at random. However, the highest level of missingness observed for any variable in the data set was 3.3%. As the level of missingness was minimal (i.e., less than < 5%), the data was deemed suitable for EM and the EM algorithm for imputing missing values was employed on the dataset.

8.4 Descriptive Statistics

Distributions of scores on the measures being utilised in the current study were inspected for normal distribution. Prior to conducting the Multiple Regression analyses, the data was assessed for evidence of skewness and kurtosis. While the majority of scales showed acceptable skew and kurtosis levels (i.e., skew < .80 and Kurtosis < 3), some scales were found to exceed these recommended values (see Table 8.1). Specifically, for the measures assessing responses toward the typically developing vignette character, the ‘Dangerousness’, ‘Prejudice’ and ‘Injunctive Norms’ factors all showed evidence of skewness or kurtosis. In relation to the peer with depression, the ‘Responsibility’, ‘Prejudice’ and ‘Classroom Discrimination’ also showed evidence of skewness. However, deviations from normal distribution are to be expected in large sample sizes due to the decrease in standard error that results from an increased sample size (Tabachnick & Fidell, 2007; Pallant, 2007). Therefore, no transformations were carried out on the data.

Additionally, all scales were assessed for univariate normality. The Dangerousness factor for the typically developing character and the Prejudice and Negative Attributes factors for the Depression character all had cases evidencing skewness (univariate skewness greater than 3.0; Tabachnick & Fidell, 2007). Although the majority of scales showed evidence of good reliability (i.e., $\alpha > .70$), as can be seen in Table 8.1, a number of scales showed alpha levels in excess of .90, which may have been indicative of item-redundancy. However, upon inspection of the inter-item correlations on these scales, multicollinearity was not deemed to be a problem as no high inter-item correlations were observed (all $r_s < .8$). Furthermore, two factors; ‘Classroom Discrimination’ for the ‘Typically Developing’ target and ‘Descriptive Norms’ factor for the ‘Depression’ vignette showed reliability levels less than .70.

All measures were also inspected for multivariate normality. Using Mahalanobis distance analysis, multivariate outliers were identified. Thirty-seven cases were identified as having significantly ($p < .05$) exceeded the critical value and thus were removed from further analyses. Following the removal of these outliers, maximum likelihood (ML) estimation was used (Byrne, 2012). This left a final sample size of 533 (208 males, 324 females, 1 non-specified) participants, ranging in age from 13-18 years ($M = 15.53$, $SD = 1.11$).

Descriptive Statistics for all factors including means and standard deviations are displayed in Table 8.1. As can be seen in this table, endorsements of ‘Dangerousness’ and ‘Responsibility’ stereotypes for each target were relatively low. Moreover, adolescents showed relatively low intentions to engage in ‘Classroom Discrimination’ toward either

target. For the predictor variables, adolescents appeared to show moderate-high levels of cognitive and affective empathy. Adolescents also appeared to endorse high (positive) levels of Descriptive and Injunctive Norms for the Typically Developing (TD) target, but low (negative) levels of descriptive norms, and moderate levels of injunctive norms, for the depressed target. For a summary of the frequency of distribution between participant gender and the gender of the vignette target, see Table 8.2.

Table 8.1

Descriptive Statistics, Reliability and Normal Distributions for all Factors Included in Study2

Factor	M	SD	Min-Max	α	CI (95%)	Skew	Kurtosis
Affective Empathy	37.91	6.46	11-55	.74	37.36-38.46	-.16	-.06
Cognitive Empathy	35.24	4.92	9-45	.75	34.82-35.66	-.23	-.31
TD Vignette							
Dangerousness	3.66	1.22	3-15	.80	3.56-3.77	2.24	5.50
Warmth & Competence	17.47	4.35	8-40	.84	17.09-17.84	.21	.03
Responsibility	6.44	2.21	3-12	.77	6.25-6.63	.06	-.79
Negative Attributes	8.98	2.26	4-20	.79	8.79-9.18	.16	.57
Prejudice	10.76	5.86	6-30	.90	10.26-11.26	1.80	3.00
Classroom Discrimination	6.19	1.92	4-12	.65	6.02-6.36	.79	.27
Friendship Discrimination	23.12	6.59	10-40	.92	22.56-23.67	-.07	-.53
Descriptive Norms	22.43	4.59	5-35	.72	22.03-22.82	-.55	-.27
Injunctive Norms	31.28	4.61	5-35	.88	30.88-31.67	-1.47	1.92
Depression Vignette							
Dangerousness	5.74	2.45	3-15	.74	5.53-5.95	.76	-.03
Warmth & Competence	21.90	5.52	8-40	.86	21.42-22.37	.09	-.01
Responsibility	4.80	2.06	3-12	.80	4.63-4.98	1.20	.85
Negative Attributes	11.84	2.35	4-20	.78	11.83-12.05	-.01	1.26
Prejudice	11.91	5.35	6-30	.85	11.45-12.37	1.12	1.04
Classroom Discrimination	6.42	2.21	4-12	.75	6.23-6.61	1.03	1.31
Friendship Discrimination	26.34	6.71	10-40	.92	25.77-26.91	-.33	-.29
Descriptive Norms	17.09	4.67	5-35	.62	16.69-17.49	.42	-.16
Injunctive Norms	27.74	6.98	5-35	.92	27.14-28.33	-.84	-.15

Table 8.2

Frequency Distribution of Participant Gender for Male and Female Vignette Targets

Participant Gender	Male Vignette	Female Vignette
Male	91	117
Female	160	164

8.5 Preliminary Analysis

8.5.1 Difference on Stigma Measures Prior to conducting the Hierarchical Multiple Regression analyses, preliminary analyses were carried out in order to assess whether stigma responses directed toward the ‘Depression’ character significantly differed from the type of responses expressed toward the ‘Typically Developing’ peer. A series of paired samples t-tests were conducted in order to investigate these differences. Results revealed that participants expressed significant differences in their stigma responses toward the depressed character compared to the typically developing character on all stigma measures, after controlling for the family-wise error rate. In general, participants were found to endorse significantly more stigmatising responses toward the peer with depression compared to the typically developing peer. Specifically, in relation to the depressed target, participants endorsed higher scores on the majority of stigma measures, where higher scores are indicative of more negative responses. One exception to this trend was observed in relation to the ‘Responsibility’ factor. In this instance, participants were found to express higher perceptions of perceived responsibility toward the typically developing character, in comparison to the depressed target. Additionally, although participants’ scores on the ‘Classroom Discrimination’ factor were significantly higher for the depressed target than the typically developing target, the difference between these scores was minimal. A full summary of these results is displayed in Table 8.3.

Table 8.3

Summary of Means (Standard Deviations) between Stigma Measures for the Typically Developing and Depressed Peer

Factor	Depression	Typically Developing
Dangerousness	5.74 (2.46)	3.69 (1.32)**
Warmth & Competence	21.87 (5.54)	17.47 (4.36)**
Responsibility	4.80 (2.06)	6.44 (2.22)**
Negative Attributes	11.83 (2.36)	8.97 (2.27)**
Prejudice	11.89 (5.34)	10.77 (5.88)**
Classroom Discrimination	6.42 (2.21)	6.17 (1.93)*
Friendship Discrimination	26.32 (6.70)	23.08 (6.48)**

*Note: * $p < .05$, ** $p < .001$.*

8.5.2 EFA on Group Norms As the measures used to assess Descriptive Norms and Injunctive Norms in the current study had been developed for the purposes of the current study and not based on previous validated measures, an EFA was carried out on these items in order to identify the most parsimonious factor structure of these items. An EFA was conducted using SPSS v.20 software.

Data Analytic Strategy for EFA The factorability of the current data was examined using Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. In the current study, Bartlett's test was statistically significant ($\chi^2 [36] = 3513.40, p < .001$) and the KMO statistic exceeded .60 (KMO = .89), thus the data was considered suitable for EFA. Dimensionality was examined using principal axis factoring (PAF) with oblique rotation (direct oblimin, delta set at zero). Decisions regarding the number of factors to retain were based on a parallel analysis (O'Connor, 2000); in conjunction with examination of the Scree plot. For the purpose of retaining items, the minimal acceptable factor loading for the retention of items was .50, where all cross-loadings for that item were less than .32 (Worthington & Whittaker, 2006).

Results for EFA Using syntax provided by O'Connor (2000), results from the parallel analysis suggested that a 2-factor solution should be retained as the first two eigenvalues for the real data (5.41, 1.88) exceeded the first two eigenvalues for the random

data (5.05, 1.54). A visual inspection of the Scree plot also provided support for a two factor matrix. Hence, the analysis was repeated forcing a 2-factor solution. One item was found to cross-load onto both factors and was removed from further analyses. From the remaining items, four items were found to load onto one factor, which was named Descriptive Norms, and five items were found to load onto a separate, second factor, conceptualised as the Injunctive Norms factor. This 2 factor solution was found to account for 77% of the total variance. Factor loadings ranged from .68-.94 and are displayed in Table 8.4. Both scales showed good internal reliability. Cronbach's alpha for Injunctive Norms was .92, where inter-item correlations ranged from .62-.81. For the new Descriptive Norms factor, $\alpha = .90$ and inter-item correlations ranged from .58-.77. In the current study, no item correlation greater than .90 or less than .30 was observed. Corrected item-total correlations for each factor were also assessed and correlations for each factor were greater than .30.

Table 8.4

Factor Loadings for the Descriptive Norms and Injunctive Norms Factors

Item	Descriptive Norms	Injunctive Norms
My Friends would like Michelle/Michael	.81	.04
My Friends Would Hang Around with Michelle/Michael	.94	-.05
My Friends Would become close friends with Michelle/Michael	.89	-.07
My friends would try to get to know Michelle/Michael	.68	.11
My Friends would hang around with me less if I was friends with Michelle/Michael	-.01	.77
My friends would think less of me if I were friends with Michelle/Michael	-.02	.88
My friends would disapprove of me trying to get to know Michelle/Michael	.02	.80
My Friends would like me less if I became close with Michelle/Michael	.05	.86
My friends with distance themselves from me if I started hanging around with Michelle/Michael	-.01	.89

8.6 Main Analyses

8.6.1 Hierarchical Multiple Regression on Explicit Measures Hierarchical Multiple Regression (HMR) was employed in the current study in order to examine how the main predictor variables influenced stigma responses in adolescents. Specifically, HMR analyses were performed on the data in order to examine how Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms, predicted adolescents' responses on each stigma factor, after controlling for Gender and Age effects. Following recommended guidelines, all control variables (Participant Gender and Participant Age) were entered in the first step. The main predictors (Affective Empathy, Cognitive Empathy, Descriptive Norms, and Injunctive Norms) were then entered in step two. Regression analyses were carried out on each stigma outcome measure (e.g. Dangerousness, Warmth & Competence, Responsibility, Negative Attributes, Prejudice, Classroom Discrimination and Friendship Discrimination). Analyses were conducted separately on stigma responses toward the male and female depressed targets. In the current study, Spearman's rho correlation statistics indicated no strong relationships ($r > .9$) existed between any of the predictor variables. For the female vignette target all r s ranged from $-.01$ - $.46$, for the male target r s for all predictor variables ranged from $.00$ - $.49$. Additionally, tolerance ($> .1$) and VIF (< 10) values for all predictors, on all criterion variables were also adequate, thereby demonstrating that there was no evidence of multicollinearity in the data. Spearman's rho correlation statistics are displayed in Table 8.5 and Table 8.6.

Table 8.5

Summary of Inter-Correlations between Predictor Variables when the Target is Male

	1	2	3	4	5
1 Affective Empathy	1				
2 Cognitive Empathy	.43**	1			
3 Descriptive Norms	.03	.08	1		
4 Injunctive Norms	.06	.18**	.50*	1	
5 Participant Gender	.35**	.04	.07	.17**	1
6 Participant Age	.16**	.08	-.05	-.07	-.14*

*Note: * $p < .05$, ** $p < .001$*

Table 8.6

Summary of Inter-Correlations between Predictor Variables when the Target is Female

	1	2	3	4	5
1 Affective Empathy	1				
2 Cognitive Empathy	.33**	1			
3 Descriptive Norms	.12*	.13*	1		
4 Injunctive Norms	.14*	.27**	.46**	1	
5 Participant Gender	.43**	.19	.27**	.17**	1
6 Participant Age	-.02	.02	-.08	-.01	-.10

Note: * $p < .05$, ** $p < .001$

8.7 Results of Hierarchical Multiple Regression for Explicit Stigma Results

revealed that for each explicit measure of stigma the overall model was significant, for both the male and female vignette targets, after controlling for participant Age and Gender effects. A summary of model results is provided in Table 8.7. As can be seen in this table, for both the male and female targets, the overall models accounted for a relatively small amount of variance in the majority of the stigma outcome measures. One exception to this trend was observed for the Friendship Discrimination factor. In this instance, the overall model accounted for a medium percentage of variance; an Adjusted R^2 value of .40 was observed for the male target and an Adjusted R^2 value of .44 was observed for the female target. Adjusted R^2 values for all other factors ranged from .05-.25.

Table 8.7

Summary of Results for the Overall Model of Predictors on each Stigma Factor for Male and Female Targets

Stigma Measure	<u>Male</u>			<u>Female</u>		
	R^2	Adjusted R^2	F Change	R^2	Adjusted R^2	F Change
Dangerousness	.14	.12	8.24**	.19	.17	11.26**
Warmth & Competence	.26	.25	19.69**	.24	.23	19.52**
Responsibility	.13	.10	7.19**	.07	.05	3.54*
Negative Attributes	.15	.13	9.37**	.24	.22	18.37**
Prejudice	.20	.18	14.57**	.19	.17	13.29**
Classroom Discrimination	.26	.24	15.54**	.24	.23	11.76**
Friendship Discrimination	.41	.40	37.30**	.45	.44	43.23**

Note: * $p < .05$, ** $p < .001$

Results revealed that the control variables, Participant Age and Gender significantly predicted responses on a selection of stigma measures. Examining responses toward the male vignette target first, it was demonstrated that the Age and Gender of the participant did exert a significant influence on the type of responses exhibited by adolescents. Participant Gender was found to have a significant effect on adolescents' endorsements of Negative Attributes ($\beta = -.15, p = .02$), Classroom Discrimination ($\beta = -.13, p = .04$) and Friendship Discrimination ($\beta = -.13, p = .02$). Specifically, when the target was male, boys were found to be significantly more likely than girls to endorse negative responses on these factors. Participant Age was also found to significantly influence adolescents' perceptions of Responsibility ($\beta = -.15, p = .02$) and intentions to engage in Friendship Discrimination ($\beta = -.12, p = .04$) toward the male depressed target, with younger adolescents endorsing more negative responses on these factors than older adolescents. When the target was female, it was found that Participant Age significantly predicted responses on the Dangerousness factor ($\beta = .15, p = .01$), with older adolescents showing more negative responses than younger adolescents. However, Participant Age did not significantly predict responses on any other stigma factor. Participant Gender was found to significantly predict responses on Classroom Discrimination ($\beta = -.16, p = .01$) and Friendship Discrimination ($\beta = -.10, p < .05$), with boys showing more negative responses, on these factors, than girls. A summary of these results is displayed in Table 8.8.

In relation to the main predictor variables, Descriptive Norms appeared to exert the most significant effect on stigma responses, as it was found to influence each aspect of stigma for both male and female targets (all $ps < .001$), whereas the other predictors appeared to have more limited effects on the stigma responses. Specifically, when the target was male, Affective Empathy only significantly influenced responses on the Classroom Discrimination factor ($\beta = -.14, p = .04$), while Cognitive Empathy significantly influenced responses on the Prejudice ($\beta = -.17, p = .01$) and Responsibility ($\beta = -.17, p = .01$) factors. Adolescents who showed higher levels of empathy also expressed lower levels of stigma on these factors. Injunctive Norms were found to significantly predict adolescents' perceptions of Dangerousness ($\beta = -.19, p = .01$) and intentions of engaging in Classroom Discrimination ($\beta = -.23, p < .001$). Specifically, it was found that when adolescents believed that their peers would approve of them engaging with the target, they showed less stigmatising responses toward the target on these factors. In contrast, Descriptive Norms were found to significantly predict responses on all seven stigma factors (all $ps < .05$), with beta values ranging from $-.15$ to $-.60$. Descriptive norms were found to be significantly associated with endorsements on all

Stereotype measures; Dangerousness ($\beta = -.17, p = .01$), Warmth & Competence ($\beta = -.48, p < .001$), Responsibility ($\beta = -.25, p < .001$) and Negative Attributes ($\beta = -.39, p < .001$). Descriptive Norms also significantly influenced adolescents' Prejudicial reactions ($\beta = -.33, p < .001$) as well as both measures of Discrimination; Classroom Discrimination ($\beta = -.23, p < .001$) and Friendship Discrimination ($\beta = -.59, p < .001$). Results indicated that when adolescents believed that their friends would respond positively to the target, they expressed less stigmatising responses to the target on each aspect of stigma.

When the target was female, Cognitive Empathy significantly influenced perceptions of Dangerousness ($\beta = -.12, p = .04$) and Prejudicial responses ($\beta = -.16, p = .01$) and Affective Empathy significantly influenced Classroom Discrimination ($\beta = -.16, p = .01$) and Friendship Discrimination ($\beta = -.14, p = .01$). Higher levels of Cognitive or Affective Empathy were found to be associated with significantly lower stigmatising responses on these factors. Injunctive Norms significantly influenced perceptions of Dangerousness ($\beta = -.26, p < .001$) and Prejudice ($\beta = -.23, p < .001$). Adolescents who believed that engaging with the target would be met by greater peer social approval showed less stigmatising responses toward the target on these factors. As was observed with the male target, Descriptive Norms were also found to exert a significant influence on all stigma responses toward the female target with depression. Descriptive Norms were found to significantly predict endorsements of Dangerousness ($\beta = -.15, p = .01$), Warmth & Competence ($\beta = -.44, p < .001$), Responsibility ($\beta = -.19, p = .01$), Negative Attributes ($\beta = -.42, p < .001$), Prejudice ($\beta = -.19, p = .003$), Classroom Discrimination ($\beta = -.26, p < .001$) and Friendship Discrimination ($\beta = -.60, p < .001$). These results indicated that adolescents who endorsed greater beliefs that their friends would respond negatively to the target also endorsed higher levels of stigmatising responses on each of the criterion measures. See Table 8.8 for an overview of standardised and unstandardised regression weights and standard errors.

Table 8.8

Standardised Estimates, Unstandardised Estimates and Standard Errors for Predictors of Adolescents' Explicit Stigma Responses Toward Male and Female Targets

Stigma Factor	Predictor Variable	β	<u>Male</u>			<u>Female</u>		
			B	SE	β	B	SE	
Dangerousness	Participant Age	.06	.13	.12	.15*	.37	.14	
	Participant Gender	-.11	-.58	.34	-.07	-.36	.32	
	Affective Empathy	.12	.04	.03	.04	.02	.03	
	Cognitive Empathy	-.09	-.05	.03	-.12*	-.06	.03	
	Descriptive Norms	-.17*	-.08	.03	-.15*	-.07	.03	
	Injunctive Norms	-.19*	-.07	.03	-.25**	-.09	.02	
Warmth & Competence	Participant Age	-.03	-.13	.28	-.06	-.32	.28	
	Participant Gender	-.11	-1.31	.76	.00	.03	.64	
	Affective Empathy	-.03	-.02	.06	-.10	-.08	.05	
	Cognitive Empathy	-.09	-.11	.08	-.03	-.03	.06	
	Descriptive Norms	-.48**	-.54	.07	-.42**	-.44	.06	
	Injunctive Norms	.00	.00	.06	-.06	-.04	.04	
Responsibility	Participant Age	-.15*	-.24	.10	.07	.14	.13	
	Participant Gender	-.01	-.04	.28	-.03	-.14	.28	
	Affective Empathy	.05	.02	.02	-.07	-.03	.02	
	Cognitive Empathy	-.17*	-.07	.03	-.05	-.02	.03	
	Descriptive Norms	-.25**	-.09	.03	-.19*	-.08	.03	
	Injunctive Norms	-.04	-.01	.02	-.03	-.01	.02	
Negative Attributes	Participant Age	-.02	-.04	.12	.10	.23	.12	
	Participant Gender	-.15*	-.77	.34	.02	.09	.28	
	Affective Empathy	.06	.02	.03	-.09	-.03	.02	
	Cognitive Empathy	-.08	-.04	.03	.09	.04	.03	
	Descriptive Norms	-.39**	-.18	.03	-.42**	-.19	.03	
	Injunctive Norms	.11	.04	.02	-.09	-.03	.02	

Stigma Factor	Predictor Variable	β	Male		Female		SE
			B	SE	β	B	
Prejudice	Participant Age	-.08	-.37	.26	-.05	-.26	.29
	Participant Gender	.03	.28	.73	-.05	-.52	.67
	Affective Empathy	.12	.09	.06	-.02	-.01	.05
	Cognitive Empathy	-.17*	-.18	.07	-.16*	-.17	.06
	Descriptive Norms	-.34**	-.34	.07	-.19**	-.19	.06
	Injunctive Norms	-.10	-.08	.05	-.23**	.15	.12
Classroom Discrimination	Participant Age	-.10	-.18	.11	.07	.15	.12
	Participant Gender	-.13*	-.60	.29	-.16*	-.72	.26
	Affective Empathy	-.14*	-.05	.02	-.16*	-.06	.02
	Cognitive Empathy	-.11	-.05	.03	-.05	-.02	.03
	Descriptive Norms	-.21**	-.09	.03	-.26**	-.11	.03
	Injunctive Norms	-.23**	-.08	.02	-.11	-.03	.02
Friendship Discrimination	Participant Age	-.11*	-.60	.29	.04	.25	.30
	Participant Gender	-.11*	-1.89	.79	-.10*	-1.35	.68
	Affective Empathy	-.06	-.06	.06	-.14*	-.15	.06
	Cognitive Empathy	-.06	-.09	.08	-.01	-.01	.06
	Descriptive Norms	-.59**	-.76	.07	-.60**	-.76	.06
	Injunctive Norms	-.00	-.00	.06	.01	.01	.05

Note: * $p < .05$, ** $p < .001$

Overall, as can be seen in the above table, (Cognitive and Affective) empathy appeared to have limited predictive effect on stigma responses toward male and female targets. For both male and female targets, Affective Empathy appeared to exert more of an influence on adolescents' discriminatory intentions, while Cognitive Empathy appeared to exert more of an effect on Prejudice responses. However, β values for these predictors on each of these stigma factors were relatively low (β s all $< -.17$). Additionally, Injunctive Norms also appeared to have a limited effect on Stigma responses toward male and female targets. While Injunctive Norms significantly predicted adolescents' endorsements on perceptions of Dangerousness toward both targets, Injunctive Norms appeared to be more predictive of Prejudice responses when the target was female and of intentions to engage in

Classroom Discrimination when the target was male. However, all standardised beta values observed for Injunctive Norms were relatively small (β s all $< .25$). In contrast, Descriptive Norms had a significant effect on each aspect of stigma, for both male and female targets. Descriptive Norms appeared to exert the strongest effect on adolescents' responses on the Friendship Discrimination factor. Large standardised beta values of $-.59$ and $-.60$ were observed for the male and female targets, respectively. Additionally, Descriptive Norms were found to exert medium-large effects on two Stereotype factors; Warmth & Competence ($\beta = -.48$ for male target; $\beta = -.42$ for female target) and Negative Attributes ($\beta = -.39$ for male target; $\beta = -.42$ for female target). In relation to the Prejudice factor, when the target was male Descriptive Norms appeared to exert a medium effect ($\beta = -.34$) on adolescents' responses, however, when the target was female, Descriptive Norms appeared to exert a comparatively small effect ($\beta = -.19$). All other standardised beta values ranged from $-.15$ to $-.26$ for both male and female targets.

8.8 Implicit Stigma

8.8.1 Scoring Procedure for the IAT The IAT program produces a score for each participant which is a form of Cohen's d that is referred to as a D IAT score (Greenwald et al., 2003). For this study, the D IAT scores were calculated following the improved scoring algorithm recommended by Greenwald et al. (2003). Firstly, prior to calculating the D -scores, preliminary screening of the data was performed. Following the recommendations outlined by Greenwald et al. (2003), trials longer than 10,000 milliseconds were deleted and participants who engaged in rapid responses (< 300 ms) on more than 10% of trials were removed from further analyses. In the current study, no participant engaged in rapid responding for more than 10% of trials. For the consistent order IAT (i.e. where the character with Depression was paired with the *bad* attributes, and the 'Typically Developing' peer was paired with the *good* attributes first) D IAT scores were calculated for each participant by determining the difference between the mean response latencies for specific IAT blocks as follows: subtracting the mean response time of block 3 (Depression + *Bad*'Typically Developing' + *Good*) from the mean response time of block 6 ('Typically Developing' + *Bad*/Depression + *Good*) and then subtracting the mean response time of block 4 ('Typically Developing' + *Bad*/Depression + *Good*) from the mean response time of block 7 (Depression + *Bad*'Typically Developing' + *Good*). The resulting figures were then divided by pooled SD s of the two corresponding blocks. Finally, a single IAT score was computed by averaging the two quotients. A D IAT score of zero indicated a neutral attitude toward both target peers.

D IAT scores with a positive score indicated a negative implicit evaluation of the peer with Depression compared to the Typically Developing peer, whereas a negative score indicated a negative implicit evaluation of the ‘Typically Developing’ peer relative to the peer with Depression. For the inconsistent order IAT (i.e. where the character with Depression was paired with the *good* attributes first, and the ‘Typically Developing’ character was paired with the *bad* attributes first), as the same scoring procedure was followed, a positive score represented a negative implicit attitude toward the ‘typically developing’ peer and a negative score indicated a negative implicit evaluation of the peer with Depression. In order to keep the scores between the consistent and inconsistent order IATs congruent, the valence of *d*-score in the inconsistent order IAT was transformed so that interpretation of implicit attitudes was the same as the consistent order IAT (i.e. positive scores represented a negative attitude towards the peer with Depression and negative scores represented a negative attitude towards the ‘Typically Developing’ peer).

8.8.2 Preliminary Analyses

Test of Order Effects for the IAT Previous research has shown that the order in which the target attitude objects and attribute stimuli are presented during implicit assessments can influence the type of implicit responses observed (Cvencek, Greenwald & Meltzoff 2011; Greenwald & Nosek, 2001). In order to ensure that the order in which the combined tasks (e.g. Depression + Bad first versus Depression + Good first) were presented did not influence the observed *d*-scores, an independent samples *t*-test was conducted. No significant difference ($t[180] = .60, p = .55$) was observed between the Consistent ($M = .35, SD = .31$) and Inconsistent ($M = .32, SD = .36$) order IATs. This indicated that the order in which the tasks were presented did not influence participants’ implicit responses.

Differences in Implicit Responses toward the Depression and ‘Typically Developing’ Targets In order to investigate whether adolescents showed significant implicit preferences for the ‘typically developing’ targets over the depressed targets, one-way *t* tests were conducted. Two *t* tests were carried out; one examining adolescents’ implicit responses toward the male targets and one examining implicit responses toward the female targets. The *D* IAT score was used as the outcome variable in both sets of analyses. A positive *D* IAT score indicates a negative implicit evaluation of the peer with Depression compared to the ‘Typically Developing’ peer, whereas a negative score indicates a negative implicit evaluation of the ‘Typically Developing’ peer relative to the depressed peer. A score of zero indicates a neutral attitude toward both target peers. Results from the one-way *t* tests revealed

that adolescents' mean implicit attitude scores significantly differed from zero, for both the male and female targets. Results indicated that adolescents were found to hold more negative implicit attitudes toward the male target with depression in comparison to the male 'typically developing' target [$D = .35$, $SD = .34$, $t(96) = 10.02$, $p < .001$, $r = .71$]. Similarly, adolescents were found to hold more negative implicit attitudes toward the female depressed peer in comparison to the female 'typically developing' peer [$D = .33$, $SD = .32$, $t(83) = 9.43$, $p < .001$, $r = .72$]. Specifically, participants were found to be faster at responding to Depression/*Bad* + 'Typically Developing'/*Good* trials compared to Depression/*Good* + 'Typically Developing'/*Bad* trials.

8.8.3 Hierarchical Multiple Regression for Implicit Stigma In order to examine how the main predictor variables influenced adolescents' implicit stigma responses, Hierarchical Multiple Regression (HMR) was employed. Specifically, in the current study HMR analyses were performed on the data in order to examine how Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms predicted *D* IAT scores in adolescents, after controlling for Participant Gender and Age effects. Separate regression analyses were conducted for responses toward the male and female depressed target.

Results revealed that although the overall model was significant when responding to the female [(6, 83) = 2.28, $R^2 = .15$, Adjusted $R^2 = .09$, $p < .05$] target, the overall model was not significant in predicting implicit responses toward the male target [(6, 95) = 1.15, $R^2 = .07$, Adjusted $R^2 = .01$, $p = .34$]. However, although the overall model was significant in predicting implicit stigma when the target was female, the only predictor found to significantly influence implicit responses was Participant Age ($\beta = -.36$, $p = .002$), whereby older adolescents showed less stigmatising responses toward the depressed character than younger adolescents. No significant effects were observed for Affective Empathy, Cognitive Empathy, Descriptive Norms or Injunctive Norms. When the target was male, although the overall model was not significant, Affective Empathy was found to approach significance ($\beta = .25$, $p = .058$). However, the effect was not in the expected trend in that adolescents who showed higher affective empathy showed higher levels of implicit stigma toward the male depressed character. A summary of results, including regression weights and standard errors for each predictor on implicit responses toward the male and female targets is displayed in Table 8.9.

Table 8.9

Standardised Estimates, Unstandardised Estimates and Standard Errors for Predictors of Adolescents' Implicit Stigma Responses Toward Male and Female Targets

Predictor Variables	<u>Male Target</u>			<u>Female Target</u>		
	β	B	SE	β	B	SE
Participant Age	-.08	-.05	.06	-.36	-.19	.06
Participant Gender	-.20	-.14	.08	-.00	.00	.08
Affective Empathy	.25	.01	.01	-.10	-.16	.01
Cognitive Empathy	-.17	-.01	.01	.00	-.01	.01
Descriptive Norms	.08	.01	.01	-.10	-.01	.01
Injunctive Norms	.09	.00	.01	-.08	-.00	.01

*Note: * $p < .05$, ** $p < .001$*

8.9 Conclusions

Overall, the results provided initial support for the research hypotheses. As predicted, in general, higher levels of empathy and more positive group norms were found to be associated with lower endorsements of stigma responses toward the peer with depression. However, the effects observed for Cognitive and Affective Empathy were limited as these variables only appeared to exert a significant effect on a small selection of explicit stigma responses. Similarly, Injunctive Norms were only found to significantly predict responses on a number of explicit stigma factors. In contrast to the other predictors, Descriptive Norms were found to exert a significant effect on each aspect of explicit stigma. These effects for Descriptive Norms appeared to occur irrespective of target gender. Conversely, none of the predictor variables (Cognitive Empathy, Affective Empathy, Descriptive Norms or Injunctive Norms) were found to exert a significant influence on adolescents' implicit stigma responses.

Chapter 9

Study 2 Discussion

9.1 Aim of Chapter

The aim of this chapter is to discuss the explicit and implicit findings observed in Study Two of this research project. These findings will be discussed relative to the pattern of results that have emerged both within the stigma literature as well as within the general prejudice and social psychological research domains. The limitations of this study and recommendations for future research and practical applications will also be discussed.

9.2 Brief Recap of the Objectives of Study 2

The aim of this study was to examine whether two forms of empathy, affective empathy and cognitive empathy, and two types of peer group norms, Descriptive Norms and Injunctive Norms, exerted an influence on the type of explicit and implicit stigmatising responses that adolescents expressed toward male and female peers with depression. In order to assess the predictive effect of these factors HMR analyses were carried out on all explicit and implicit stigma measures. However, to determine the most parsimonious factor structure of the normative measures, exploratory factor analyses were first conducted. Additionally, other preliminary analyses were also carried out to investigate whether adolescents displayed differences in the amount of explicit and implicit stigmatising responses they expressed toward a typically developing or depressed peer.

9.3 Comparison of Responses toward the Typically Developing and Depressed Peer

Preliminary analyses were conducted in order to compare adolescents' explicit stigma responses toward a peer with depression with their responses toward a 'typically developing' peer. Results from these paired samples t-tests revealed that adolescents showed significantly different responses depending on whether the target was described as 'typically developing' or depressed. Overall, results indicated that adolescents' tended to endorse significantly more stigmatising responses toward the peer with depression than the typically developing peer. This trend is consistent with the pattern of responses observed in other stigma research, whereby both adults and adolescents have been consistently found to express more stigmatising responses toward peers with mental health problems, such as depression, than other typically developing peers or peers with other chronic disorders or physical disabilities (Burns & Rapee, 2006; Walker et al., 2008).

However, some discrepancies in these results that were not consistent with the expected trend were observed. Namely, although previous research has indicated that people often hold individuals with mental health difficulties responsible for their condition or expressed behaviour (Corrigan et al., 2003; Corrigan & Watson, 2007), the current research found that adolescents perceived the typically developing peer as being significantly more responsible for his or her behaviour than the peer with depression. An explanation for this trend may be that adolescents did not perceive the typically developing peer as suffering from any underlying mental health problems and as a result viewed this target as being 'responsible' for his/her behaviour or as choosing to act in this manner. Nonetheless, adolescents also appeared to attribute little responsibility to the character with depression for his or her behaviour, as mean scores on this factor were low. Other researchers have also found a pattern whereby individuals appear to perceive people with depression as being less responsible for their behaviour than people with other mental health conditions such as ADHD (O'Driscoll et al., 2012). In particular, the study by O'Driscoll et al. (2012) did not find any significant differences between children and adolescents' perceptions of responsibility toward their depressed peers and their typically developing peers. Thus, research suggests that when it comes to perceptions of responsibility, this Stereotype component may play a more prominent role among adults than it does among adolescents. Additionally, considering the findings which emerged from the O'Driscoll et al. (2012) study, there seems to be evidence to suggest that responsibility may be a more pervasive stereotype in assessments of stigma toward peers with mental health problems other than depression (e.g. ADHD). Nonetheless, although adolescents were not found to hold the depressed target responsible for his or her behaviour, this appeared to have little impact on their endorsements on other explicit stigmatising responses toward the target. Overall, in the current study, adolescents perceived the peer with depression as being less favourable than the 'typically developing' peer on all other stigma measures.

It is important to note that although adolescents were found to express significantly greater intentions to engage in Classroom Discrimination toward the depressed target than the typically developing target, the observed difference between these mean scores was minute. This factor is represented by four items which assesses adolescents' tendencies to inform the target about a 'homework assignment', help the target with a 'math problem', help the target with a 'class project' and to 'lend the target a pencil'. It is possible that these items do not provide a full reflection of the extent to which adolescents may engage in discrimination at a

classroom or school level and that is why such a small significant difference was observed. Alternatively, it may be the case that adolescents do not intend to engage in discrimination at this level and that discriminatory tendencies are manifested in behaviours that require more intimate contact or are more akin to friendship intentions. Evidence to support this argument comes from the findings which emerged from O'Driscoll, Heary, Hennessy and McKeague's (2015) qualitative paper. In this study, the authors conducted focus groups in order to generate an understanding about children and adolescents' justification for excluding peers with ADHD and depression from certain social situations. Results appeared to suggest that adolescents distinguish between behaviours that are carried out at in a school or classroom setting and friendship behaviours. Specifically, O'Driscoll et al. (2015) noted that adolescents appear to believe that exclusion at a classroom or school level was wrong but adolescents' believed that excluding peers with ADHD and depression from more friendship type behaviours was more morally justified due to differences in the intimacy of the relationships. These results are also in line with other findings from the adult mental health stigma literature which indicate that social distance increases as the level of intimacy required in the relationship increases (Adewuya & Makanjuola, 2005; Lauber, Nordt, Falcato & Rossler, 2004).

It must also be noted that, while adolescents demonstrated more negative responses toward the peer with depression than the typically developing peer, on the majority of stigma measures, no extreme scores were observed on any of these stigma factors. This indicates that although adolescents endorse more negative responses toward peers with depression than their 'typically developing' peers, they do not appear to endorse overly high stigmatising responses toward their peers with depression. This is consistent with previous research findings (Calear et al., 2012; Dixon et al., 2012; Wahl et al., 2012; Watson et al., 2008). Although comparative research that contrasts individuals' responses toward people with depression with their responses toward people with 'normal issues' is limited, other research indicates that adolescents do not stigmatise peers with depression as readily as they do peers with other externalising conditions, such as ADHD or psychosis (Jorm & Wright, 2008; Walker et al., 2008). Moreover, findings from Burns and Rapee's (2006) paper indicates that adolescents' stigmatising responses toward peers with depression, may also depend on the severity of symptoms being described. Specifically, this research demonstrated that adolescents' exhibited more stigmatising responses toward a peer with suicidal ideation than toward a peer experiencing milder symptoms of depression (Burns & Rapee, 2006). As the

target in the current study was described as experiencing mild-moderate levels of depression this may explain why more stigmatising responses were not observed. However, as this research relied on the interpretation of mean scores as a proxy measure of stigmatisation, as opposed to specified cut-off points, it is difficult to compare or quantify the level of stigmatisation expressed toward the ‘typically developing’ and depression targets. Overall, while these results indicate that adolescents appear to demonstrate more stigmatising responses toward peers with depression than typically developing peers, in general, more comparative research would be helpful in future investigations.

9.4 Exploratory Factor Analysis for Group Norms

As there were no measures already available that assess Descriptive and Injunctive Norms in the context of mental health stigma, new items were developed that could assess these norms in the current context. These norms were operationalised using the respective definition of Descriptive and Injunctive Norms outlined by Cialdini et al (2006). Although this procedure does not follow the precise scale development guidelines outlined by DeVellis (2003), in that items were not developed through focus group discussions and consultation with content experts, other researchers who have investigated group norms have adopted a similar approach when creating their normative measures (Rimal and Real, 2005; Stok et al., 2014).

Additionally, in order to further examine the psychometric properties of the normative measures and to ensure that the items used were in fact representative of two distinct types of norms, exploratory factor analyses were conducted. The results from this EFA indicated the presence of two factors; four items appeared to load onto a factor that was representative of Descriptive Norms and five items loaded onto a factor representative of Injunctive norms. One item was deleted as it appeared to cross-load onto both factors. Both the Descriptive Norms ($\alpha = .90$) and Injunctive Norms ($\alpha = .92$) factors evidenced good internal consistency. Although the high alpha levels observed for both factors may be indicative of item redundancy no high inter-item correlations were observed on either factor. However, it is important to note that these group norm factors were only subjected to exploratory factor analysis and in order to confirm this observed factor structure further confirmatory factor analyses would need to be carried out on a separate sample. Nonetheless, the use of factor analysis in this instance is a relevant strength of this research as similar validation techniques are not readily employed in other research studies. Additionally, given the absence of measures that assess norms within a mental health stigma context, this study advances the

literature by providing some preliminary support for both a Descriptive and Injunctive Norms measure that may assess how these factors may influence how adolescents respond toward a peer with depression.

In relation to adolescents' pattern of responding on the normative measures in the current study, it was observed that adolescents tended to endorse more negative Descriptive and Injunctive Norms toward the target with depression than the 'typically developing' target. Specifically, it was observed adolescents appeared to believe that their friends would respond more negatively toward the target with depression and that they would experience more negative social sanctions from their friends if they engaged with the depressed target, in comparison to the 'typically developing' target. This finding is unsurprisingly given the evidence that has emerged from other research which suggests that people perceive there to be negative social norms surrounding mental health issues and people with mental health problems (Norman et al., 2008; 2012).

9.5 Explicit Stigma

In order to examine the effect that Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms exert on explicit stigmatising responses in adolescents, hierarchical multiple regression analyses were conducted. As previous research has found that the age and gender of participants can influence the type of stigmatising responses observed, these effects were controlled for in the first step and the main effects of the predictor variables on each component of stigma were examined in a second step. In order to examine how these factors influenced stigma responses when the depressed target was male compared to when the target was female, separate regression analyses were conducted. It was anticipated that higher levels of empathy (Cognitive and Affective) and more positive perceived norms (Descriptive and Injunctive) would be associated lower endorsements on the stigma factors.

9.5.1 Age and Gender Effects Results from the hierarchical regression analysis indicated that, as anticipated, Participant Gender and Age exerted significant effects on adolescents' stigma responses. However, it was observed that these factors were only significant in predicting certain aspects of stigma and these effects varied depending on whether the target was male or female. For instance, looking at the effects of Participant Age on stigma first, when the target was male, younger adolescents were found to show more stigmatising responses on the Responsibility and Friendship Discrimination factors.

Conversely, when the target was female, Participant Age was only significant in predicting adolescents' endorsements of the Dangerousness stereotype. However, in this instance, older adolescents were found to display significantly more stigmatising responses than younger adolescents. As a limited amount of cross-sectional research has been conducted that has assessed individuals' stigma responses toward both male and female target peers, it is difficult to compare these findings with previous research. Nonetheless, there are several possible explanations for these observed trends. Firstly, it has been observed that younger children or adolescents who display mental health problems are often perceived as being more deviant than older adolescents or adults who display similar symptoms (Wahl et al., 2002). Importantly, research from other areas of social psychology has shown that adolescents tend to perceive the social exclusion of deviant peers who threaten group functioning as acceptable or justifiable (Killen & Stangor, 2001; O'Driscoll et al., 2014). Thus, given that all adolescents read about an 'age-matched' peer, it is possible that younger adolescents perceived the male target as being more deviant of traditional norms than older adolescents due to differences in the perceived age of the target and that is why they exhibited more stigmatising responses toward the target than older adolescents. Additionally, previous research has indicated that males who display signs of mental health problems are perceived to be 'less masculine' than other males or as not conforming to traditional, societal male gender norms (Fox et al., 2008; Mann & Himelein, 2004). This may help explain why younger adolescents expressed more stigmatising responses toward the male target and not the female target. It is also worth noting that previous cross-sectional research that has examined age effects, in mental health stigma context, has traditionally compared effects across a wider age span than the one covered in the current study (e.g. 13-18). As all participating adolescents in the current study were of a secondary school age, it may explain why more significant age differences were not observed on other stigmatising factors.

When examining the effects of Participant Gender, boys consistently evidenced more stigmatising responses than girls, which is similar to findings from other stigma research (Calear et al., 2009; Jorm & Wright, 2008) and was also consistent with the expected trend. In general, research has evidenced that adolescent girls tend to show higher levels of mental health knowledge (Williams & Pow, 2007) and mental health literacy (Burns & Rapee, 2006). Research has also shown that higher levels of mental health knowledge and literacy are associated with lower levels of stigmatising responses (Sheffield et al., 2004). This may account for why girls typically endorse less stigmatising responses than boys. What is

interesting about the findings which emerged from the current research is that, although boys were found to generally endorse more stigmatising attitudes toward the targets than girls, these differences were only really significant on the Discrimination factors. Specifically, when the target was male, boys showed significantly more stigmatising responses on Negative Attributes, Classroom Discrimination and Friendship Discrimination, and when the target was female, boys also showed more stigmatising responses on the Classroom Discrimination and Friendship Discrimination factors. These results appear to suggest that boys may not express more stigmatising responses than girls at a 'global' level but that gender differences in stigma responses may depend on the type of stigma being assessed, with the behavioural domain appearing to be particularly important.

Developmental research has indicated that same-sex friendship groups are more common among older, adolescent boys (Benenson, Apostoleris & Parness, 1997; Rose & Rudolph, 2006; Way, 2004) and so it is possible that adolescent boys showed lower intentions of interacting with the female target simply on the basis that this target was female, rather than as a reaction to the target's apparent symptoms of depression. Additionally, social psychological research has indicated that social identity is important to adolescents and that adolescents actively engage in social regulation to punish deviant peers and ensure group cohesion (Killen & Stangor, 2001). Previous research has noted that males in western society are encouraged to endorse more traditional views about gender roles than females and more readily conform to the traditional gender belief system (Connell, 1996; Davies, 2012). As adolescent boys engage in more exclusive same-sex friendships than adolescent girls, it is possible that boys showed more stigmatising responses toward the male target, as they perceived the male peer with depression as not conforming to expected group or male norms or as being more of a threat to group cohesion than the female adolescents did.

At a global level, however, these findings support the results from previous research which stipulate that stigma is a multi-faceted construct and that its expression is often dependent upon the characteristics of the perceiver, as well as the characteristics of the target (Jorm & Wright, 2008; Wolf, Pathare, Craig, & Leff, 1996; Watson et al., 2004). Additionally, these results appear to suggest that the extent of stigmatisation may depend on the aspect of stigma being assessed. Although this is similar to the pattern of results which emerged from the O'Driscoll et al. (2012) study, it is difficult to compare these results to other research studies due to the paucity of research that includes assessments of each aspects of stigma (i.e. Stereotypes, Prejudice and Discrimination). Given the discrepancies in

findings observed in the current study, this research highlights the importance of assessing the effects that these characteristics can exert on each aspect of stigma.

9.5.2 Predictors of Explicit Stigma After controlling for the effects of Participant Gender and Age, the analyses indicated that the main predictor variables also appeared to exert significant effects on the various stigma components. Results from the current study revealed that Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms exerted significant effects on adolescents' stigma responses toward both the male and female target with depression. However, although the overall models were found to be significant, in general, these models were found to account for a relatively small amount of the variance explained. For instance, the overall model was found to account for just 5% of the variance in adolescents' responses on the Responsibility factor toward the female target and for 10% of the variance in responses toward the male target. The model accounted for the highest amount of variance for the Friendship Discrimination factor; explaining 40% of the variance in adolescents' responses toward the male target and 44% in responses toward the female target. Overall, the four predictors alone were able to account for between 5-44% of the variability in adolescents' responses toward male and female peers with depression. Although these factors appear to explain a comparatively high amount of variance, these results also indicate that there is still approximately 60% of the variance in stigma responses unaccounted for by the current predictors. This may suggest that although Empathy and Peer-Group Norms may significantly influence adolescents' responses toward their peers with depression, there may be other influential predictors of stigma.

Another important consideration that must be made when interpreting the model results from the current research is that these findings also indicate that there is a great deal of changeability in the amount of variance accounted for by the model depending on which stigma outcome is being investigated. Specifically, the model seemed to explain much more variance in adolescents' responses on the Discrimination factors, than the Prejudice or Stereotype components of stigma. As Stereotypes, Prejudice and Discrimination are considered to represent separate Stigma components, researchers have argued that factors that influence the expression or maintenance of one component may not affect another component (Earnshaw & Chaudoir, 2009; Hinshaw, 2007). The current results add weight to this argument and demonstrate the importance of investigating predictors of each component of stigma, as it may be necessary to target different factors in order to reduce all aspects of stigma.

Additionally, another important finding from the current research is that, although the overall models were significant, the four predictor variables; Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms, were found to exert differential effects on stigma responses toward male and female targets. The differential effects observed for the Empathy and Peer-Group Norms predictors are discussed below in detail.

Affective and Cognitive Empathy Overall, the results appeared to indicate that affective and cognitive empathy appeared to exert little significant influence over adolescents' stigmatising responses. This result was not anticipated and is inconsistent with the general trend observed in the social psychological literature. A substantial amount of research has been conducted examining the link between empathy and stigma reduction or pro-social behaviour (Teachman et al., 2003; Shih et al., 2014). Although a more limited amount of research has concentrated on examining this effect among children and adolescents, results from this previous research has tended to suggest that adolescents who show higher levels of empathy tend to show lower stigmatising responses toward a variety of out-groups (Malti et al., 2012; Wentzel, 2014). However, this study is among the first to examine the role of empathy (affective or cognitive) in predicting adolescents' responses toward peers who appear to be experiencing particular mental health issues. Given the limited significant effects observed for either form of empathy on stigma responses in the current study, these results may suggest that, unlike responses toward other out-groups, empathy does not exert a strong, significant effect on how adolescents respond to their peers with depression.

There are a number of potential explanations for why a stronger relationship between empathy and stigma was not observed in the current research. First, it is important to note that a substantial portion of the research which examines the link between empathy and stigma reduction, or pro-social behaviour, has focused on investigating this relationship by inducing empathic arousal in participants (Teachman et al., 2003; Beelmann & Heinemann, 2014; Lai et al., 2014). These empathy induction techniques require individuals to imagine how a specific target may think/feel under certain circumstances or where the target appears to be in a state of distress and there is a high need to help the target (Burke et al., 2015; Eisenberg et al. 2010). Notably, researchers have suggested that the link between these forms of 'situational' empathy and pro-social responding may be stronger than the link between pro-social responding and dispositional empathy (Eisenberg et al. 2010). Crucially, a number of researchers assert that empathy exerts greater effects on behaviour in situations where

empathic arousal is more salient (Decety & Lamm, 2011; Pettigrew, 1997). For example, Preston and de Waal (2002) argue that a target's emotional state influences empathic responding and Edwards (1990) demonstrated that affective responding is more prevalent when affective content is made salient. Hence, if empathic responding is dependent upon arousal (Decety & Lamm, 2011), then one possible explanation for why empathy did not appear to have strong significant associations with stigma in the current study is because the vignettes did not contain emotional content potent enough to induce an empathic response in the adolescents. It may be the case that adolescents in the current study did not regard the depressed target as being in a high level of need due to the mild-moderate nature of the symptoms displayed. If the target had been described as displaying higher levels of maladaptive behaviour, or if the adolescents had been asked to perspective take when reading the vignettes, then stronger effects for empathy may have been observed.

It is also possible that other contextual variables may moderate or influence the effects of dispositional empathy on responding. For example, Vescio et al. (2003) suggested that the extent to which an individual identifies with the target outgroup might influence affective mechanisms, such as empathy arousal, which in turn may affect intergroup attitudes. Additionally, Nesdale et al. (2005) suggested that the nature of empathy may be interactionally influenced by the nature of ingroup norms. This research noted that although children whom evidenced higher levels of dispositional empathy, also demonstrated greater levels of liking toward outgroup members; these children did not express greater liking towards the outgroup when it conflicted with the norms of the ingroup (Nesdale et al., 2005). However, recent researcher by Sierksma et al. (2014) noted that when the target's level of personal distress is high, empathy may exert a more powerful effect on behaviour than norms. Thus, it is argued that in order to generate a greater understanding of the relationship between empathy and stigma, future research would benefit from investigating the situational factors that may moderate this relationship.

Additionally, it is interesting to note that the results of the current study indicated that Cognitive and Affective Empathy appeared to exert differential effects on stigma responses in adolescents. The results from the current study revealed that Cognitive Empathy appeared to influence Prejudice responses in adolescents and select Stereotype components toward the male and female targets. Specifically, Cognitive Empathy was found to be associated with lower prejudicial responses toward both male and female depressed targets, lower perceptions of dangerousness toward the female target and lower perceptions of responsibility toward the

male target. In contrast, Affective Empathy exerted significant effects on adolescents' responses on the Discrimination factors. Affective Empathy was associated with significantly lower intentions to engage in classroom discrimination toward the male target and lower intentions to engage in both classroom and friendship discrimination toward the female target. Findings from previous research studies also support the notion that Cognitive and Affective Empathy may influence different types of responding. Consistent with extant research (e.g., Haddock, Zanna & Esses, 1993; Huskinson & Haddock, 2004), these findings may provide support for the distinction between cognitive and affective elements of stigma. Previous research has proposed that attitudes and prejudicial responses often have separate affective and cognitive sources or components (Paolini, Hewstone & Cairns, 2007; Zanna & Rempel, 1988). For example, Paolini et al. (2007) noted that affective elements were more associated with direct friendship formation in college students than cognitive elements. Hence, findings obtained by this study may indicate that while Cognitive Empathy may have a greater influence on cognitive (i.e. Stereotypes) and affective (i.e. Prejudice) components of stigma, Affective Empathy may have a greater influence on behavioural intentions (i.e. Discrimination) among adolescents. Although the novelty of this research makes it difficult to compare these findings with that of previous research, these results do highlight the importance of investigating how affective and cognitive components of empathy may affect the different components of stigma separately.

Descriptive and Injunctive Norms Results also indicated that Descriptive and Injunctive Norms exerted a significant effect on adolescents' stigmatising responses toward their peers with depression. In particular, Descriptive Norms appeared to exert a substantial effect on stigma while some limited significant effects were observed for Injunctive Norms. Discussing the effects of Injunctive Norms first, Injunctive Norms were found to significantly predict adolescents' perceptions of Dangerousness for both the male and female target; as well as intentions to engage in Classroom Discrimination when the target was male and Prejudicial responses when the target was female. These results indicated that when adolescents believed that befriending the target would not result in any social punishment with their friendship group, adolescents showed lower stigmatising responses on these particular Stereotypes, Prejudice and Discrimination factors. Looking at the pattern of findings for Descriptive Norms, it was found that Descriptive Norms significantly influenced all aspects of stigma for both the male and female target. In other words, results from the regression analyses revealed that when adolescents believed that their friends would respond

positively to the target, they themselves expressed less negative stereotypes, endorsed lower prejudicial responses and exhibited less discriminatory intentions toward both male and female peers with depression.

An interesting finding from the current research is that adolescents' beliefs about how their friends would respond to the target appeared to have a greater effect on stigma responses than their beliefs about the social sanctions they would receive from their friends if they befriended the target. In terms of understanding the pattern of results which emerged from the current study, there may be several possible explanations to account for this observed trend. First, researchers have suggested that in certain situations descriptive norms may exert a more powerful effect on behaviour, than injunctive norms, because of how relatively easy it is to accommodate to such norms without much cognitive analysis (Cialdini, 2003). Meisel, Colder and Hawk (2015) noted that injunctive norms may demand more cognitive capacity than descriptive norms because these form of norms require individuals to reflect and deliberate on whether a behaviour or attitude is socially acceptable or not. Similarly, Baumgetner et al. (2011) suggested that for socially unapproved behaviours, descriptive peer norms may be more directive of behaviour than injunctive peer norms as adolescents may only have vague assumptions about their friends' general approval of these behaviours. Thus, it is possible that injunctive norms were less cognitively accessible to adolescents in the current study, which may account for their lesser effect on stigma responses.

Alternatively, it is possible that the way in which Injunctive Norms were operationalised in the current study failed to capture the full meaning of the construct. For example, the current Injunctive Norms measure was formulated from only five-items. Additionally, all five items in this scale assessed the negative social sanctions that adolescents would experience in their friendship groups, if they befriended the target. It is possible that this factor overlooked other forms of positive injunctive norms or social approval that may have influenced stigma responses. Moreover, all items on the current Injunctive Norms factor assessed overt social sanctions by the friendship group, such as explicit disapproval; being liked less; becoming more distant; being held in less esteem; and being associated with less. Hence, it is possible that this factor failed to assess adolescents' beliefs about other forms of more subtle consequences or social punishments that they believe they would experience. It may be the case that had a more broad measure of

Injunctive Norms been used in this instance, Injunctive Norms may have been found to exert a more significant effect on stigma.

Results from the current study also revealed that adolescents' responses on the Injunctive Norms factor appear to be more positive than their responses on the Descriptive Norms measure. In other words, although adolescents evidenced beliefs that their friends would not respond positively to the target, these adolescents did not believe that their friends would sanction them for befriending the target. While it is important to note that these normative measures do not contain absolute 'cut-off' points, in which adolescents' perceptions of norms can be categorised as 'positive' or 'negative', overall, an examination of the mean pattern of responding on these factors indicates that the mean scores for the Injunctive Norms factor appear to fall in the upper end of the spectrum, where higher scores represent more positive responses, whereas mean scores for the Descriptive Norms factor appear to fall in the middle range of the scale. Thus, as adolescents in the current study appeared to generally endorse the belief that their friends would not respond negatively toward them if they befriended the target this may explain why more significant effects were not observed for the Injunctive Norms factor but were observed for the Descriptive Norms factor.

An important finding from the current research is that Descriptive Norms appeared to exert a strong influence on the type of stigmatising responses that adolescents expressed toward both a male and female peer with depression. Not only were Descriptive Norms found to significantly influence responses on each stigma factor, but this predictor variable was found to exert a strong effect on several stigma outcome measures. In particular, Descriptive Norms appeared to exert the largest influence on adolescents' endorsements on the Friendship Discrimination factor with standardised Beta values of $-.59$ and $-.60$ being observed for the male and female targets, respectively. These results appear to indicate that adolescents' intentions to engage in friendship behaviour with the target were highly influenced by their beliefs about how their friends would respond to the target. These results complement the findings from other research which has shown that children and adolescents will often exclude peers who they believe would be a threat to group cohesion (Garandau & Cillessen, 2006; Killen & Stangor, 2001).

Furthermore, it is important to note that there is limited information available on the validity and reliability of the measurement tools used to assess both Descriptive and

Injunctive Norms in the current study. Future research needs to be conducted that further assesses the validity and reliability of the items employed here. Thus, it is possible that limited significant effects were found for injunctive norms due to the measurement tool used or the way in which these norms were conceptualised. However, it is worthy to note, that the current findings are in line with findings from similar research projects. For example, researchers such as Stok et al. (2014) and Killen et al. (2013) have argued that as social or group norms operate at different levels they may thus exert differential effects on individuals' behaviour and attitudes. For instance, Larimer, Turner, Mallett, and Geisner (2004) found that while Descriptive Norms significantly predicted college students' concurrent drinking behaviour, Injunctive Norms were more predictive of future intentions to drink. Additionally, Murray and Hennessy (in press) uncovered that Descriptive Norms exerted a more significant effect on college students' attitudes toward a person with depression and intentions to engage in personal help-seeking than Injunctive Norms. Hence, this research highlights the need to examine the effect of Descriptive and Injunctive norms separately.

Overall, these findings appeared to suggest that Descriptive Norms exert a substantial effect on adolescents' explicit stigmatising responses, while only limited significant effects were observed for Injunctive Norms. This pattern of results may indicate that adolescents' stigmatising responses toward their peers with depression are more influenced by their concerns about group cohesion or how their friends may respond to a target than the social punishments they believe they would experience for befriending the target themselves. Although these results are in line with the evidence suggested from other previous research, this is the first study to have specifically investigated the amount of direct influence that normative beliefs may have on adolescents' stigmatising responses to peers with a mental health condition, such as depression. Given the strength of the influence uncovered for the Descriptive Norms measure, it is apparent that future research would benefit from exploring the link between Descriptive Norms and adolescent stigma in greater detail. Although this research indicates that Descriptive Norms appear to be highly influential on adolescents' stigma responses, these findings cannot shed light on *why* Descriptive Norms may exert such a strong effect. This appears to be a crucial avenue for future research, given that the current results appear to indicate that Descriptive Norms may be an important factor to consider in future anti-stigma programmes.

9.6 Implicit Stigma

In order to examine whether there were also significant differences in adolescents' implicit responses toward their peers with depression in comparison to their 'typically developing' peers, one-way *t* tests were carried out. These analyses were run separately for responses toward the male and female targets, with the *D* IAT score acting as the outcome variable in each instance. The *D* IAT score represented individuals' implicit stigmatising responses toward the depressed target, relative to the 'Typically Developing' target. Overall, adolescents were found to express more negative implicit responses toward both male and female peers with depression, than toward their 'typically developing' counterparts. A notable strength of this research was that it included assessments of adolescents' implicit stigmatising responses toward peers exhibiting symptoms of a mental health condition, without the relying on the use of psychiatric labels. Although this approach increases the ecological validity of the findings, the novelty of this research makes it difficult to compare these findings with that of other research. Only one other study appears to have examined implicit stigma in children and adolescents using similar methodologies. Nonetheless, this study by O'Driscoll et al. (2012) also found that adolescents exhibited more implicit stigmatising responses toward a peer with depression than to a 'typically developing' peer. These findings provide some tentative evidence to suggest that adolescents hold negative implicit attitudes toward their peers with depression. However, in order to strengthen confidence in this pattern of results, further research needs to be conducted.

Hierarchical multiple regressions analyses were also carried out in order to assess the effect that Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms exerted on adolescents' implicit stigma responses, after controlling for the effects of Participant Age and Gender. Researchers have advocated that there is a need to assess implicit and explicit stigma separately, as it is proposed that both aspects of stigma may be influenced by separate components (Hinshaw, 2005; Stier & Hinshaw, 2007). This contention was supported by the findings from the current study, as results indicated that the factors which were found to exert a significant influence on adolescents' explicit responses, exerted very limited significant effects on adolescents' implicit stigma responses. To capitulate, when the targets were female, although the overall model was found to be significant, the only factor which appeared to significantly influence implicit stigma was Participants' Age. In particular, older adolescents were found to display higher levels of implicit stigma toward the female target than the 'Typically Developing' female target. Although a similar pattern of

responding was observed in adolescents' responses on the explicit measures, this overall model of implicit stigma was found to account for just 9% of the variance. When the targets were male, no factor exerted a significant effect on adolescents' implicit attitudes and the overall model was not significant.

Although no significant effects were observed for the male targets, one interesting pattern of results was observed in that individuals who showed higher levels of Affective Empathy also showed higher levels of implicit stigma. This result is interesting as it is contradictory to the expected trend and was found to approach significance ($p=.058$). As there is a paucity of research examining the effect of empathy on implicit stigma towards individuals with mental health problems it is difficult to compare the current results with that of previous research findings. As this is an unexpected finding, further exploration of this effect is needed in future research in order to ensure that this result is not idiosyncratic. Alternatively, it is possible that the link between affective empathy and increased implicit stigma toward the male depressed target could in fact indicate that adolescents who are more likely to share the feelings of others are also more likely to stigmatise males with depression. Previous research has shown that individuals with internalised mental health conditions, such as depression, often show high levels of self-stigma (Griffiths et al., 2008). Research has also indicated that individuals express more negative responses toward males with depression than females (Fox et al., 2008; Mann & Himelein, 2004). Thus, it is possible that individuals who empathise with others more, may also unconsciously adopt a portion of this self-stigma. Given that stigma is greater towards males than females, this may explain the observed increase in implicit stigma toward the depressed target in this instance.

One of the most important findings to emerge from the results of these implicit analyses is that adolescents' responses on the IAT did not appear to be affected by any of the main predictor variables (Affective Empathy, Cognitive Empathy, Descriptive Norms or Injunctive Norms). This is an interesting finding as it indicates that although these factors were significant at predicting aspects of explicit stigma in adolescents, they were not significant in predicting implicit stigma responses. Firstly, it is important to note that explicit and implicit attitudes are considered to be theoretically separate phenomena and represent separate forms of social cognition (Dovidio, Kawakami & Gaertner 2002; Fazio et al., 1995; Greenwald & Banaji, 1995). Therefore, it is possible that factors which may bear an influence on adolescents' 'conscious' (explicit) responses would not necessarily influence their 'unconscious' (implicit) responses. For example, Sakaluk and Milhausen (2012) conducted a

study which compared the influence that several factors had on predicting college students' explicit and implicit views of sexual double standards. This study also found differences in the influence of the predictors depending on whether explicit or implicit views were being assessed (Sakaluk & Milhausen, 2012). Thus, as explicit and implicit responses may represent separate forms of social cognition, this may explain why differences in the predictive effects of the main variables were observed in the current study.

It is also important to note, however, that there were extensive differences between the way in which explicit and implicit stigma were assessed, which may also account for the discrepancies observed in the predictors of both forms of stigma in the current research. Firstly, it should be noted that, although a variety of outcome measures were used to assess explicit stigma, implicit stigma was measured by just one assessment on the IAT. Specifically, adolescents' implicit stigmatising responses were measured according to how quickly they associated two attribute categories 'good' and 'bad' with the target peers. While these attribute stimuli were adapted from the Teachman et al. (2003) scale, the items which composed the attribute categories in this implicit assessment also composed the explicit Negative Attributes factor. This means that the *D* IAT score in the current study is more representative of adolescents' implicit attitudes than a global implicit stigma response. On this note, it is pertinent to remark that while both forms of Empathy and Peer-Group Norms were found to exert significant effects on explicit stigma, there was huge variability in both the strength and significance of these effects depending on which aspect of stigma was being assessed. Interestingly, an examination of responses on the Negative Attributes factor revealed that the only predictor to exert a significant effect on this explicit factor, for either the male or female depressed target, was Descriptive Norms. Thus, it may also be the case that if a different measure of implicit stereotypes had been used or if this research had also included measures of implicit prejudice or behavioural responses, then more significant effects for the predictors would have been observed. Overall, it can be concluded that the present results are an indication that the predictor variables (Affective Empathy, Cognitive Empathy, Descriptive Norms and Injunctive Norms) did not play a role in influencing adolescents' implicit stereotypic evaluations of their peers. In order to explore the role that these predictors may play in influencing other forms of implicit stigma, further research needs to be conducted.

Furthermore, another pertinent issue to consider when interpreting the current results, is that implicit stigma in the current study was measured using the IAT, which is a relative

measure, whereas the explicit measures employed in this study were target specific. Specifically, the IAT produced a *D* IAT score which prescribed how adolescents stigmatised the depressed target relative to the ‘typically developing’ target. Conversely, the explicit measures only assessed how adolescents responded to the depression target and did not measure how adolescents responded to the depressed peer relative to the ‘typically developing’ target. As a result, it is difficult to directly compare responses on these implicit and explicit measures as they represent slightly different assessments. It is therefore possible that the lack of significant effects observed for the predictors on the implicit assessment of stigma may be due to the relative component of this assessment as opposed to the ‘implicit’ nature of the measurement. In other words, it is possible that Empathy and Group-Norms do play a significant role in influencing adolescents’ responses toward a peer with depression but these factors may not be significant in influencing responses toward the ‘typically developing’ target. As the implicit stigma assessments incorporated adolescents’ responses toward both peers, this may also help explain why the predictors were not found to exert a significant effect on implicit responses, but were found to exert a significant effect on explicit stigma. In order to gain further insight into why the discrepancies between the explicit and implicit predictors occurred, future research would benefit from including a corresponding relative measure of explicit stigma, or from assessing the impact of the predictors on other non-relative implicit measures, such as the Single Target-Implicit Association Test (ST-IAT; Karpinski & Steinman, 2006).

9.7 Strengths, Limitations & Recommendations

Firstly, it is important to acknowledge that this research study has several important strengths and has provided numerous incremental advances to the research base by addressing important gaps in the current stigma literature. In particular, this study is among the first to attempt to generate an understanding of the factors which influence the type of stigmatising responses that adolescents express toward their peers with mental health problems. Moreover, an important strength of this study is that it included assessments of both explicit and implicit forms of stigma, which is relevant as it is one of only a handful of studies to have assessed both implicit and explicit stigma among adolescents. Additionally, another advantage of this research is that it assesses how the chosen factors influence adolescents’ stigmatising responses toward both male and female targets with depression. Thus, this research builds on the knowledge obtained in other similar research, which typically assess responses toward same-sex or single-sex targets (Jorm & Wright, 2008; O’Driscoll et al., 2012; Reavley &

Jorm, 2011; Yap et al. 2013). Other relevant highlights of this research include the large sample size (N=646) included in the explicit analyses as well as the extensive validation process that the explicit stigma measures were exposed to (see Study 1, pp. 29-31), prior to their inclusion in the current analyses, in order to ensure that these measures represented valid and reliable assessments of stigma in adolescents.

However, there are also several limitations associated with the current body of research, which are important to acknowledge and should be addressed in future research studies. Firstly, as the Descriptive and Injunctive normative measures used in the current research were created for the purposes of this study, some caution must be exerted when interpreting these results as the validity of these measures has yet to be confirmed by a separate body of research. Due to practical restraints and time considerations, it was not possible to recruit a second sample to the study in order to confirm the factor structure of the normative measures in a separate sample. Although both scales demonstrated high factor loadings and good internal reliability it is possible that this trend may not be observed in another sample. Hence, these scales should be subjected to further confirmatory factor analyses in future in order to further evaluate the validity and reliability of these measures and strengthen confidence in the effects which were observed for these factors.

Additionally, although both scales demonstrated good internal consistency, both scales are formulated from a small pool of items. The Descriptive Norms measure contains 4-items, while the Injunctive Norms scale contains 5-items. Hence, it is possible that while these items may represent two separate constructs, they simultaneously may not be broad enough to capture the full possible diversity of the descriptive or injunctive norms that may be pertinent to adolescents. Future research may benefit from further exploring these constructs within the mental health stigma domain by employing both quantitative and qualitative techniques to further investigate these constructs and develop validated measures. For example, focus groups may be a useful method for future researchers to employ in order to further elaborate on what type of norms influence adolescents' responses toward their peers with mental health problems, such as depression. Given the substantial influence that Descriptive Norms were found to exert on adolescents' explicit stigmatising responses, further exploration of this topic may be of particular benefit to future research studies and practical initiatives and lead to greater understanding of why these norms influence stigma.

It is also important to note that implicit stigma in the current study was only assessed in a portion of the overall sample. Due to practical limitations associated with carrying out the IAT with a large sample size, it was not possible to assess implicit stigmatising responses for all participants recruited to the study. Moreover, a further methodological limitation associated with this research is that adolescents were recruited to the IAT component of the study at a school level. In other words, all participating adolescents in a sub-section of participating schools were asked to complete this implicit stigma assessment. Hence, as randomisation was not employed it is possible that some selection bias may have occurred whereby adolescents who completed the IAT were different from adolescents who were not asked to complete the IAT. Thus, future research would benefit from examining whether similar results are observed when individuals are randomly selected to take part in the IAT.

In addition to the methodological limitations associated with the way in which the IAT was carried out, there are also relevant limitations associated with the type of implicit attitudes which were assessed. To elaborate, in the current research it was found that Empathy and Peer-Group Norms did not significantly impact on adolescents' implicit responses. This is an important finding as it appears to suggest that different factors may contribute to the expression of implicit and explicit stigma in adolescents. Thus, the current results may have important practical implications for any applied or research initiatives that aim to reduce stigma in adolescents, as they may imply that while empathy and norms are effective at predicting explicit forms of stigma, other factors may play a more substantial role in influencing implicit stigma. Alternatively, as implicit measures of stigma are less susceptible to social desirability biases (Greenwald & Banaji, 1995), the results may also imply that these predictors are only significant at predicting stigmatising responses when adolescents are consciously monitoring their responses. However, it is important to note, that the current study only included assessments of adolescents' implicit stereotypes, and did not measure implicit prejudice or unconscious behavioural responses. Therefore, an important objective for future research is to include explicit and implicit assessments of each stigma component, in order to establish whether similar differences would be observed across the different implicit and explicit stigma dimensions.

Other limitations of this study pertain to the scope of the statistical analyses employed in the current study. Specifically, although this research highlighted the important role that both Participant Gender and Target Gender play in the stigma process among adolescents, this research did not explore how Participant Gender may have interacted with the main

predictor variables to exert differential effects on adolescents' responses toward male and female targets with depression. In other words, this research did not investigate whether male and female adolescents scored higher or lower on the Empathy and Peer-Group Norms factors or whether gender differences on these factors could account for variations in the observed stigma responses. As previous research has indicated that gender differences are consistently observed in the type of empathic responses (D'ambrosio, Olivier, Didon, & Besche, 2009; Jolliffe & Farrington, 2006) and social behaviour (Eagly, 2013) exhibited by individuals, there is some reason to believe that the impact that the Empathy and Group-Norms predictors appeared to exert on stigma responses may vary depending on the gender of the participant. As this information may be useful for informing anti-stigma initiatives, it is recommended that future research consider how stigma responses may be influenced by these additional Gender X Predictor interaction effects.

9.8 Practical Applications

In addition to the contribution of knowledge that this research has made to the current stigma research base, several of the central research findings from this study have key practical implications, which are important to discuss. Firstly, the results from the current research indicate that adolescents express more negative, explicit and implicit, stigmatising responses toward their peers with depression than they do toward their 'typically developing' peers. Crucially, these results compliment the findings which have emerged from other similar research studies (Moses, 2010; Swords et al., 2011; O'Driscoll et al., 2012) and support the contention that adolescents who appear to experience mental health problems are consistently stigmatised by their peers. Given the research evidence which has highlighted the negative impact such stigmatisation exerts on adolescents' developmental and psychological well-being and help-seeking behaviour (Chandra and Minkowitz, 2007; Gulliver, Griffiths & Christensen, 2010; Hennessy et al., 2008; O'Driscoll et al., 2012; Moses, 2010; Walker et al., 2008) these findings have important practical implications. Specifically, these results provide further evidence that advocate for the need to develop effective methods of reducing public mental health stigma among this age group.

The current study also highlighted the importance of examining adolescents' stigmatising responses toward male and female peers separately, as the research uncovered variability in the influence of the predictors depending on whether adolescents were responding to a male depressed target or a female depressed target. Likewise, this study also

found that aspects of adolescents' stigma responses were influenced by the age and gender of the participant. Similar observations have been made by other stigma researchers. In particular, other researchers have also observed that male and female adolescents respond differently to male and female peers with specific mental health conditions (O'Driscoll et al., 2012). Research, such as that conducted by Fox et al. (2008) and MacLean, Sweeting and Hunt (2010), has demonstrated that adolescent boys who report or experience symptoms of psychological distress typically experience more stigmatising consequences than their female counterparts. Of particular significance are the research findings which have indicated that adolescents' beliefs about appropriate gender norms can influence adolescents' stigmatising evaluations of their male and female peers (Swain, 2004). Crucially, research has shown that beliefs about gender appropriate behaviour and expectancies solidify during adolescence (Martin & Ruble, 2004). Thus, this research indicated that stigma is a multi-dimensional construct which is influenced by characteristics of the perceiver, as well as characteristics of the prescribed target, which is similar to the trend observed in other research. Hence, when considering the findings of the current research in the context of previous research findings, it is clear that future work would benefit from considering the influential role that these characteristics may play in the stigma process, in order to design more effective stigma reduction strategies.

Furthermore, this research is among one of the only studies to have carried out an empirical investigation into the factors that might influence how adolescents stigmatise people with mental health problems. Specifically, these findings implied that the way in which adolescents respond to their peers with depression is influenced by their perceptions of how their friends would respond to the peer. Not only does this finding have important implications within the mental health stigma field, but potentially, as similar relationships have also been observed in other domains (Paluck, 2009; Rutland et al., 2005), these results might provide support to indicate that descriptive norms also play a wider role in influencing the type of inter-group responses that adolescents express more generally.

9.9 Conclusions

Overall, the results provide further support for the multi-dimensional nature of stigma. These findings indicate that different factors may influence the expression of stigma in adolescents depending on the aspect of stigma being assessed and the gender of the target. Other socio-background characteristics of the respondents may also play a role in influencing

stigma responses. Although empathy and group norms were found to exert significant effects on aspects of adolescents' explicit stigma responses, these factors were found to exert limited predictive effects on implicit responses. These results may indicate that other factors are more important in influencing implicit stigma responses in adolescents. Nonetheless, the results of this research suggest that Descriptive Norms appear to play a substantial role in the stigma process among adolescents and provide initial evidence to suggest that normative interventions may have some utility in reducing stigmatising responses in adolescents. The potential utility of a normative feedback approach is explored further in the next study of this doctoral thesis.

Chapter 10

Study 3 Introduction

10.1 Aim of Chapter

The aim of the current chapter is to establish a rationale for investigating the potential effectiveness of a normative feedback technique at reducing mental health stigma in adolescents. Specifically, this chapter will outline the current popular anti-stigma intervention strategies and highlight the relevant shortcomings associated with these techniques. This chapter will conclude by demonstrating the potential utility that normative feedback approaches may play in reducing public depression stigma among adolescents and outline the theoretical mechanisms that are proposed to moderate the effectiveness of normative interventions.

10.2 Importance of Reducing Mental Health Stigma in Adolescents

As already outlined in this thesis, prior research suggests that adolescents typically evidence moderate levels of public mental illness stigma, and that adolescents who experience mental health issues are excluded or ostracised from the peer group (Chandra & Minkowitz, 2007; Moses, 2010; O’Driscoll et al., 2012; Pinto-Foltz, Logsdon & Myers, 2011). Research has suggested that mental health treatment seeking in adolescents is significantly influenced by the perceived opinions of their peers and others in their social networks (Moses, 2010). Moses (2010) found that adolescents with mental health problems fear discovery by their peers and other school personnel. Other research has indicated that although adolescents prefer informal help-seeking options, such as discussing mental health issues with their peers, they are reluctant to do so due to anticipated negative and stigmatising responses (Marcell & Halpen-Felscher, 2007; Pinto-Foltz et al., 2010; 2011). Furthermore, in a recent review of the literature, Gulliver et al. (2010) also noted that adolescents report embarrassment and perceived stigma as major barriers in their treatment seeking. Thus, it is now recognised that in order to prevent the social exclusion of young people with mental illness and facilitate the use of mental health services among this population, the development of efficacious stigma reduction strategies should be a priority area of concern for research, public health campaigns, clinical care, advocacy and policy development (Spagnolo et al., 2008; Yamaguchi, Mino & Uddin, 2011). For a more thorough review of the negative effects of stigma see pages 1-27.

10.3 Current Mental Health Stigma Reduction Strategies

In recent decades, there has been a considerable increase in the number of programmes and interventions designed to reduce public mental health stigma (Dalky, 2012; Schachter et al., 2008). In general, these anti-stigma approaches can be divided into three main paradigms; protest, education and contact (Corrigan et al., 2012). Protest strategies typically involve highlighting the injustice of stigma and attempting to remove stigmatising messages from the public eye (Murman et al., 2014). Protest approaches often involve telling the public not to hold stigmatising responses toward people with mental illness and chastising those who do (Corrigan et al., 2001; Penn & Couture, 2002). Education strategies attempt to reduce stigma by providing individuals with accurate information about mental health disorders (Corrigan & Penn, 1999). These strategies attempt to increase knowledge about mental illness, in order to challenge negative stereotypes or false assumptions about people with mental health problems (Murman et al., 2014). Contact-based programmes attempt to decrease stigma by facilitating positive, cooperative interactions between the public and persons with mental health issues (Rusch et al., 2005). This approach operates on the assumption that interacting with a member of a stigmatised group will help to disconfirm prevailing negative stereotypes, reduce prejudice and cultivate friendship (Corrigan et al., 2012; Kerby et al., 2008).

Although anti-stigma interventions are widely employed in the adult literature, it is only in recent years that researchers have started empirically evaluating the effectiveness of these various stigma reduction initiatives (Corrigan et al., 2012; Dalky, 2012; LeBel, 2008; Parscesepe & Cabassa, 2013; Pinto-Foltz et al., 2011; Spagnolo et al., 2008). Results from a series of recent systematic reviews and meta-analyses appear to suggest that protest strategies may actually lead to an increase, rather than a decrease, in stigma (Corrigan et al., 2012; Heijnders & Van Der Meij, 2007). The research evidence indicates that instructing individuals to suppress their negative thoughts or stigmatising responses may in fact lead to paradoxical rebound effects that augment, rather than reduce, stigma (Corrigan et al., 2015; Penn & Couture, 2002). Additionally, protest strategies are criticised for failing to replace negative images with more positive ones (Buechter, Pieper, Ueffling & Zschorlich, 2013). On the other hand, the empirical evidence indicates that both contact and education appear to significantly reduce stigma toward people with mental illness (Dalky, 2012; Rusch et al., 2005). However, although it is generally believed that contact may yield more successful results than educational approaches (Corrigan et al., 2012; Pinto-Foltz et al., 2011), research

suggests that contact may not be effective at reducing stigma in the long term (Mehta et al., 2015).

10.3.1 Overview of Findings from the Adolescent Anti-Stigma Literature It is increasingly recognised that an important place for carrying out anti-stigma interventions for adolescents is schools (Crisp et al., 2000; Schachter et al., 2008). As a result, there has been a substantial increase in the amount of school-based programmes which aim to reduce mental illness stigma among adolescents in the last number of years (Pinto-Foltz et al., 2011). Typically, anti-stigma strategies among adolescents employ similar paradigms to those used among adults (Chisholm et al., 2011; Corrigan et al., 2012). However, wide scale empirical evaluations of the quality and efficacy of these anti-stigma interventions are sparse (Mellor, 2014; Schachter et al., 2008; Yamaguchi et al., 2011). For example, a review by Kelly, Jorm and Wright (2007) commented that only a few of the school-based interventions attempting to improve mental health literacy among adolescents have been evaluated, and fewer have been evaluated well. Despite the paucity of evaluations, consideration of the empirical evidence is needed to synthesise research findings and draw inferences about the most effective elements of these anti-stigma interventions, in order to inform the design of future successful programmes (Mellor, 2014).

Overall, however, it is difficult to compare findings across the extant stigma reduction strategies due to differences in the intervention characteristics and methodologies employed (Mellor, 2014). For example, the systematic reviews conducted by Schachter et al. (2008) and Yamaguchi et al. (2011) both comment on the vast differences that exist between the type of content and delivery methods (vehicles) employed across the various intervention studies. Additionally, both Murman et al. (2014) and Yamaguchi et al. (2011) commented that most stigma-reduction strategies utilise different outcome measures in their operationalisation of stigma. Moreover, researchers have noted that several of the existing intervention studies appear to suffer from poor research design or lack sufficient randomisation to ensure the validity and generalisability of the results observed (Pinto-Foltz et al., 2011; Yamaguchi et al., 2011). For these reasons, researchers have argued that research to support a clinically relevant intervention strategy with adolescents is lacking, and that further, well-designed, research in this field is warranted (Chisholm et al., 2011; Mellor, 2014; Schachter et al., 2008).

In general, reviews indicate that the majority of successful anti-stigma efforts appear to use education or contact as the primary method of mental illness stigma reduction with adolescents (Corrigan et al., 2012; Mellor, 2014; Schachter et al., 2008; Yamaguchi et al., 2011). However, despite the popularity of these approaches there are a number of limitations associated with these strategies which are important to note. First, research indicates that short term educational approaches or programmes that focus exclusively on providing biological explanations of mental illness appear to be ineffectual at producing long-term stigma changes (Chan, Mak & Law, 2009; Pinfold et al., 2003; Murman et al., 2014). Stigma researchers also generally seem to agree that anti-stigma efforts need to move beyond education and knowledge based programmes and incorporate other elements (Murman et al., 2014; Pinfold et al., 2003; Schulze et al., 2003). Similarly, although researchers advocate the importance of contact in reducing mental health stigma among adolescents, a recent systematic review by Yamaguchi et al. (2011) indicated that contact alone may be insufficient at producing maximum benefits. Moreover, findings from a recent meta-analysis of anti-stigma approaches indicated that while contact appeared to be better than education approaches at reducing stigma in adults, a reverse effect was found among adolescents (Corrigan et al., 2012). Furthermore, it is argued that direct contact approaches may be difficult to implement on a wide scale because of the specific conditions that are necessary in order to produce significant reductions in stigma (Chan et al., 2009), which has led to researchers using other forms of indirect or imagined contact (Pinfold et al., 2003; Stuart, 2006; Stathi, Tsantila & Crisp, 2012; West, Holmes & Hewstone, 2011). However, there is some available research to suggest that indirect contact may produce smaller effects than direct contact approaches (Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004). Of particular importance is the finding from Corrigan et al. (2012) which revealed that although education and contact produce significant reductions in mental health stigma, overall, these studies appear to produce relatively poor effect sizes (.10-.30) for both adults and adolescents. These results indicate that there may be important factors influencing adolescents' stigmatising responses that are not being targeted by the current, dominant intervention strategies.

Evaluations of other child and adolescent interventions, from outside the mental health stigma literature, also report similar observations. For example, a recent meta-analytical review indicated that several anti-stigma programmes show promising results with children and adolescents, interventions that incorporate direct contact experiences with social-cognitive training appearing to show the strongest effects (Beelmann and Heinemann,

2014). Beelmann and Heinemann (2014) concluded that, in general, anti-stigma strategies need to focus more on the social context and be guided by empirical knowledge on intergroup relations. Overall, researchers agree that campaigns to reduce stigma among adolescents need to do more and have called for further innovation and growth among future anti-stigma programmes (Aboud et al., 2012; Crisp et al., 2000; Estroff, Penn & Toporek, 2004; Mellor, 2014; Murman et al., 2014; Schachter et al., 2008).

10.4 Rationale for a Normative Feedback Intervention Approach to Reduce Public Stigma among Adolescents

10.4.1 Importance of Peer Norms among Adolescents Researchers argue that in order to design effective stigma reduction programmes, these strategies must be informed by an understanding of the factors that promote the expression of stigma and interventions should then be tailored to the relevant needs and concerns of the target group (Corrigan, et al., 2012; Parscesepe & Cabassa, 2013; Sierksma et al., 2015). In fact, emerging guidelines from the Medical Research Council (MRC) suggest that intervention design should be informed by relevant empirical evidence and the identification of an appropriate theoretical framework (MRC, 2015). Similarly, researchers such as Schulze et al. (2003) and Murman et al. (2014) have proposed that adolescent interventions, in particular, should be relevant, developmentally appropriate and emanate from adolescents' own personal experiences. Crucially, it is now recognised that stigmatising opinions are not always due to a lack of knowledge or familiarity with the target out-group (Crisp et al., 2000; Schachter et al., 2008). Thus, there is a need for further anti-stigma strategies that target the specific factors that contribute to the emergence and maintenance of stigma among adolescents.

It is now widely accepted in the literature that stigma is a social phenomenon, with researchers claiming that social interactions are necessary in order for stigma to occur (Dovidio et al., 2000; Goffman, 1963; Major & O'Brien, 2005; Pescosolido et al., 2007). Previous research has shown that peer social networks are extremely influential during adolescence, whereby adolescents' attitudes and behaviours appear to be highly influenced by the perceived attitudes and behaviours of their peer group (Bigler et al., 1997; Nesdale et al., 2005; Sierksma et al., 2014). Thus, the perceived norms of the peer group are considered to be a major source of inter-group bias among adolescents (Aboud & Sanker, 2003; Nesdale & Dalton, 2011; Thijs & Verkuyten, 2011). Within the mental health stigma context, there is emerging evidence to suggest that peer norms may exert a substantial effect on adolescents'

stigmatising responses toward their peers with mental health problems. First, as discussed in detail in Chapter 6 (pp. 109-111), a number of findings from the adult stigma literature suggest that perceptions of perceived social norms influence how individuals respond to people with mental health disorders, such as depression (Norman et al., 2008; Shamblaw et al., 2015). Results from a recent qualitative investigation among adolescents also revealed that consideration of pre-existing group norms was an influential factor in adolescents' decisions to exclude peers with mental health disorders from particular social situations (O'Driscoll et al., 2014). Of critical importance to the current research are the findings from Study 2 of this doctoral thesis. These findings indicated that adolescents' perceptions of (descriptive) peer norms exerted a significant effect on the type of stigmatising responses they expressed toward male and female peers with depression (see pages 128-166 for more detail). Hence, there is evidence to suggest that peer norms may help account for the emergence and persistence of public mental health stigma in adolescents.

Researchers propose that when attitude and behaviour change among adolescents are goals, peers should be an integral component of any health related intervention or stigma reduction research strategy (Crosnoe & McNeely, 2008; Pinto-Foltz & Logsdon, 2009). It is argued that adolescent-based interventions should target all adolescents within the school context, in order to help reform the stigmatising culture that may persist within adolescents' social networks and promote a more inclusive peer environment (Murman et al., 2014; Pinto-Foltz & Logsdon, 2009; Pinto-Foltz et al., 2011). In fact, Beelmann and Heinemann (2014) argued that given the small-moderate effects that are generally observed for anti-stigma interventions, alternative interventions that seek to socialise adolescents toward more positive social norms are an important avenue for future research. Thus, given the influential role that peers appear to exert on adolescents' intergroup responses and the importance that peer norms appear to play in promoting adolescent mental health stigma, future research may benefit from evaluating the efficacy of a normative approach at reducing public mental health stigma among adolescents.

10.4.2 Overview of Normative Feedback Approaches Normative feedback approaches operate by providing individuals with information about the prevalence of specific behaviours or attitudes (i.e., descriptive norms) amongst an individual's reference group (Neighbors et al., 2015; Smith, Davis, Ureche & Tabb, 2014). Normative feedback approaches are guided by an underlining theoretical assumption that changing individuals' perceptions of (in-) group norms will cause a subsequent change in behaviour or attitude

(Doumas, Esp, Turrisi, Hausheer & Cuffee, 2014). Typically, normative feedback approaches operate by capitalising on the discrepancies which often exist between perceived and actual norms (Neighbors et al., 2015). Research shows that although individuals are strongly influenced by perceived social norms, both adults and adolescents commonly misperceive how frequently members of one's reference group engage in a specific behaviour or how strongly they endorse a particular attitude (Smith et al., 2014; Tankard & Paluck, 2015; Walker et al., 2011). Hence, normative feedback approaches attempt to correct misperceptions about the prevalence of negative behaviours or attitudes in an individual's social group by providing information about actual prevalence rates (Neighbors et al., 2015). Other normative feedback approaches operate by providing individuals with fictitious or falsified information about the prevalence of positive norms among their social referents (Finnegan, Garnham & Oakland, 2015). This approach is adopted in situations where information on the prevalence of actual norms is unavailable or where the promotion of actual norms may result in an increase in negative or stigmatising reactions (Puhl et al., 2005; Stangor et al., 2001; Tan et al., 2001). Both forms of normative feedback operate under the assumption that changing perceptions of the prevalence of descriptive norms will result in a change in the prevalence of actual norms (i.e. behaviour; Tankard & Paluck, 2015).

Currently, there does not appear to be any anti-stigma research which investigates the role that peer norms may play in reducing mental health stigma among adolescents. However, evidence from other fields of research suggests that targeting individuals' perceptions of norms, through normative feedback approaches, can produce significant changes in behaviour and stigmatising attitudes. Research has shown that providing individuals with information on descriptive norms has led to significant, positive behavioural changes in a variety of different domains, such as increased hygiene care, energy conservation (Allcott & Mullainathan, 2010), and greater intentions to vote (Gerber & Rogers, 2009; Glynn, Hoge & Lunney, 2009) and join the organ donation registrar (Behavioural Insights Team, 2013). Research has also shown that normative feedback interventions are effective at reducing engagement in dangerous health-related behaviours, such as risky sexual behaviours (Chernoff & Davidson, 2005; Lewis et al., 2014), binge-drinking (Lewis et al., 2007; Neighbors et al., 2010; Rimal & Real, 2005), and other forms of substance misuse (Smith et al., 2014). For example, Doumas et al. (2014) investigated the efficacy of a web-based normative feedback intervention at reducing under-age drinking among adolescents. In this study, adolescents were provided with information which compared their perceptions of peer

drinking behaviour to actual school drinking normative data. Results indicated that adolescents who were exposed to the normative information showed reduced positive attitudes towards alcohol consumption.

Moreover, research has shown that normative feedback interventions can lead to positive, beneficial changes in health-related behaviours. For instance, Stok et al. (2014) examined whether communicating health-promoting norms would influence adolescents' fruit consumption. The researchers found that adolescents who were exposed to descriptive normative information showed significantly higher fruit intake than adolescents who did not receive any normative information (Stok et al., 2014). Crucially, research has also indicated that normative feedback approaches can successfully increase individuals' willingness to engage in help-seeking behaviours. To evidence, a recent study by Murphy and Hennessy (2015) investigated whether providing normative feedback would promote positive help-seeking intentions and attitudes in individuals with, and without, mental health problems. Specifically, young adults were exposed to normative information that normalised the experience of seeking help by communicating online messages that 'most peers think that help seeking is normal'. Findings from this study revealed that all individuals who were exposed to the normative messages reported more positive attitudes toward help-seeking. Additionally, individuals with mental health problems also reported greater intentions to seek-help, after being exposed to the normative feedback intervention (Murphy & Hennessy, 2015).

In addition to these changes in health-related behaviours, normative feedback approaches have been found to significantly reduce individuals' stigmatising responses toward a variety of marginalised groups. For example, Tan et al. (2001) attempted to examine the effect that providing normative information would have on individuals' stereotypic beliefs about a racial out-group. Findings showed that college students, who were exposed to normative feedback suggesting that their peers held positive attitudes toward African-Americans, endorsed significantly more positive stereotypes toward the target group, in comparison to a control condition (Tan et al., 2001). Similarly, Stangor et al. (2001) found that exposing individuals to information suggesting that a large percentage of in-group members held favourable stereotypes about a racial out-group (African-Americans) lead to an increase in the expression of positive stereotypes among these individuals. These changes appeared to be strong in magnitude as they remained persistent when assessed at a follow-up assessment, two weeks later (Stangor et al., 2001). Finnegan et al. (2014) also showed that

providing individuals with positive normative information, suggesting that other people rarely endorsed gender stereotypes, caused a significant decrease in the expression of stereotypical gender bias. Additionally, Puhl et al. (2005) found that providing individuals with normative feedback suggesting that other members of an in-group held more positive attitudes toward obese people, resulted in a decrease in the expression of negative, as well as an increase in positive, stereotypes among those exposed to the normative information. Furthermore, a study by Sechrist and Milford (2007) investigated whether a normative feedback intervention could successfully influence individuals' helping behaviours. Specifically, participants in the normative feedback condition were provided with information suggesting that members of a referent social group held favourable attitudes toward a specific marginalised ethnic group. Sechrist and Milford (2007) found that individuals who were exposed to the normative information reported more positive intergroup attitudes and demonstrated higher levels of helping behaviour toward a member of the target out-group, than individuals who were not exposed to the normative information. Collectively, these results lend credence to the hypothesis that normative feedback approaches are beneficial at inducing behaviour change and reducing stigmatising responses in individuals, across a variety of settings.

However, despite the demonstrated support for normative feedback as an effective method of stigma reduction among adults, research investigating the effectiveness of normative feedback as an anti-stigma strategy among adolescents is extremely sparse. Nonetheless, findings from a recent school based, anti-bullying campaign by Perkins, Craig & Perkins (2011) provide some preliminary evidence to suggest that this type of approach may also be beneficial at reducing stigma among adolescents. In this study, Perkins and colleagues attempted to reduce the prevalence of bullying among students in five U.S. middle schools. Students in these schools were asked to complete a preliminary survey assessing students' experiences of bullying perpetration and victimisation. Students were also asked to indicate the extent to which they believed other students endorsed pro-bullying attitudes. The social normative intervention was communicated to students in each school via a series of posters, which contained feedback from the results of the initial survey. These posters contained social normative messages about the prevalence of positive behaviour or anti-bullying attitudes in each school (i.e., descriptive norms). Perkins et al. (2011) reported that after being exposed to these posters, students in each school reported significantly lower levels of personal bullying perpetration and victimisation and less perceived peer support for

bullying. Thus, although these findings provide some suggestive evidence that normative feedback may exert important effects on adolescents' intergroup attitudes and behaviours, further research is needed to evaluate the potential effectiveness of this approach at reducing mental health stigma among adolescents.

10.5 Theory of Normative Social Behaviour (TNSB)

Researchers argue that a crucial component in the evaluation or design of successful stigma programmes is to understand the theoretical foundation, underpinning the intervention (Pinto-Foltz & Logsdon, 2009; Tankard & Paluck, 2015). In other words, it is important for researchers attempting to design effective stigma reduction strategies to not only evaluate whether an intervention is successful or not, but to understand how and why the intervention exerts its effects. However, although the influence of social norms on individuals' behaviour and attitudes is well documented in the literature (Crandall et al., 2002; Stok et al., 2014; Tan et al., 2001; Tankard & Paluck, 2015; Walker et al., 2015), little is known about how or why these normative influences occur (Rimal, 2008). As a result, extant normative feedback interventions are often limited due to their atheoretical nature. It is also proposed that effects of these norm-based interventions could be mitigated by a lack of consideration given to the variables that moderate or mediate the relationship between normative beliefs and behaviours (Rimal & Real, 2005; Rimal, 2008). For example, it is generally assumed that normative feedback approaches exert their effects on behaviour by changing perceptions of prevalent social norms (Rimal, 2008). However, few studies have evaluated the effectiveness of normative feedback approaches by empirically testing this mediation effect (Neighbors et al., 2014; Rimal, 2008). Hence, researchers contend that greater precision in theorising about normative influences is an important step in designing more effective intervention strategies (Tankard & Paluck, 2015; Rimal, 2008). The current study aims to rectify this empirical gap by assessing 1) whether changes in normative perceptions mediate the relationship between a normative feedback intervention and individuals' stigma responses and 2) by drawing on the Theory of Normative Social Behaviour (TNSB; Rimal & Real, 2003; 2005) to examine how normative feedback approaches exert their effects.

The TNSB proposes that three cognitive mechanisms underline the relationship between descriptive norms and behavioural intentions/attitudes, and may moderate the effectiveness of normative feedback interventions. Specifically, the TNSB posits that injunctive norms, outcome expectations and group identity, all moderate the relationship

between descriptive norms and behaviour (Rimal & Real, 2005). Injunctive norms are defined as the social pressure one feels to conform to descriptive norms and can prescribe what is appropriate for an individual to think or feel in a given situation (Cialdini et al., 1990). According to Rimal (2008), individuals are more likely to engage in behaviours when they believe that other people frequently engage in this behaviour, and that failure to also enact this behaviour will lead to negative social sanctions. In this sense, the TNSB proposes that injunctive norms moderate the relationship between normative influence and behaviour, in that the magnitude of the relationship will be stronger when injunctive norms are stronger (Rimal & Real, 2005). According to the theory of social cognitive behaviour (Bandura, 1986), individuals' behaviour is guided, in part, by the perceived outcome expectations, which refer to the belief that engagement in a particular behaviour will lead to rewards (Rimal, 2008; Rimal & Real, 2005). Similarly, the TNSB proposes that the relationship between norms and behaviour is moderated by outcome expectations, in that when perceived descriptive norms are high, and individual's also believe that there are benefits associated with engaging in a behaviour, their own behavioural intentions will be stronger (Rimal & Real, 2005). Finally, numerous studies have documented the role that group identity plays in influencing behaviour and attitude (Tankard & Paluck, 2015). It is widely proposed that the greater affinity or connection an individual feels toward the referent group, the greater influence those social referents will have on the individual's behaviour (Paluck & Sheppard, 2012). Hence, the TNSB proposes that the relationship between norms and behaviour will become stronger, as group identity becomes stronger (Rimal & Real, 2005).

Given the proposed influence of these three moderators on the relationship between normative influence and behaviour, Rimal (2008) proposed that these moderators may influence the effectiveness of normative feedback strategies. Rimal (2008) tested whether these three factors (injunctive norms, outcome expectations and group identity) moderated the effect of a normative feedback intervention at reducing binge-drinking among U.S. college students and found significant effects for each moderator variable. However, there is a lack of research investigating the theoretical foundations of normative feedback approaches in other fields. Crucially, researchers argue that given the growing popularity of these normative feedback approaches, it is important for future researchers to gain a greater understanding of the specific mechanisms underlining the effectiveness of these normative feedback approaches (Neighbors et al., 2010; Rimal & Real, 2005).

10.6 Conclusions

In conclusion, although researchers, practitioners and policy makers alike advocate the importance of establishing effective methods of reducing mental health stigma among adolescents (NIMH, 2010; WHO, 2013), support for the efficacy of extant anti-stigma strategies is limited (Mellor, 2014; Schachter et al., 2008; Yamaguchi et al., 2011). It is becoming increasingly recognised by researchers in the area that effective stigma reduction strategies should be informed by solid evidence-based research on the factors which influence the expression and maintenance of stigma (Emerton, 2010; Gulliver et al., 2010; Mukolo & Heflinger, 2010). Researchers are calling for further growth and innovation among these anti-stigma programmes (Crisp et al., 2000; Estroff et al., 2004; Murman et al., 2014) as evidence from the literature suggests that there may be important predictors of adolescents' stigmatising responses that are not being targeted by these current strategies. Importantly, findings from social psychological research indicate that descriptive norms exert a profound effect on the type of stereotypes, prejudice and discrimination that individuals' express toward a variety of marginalised groups (Crandall et al., 2002; Nesdale et al., 2005; Sierksma et al., 2014; Tan et al., 2001; Walker et al., 2014). Crucially, findings from Study 2 of this doctoral thesis (pp.128-166) revealed that descriptive norms exerted strong, significant effects on adolescents' stigmatising responses toward their peers who appeared to be experiencing symptoms of depression. Hence, there appears to be evidence to suggest that peer norms may significantly influence the expression and/or maintenance of public mental health stigma in adolescents, and may be an important factor to consider in the design of effective anti-stigma strategies.

Although the efficacy of normative feedback interventions in changing individuals' behaviour and attitudes has been demonstrated in numerous research areas (Finnegan et al., 2014; Puhl et al., 2005; Murphy & Hennessy, 2015; Sechrist & Milford, 2007; Stangor et al., 2001), research investigating the effectiveness of these approaches amongst adolescents is sparse (Domas et al., 2014; Smith et al., 2014; Stok et al., 2014) and there appears to be no published research study examining the utility of this approach in reducing mental health stigma among adolescents. However, a critical limitation of normative feedback interventions is the lack of understanding surrounding the mechanisms through which norms influence behaviour (Rimal & Real, 2003). In response to this limitation, Rimal and Real (2005) formulated the theory of normative social behaviour which proposes that injunctive norms, outcome expectations and group identity moderate the relationship between descriptive

norms and behaviour. Although these variables have been found to significantly moderate the effectiveness of feedback interventions in changing health-related behaviours (Rimal, 2008; Neighbors et al., 2014), researchers have yet to investigate whether these factors also moderate the effectiveness of normative feedback in influencing social behaviour or attitudes. Given the value that is placed upon understanding the theoretical foundation of an intervention in programme evaluation (Pinto-Foltz & Logsdon, 2009); an important step for future anti-stigma research is to investigate potential moderators of these normative interventions.

10.7 Aims and Objectives of the Current Research (Study 3)

The current research proposes to test the efficacy of a pilot normative feedback intervention at reducing public mental health stigma among adolescents. In particular, this research sets out to establish whether providing adolescents with positive, normative information about how other teenagers respond to peers with depression would significantly reduce the stigma that these adolescents express toward a (hypothetical) peer with depression. Additionally, this study will empirically assess whether perceptions of descriptive norms mediate the relationship between normative feedback and stigma. It is anticipated that adolescents who are exposed to the normative feedback information will endorse less negative descriptive norms and in turn will endorse less stigmatising responses. Finally, this research also aims to examine whether the effectiveness of this normative intervention is moderated by adolescents' perception of injunctive norms, outcome expectations or group identity, as is in-line with the TNSB. Specifically, this study tests three major research hypotheses:

- Hypothesis One (H1): It is hypothesised that adolescents in the normative feedback condition will show a reduction, over time, in their stigmatising responses toward the depressed target, in comparison to a control group.
- Hypothesis Two (H2): It is hypothesised that perceptions of descriptive norms will mediate the relationship between condition and stigma. Specifically, adolescents in the intervention condition are expected to endorse less negative descriptive norms at Time 2, and in turn, endorse less negative stigmatising responses toward the depressed target, in comparison to the control group.
- Hypothesis Three (H3): It is hypothesised that injunctive norms, outcome expectations (personal and perceived benefits) and group identity (aspirations

and similarity) will moderate the relationship between condition and stigma. Specifically, it is hypothesised that normative feedback will result in greater stigma reduction when perceptions of injunctive norms are more positive; outcome expectations are beneficial; and group identity with the referent peers is high.

Chapter 11

Study 3 Method

11.1 Aim of Chapter

The aim of this chapter is to outline the methodology that was employed in Study 3 of this doctoral thesis. This chapter will outline the experimental design that was employed in the current study, in order to assess the effects that a pilot normative feedback intervention would exert on adolescents' responses to a gender-matched peer with depression. Additionally, this chapter will describe the tools that were used to measure adolescents' stigmatising responses to their peers and assess the proposed mediators and moderators of the intervention effects. Finally, the ethical considerations which were pertinent to this study will also be outlined. This chapter will conclude by describing the statistical analyses that will be employed in this study.

11.2 Experimental Design

An experimental design was employed in the current study to investigate whether a pilot normative feedback intervention would be effective in reducing adolescents' stigmatising responses towards a gender and age matched peer with depression. Gender and aged matched vignettes were employed for feasibility purposes. Participants were allocated to one of two groups at a school level; the Experimental Group, who were exposed to normative information, and the Control group, who received no normative information, following a similar design employed by Perkins et al. (2011). All adolescents in their 4th or 5th year in participating schools and who received parental consent were eligible to take part in the study. All participating adolescents who met the eligibility criteria, within each school, were recruited to the assigned condition. Data was collected across two time points. First, stigma responses for both groups were assessed prior to the experimental manipulation taking place (Time 1). Participants' responses were then re-assessed two weeks later, following exposure to the experimental manipulation (Time 2).

11.3 Development and Selection of the Normative Feedback Information Messages

The basic strategy of the normative feedback intervention was to communicate information to students about how other real-life teenagers respond to peers with depression, in order to promote the perception of positive descriptive norms among adolescents. In order to abide by ethical principles and to ensure that the normative information communicated to

adolescents portrayed positive norms and was also based on actual data, a number of procedures were adopted as follows.

The normative messages utilised in current study were developed from the data collected in Study 2. In order to identify potential messages that could function as positive norms, descriptive statistics and frequencies of adolescents' responses on individual items toward the depressed target in Study 2 were re-examined. All items for which the majority of respondents from Study 2 were found to endorse positive or non-stigmatising responses toward the depressed target on any items were compiled into a list of potential normative messages. The three researchers consorting on this Doctoral thesis then met and reviewed the potential messages. These researchers identified the ten best messages which they believed would be most beneficial to use in the normative feedback intervention.

These ten selected messages were then subjected to a validation process. Specifically, an array of psychological researchers and clinical trainees were contacted due to their relative expertise in the research area and were asked to evaluate the content of the selected normative messages. Specifically, these reviewers were contacted via email and asked to complete an evaluation form (see Appendix K). This form outlined the aims and objectives of the current study and asked each reviewer to evaluate the normative information provided in terms of how suitable he/she believed the information would be for an adolescent population and its potential effectiveness in reducing stigma among this age group. Reviewers were asked to select up to five messages that they would endorse for inclusion in the experimental study. It was decided that the normative feedback information would communicate five key messages to adolescents following Michie et al. (2013) recommendations that campaigns attempting to promote behaviour change should seek to communicate between 5-10 key messages. A total of 14 reviewers completed and returned evaluation forms. The top five most rated messages were chosen as the messages for the normative feedback information. See Table 11.1 for a summary of the frequency of endorsements made for each message. Each individual message was then compiled into a separate poster. The colour design and visual graphics of the posters were developed based on the design graphics used in the Perkins et al. (2011) study. Each message was displayed in each of three different colour schemes (see Appendix L).

Table 11.1

Frequency of Endorsements for each Normative Message Reviewed

Normative Message	Number of endorsements	Percentage Endorsement
Most teenagers your age would act friendly towards their peers with problems such as depression	6	43%
Two in every five teenagers know someone with depression	11	79%
Four in five teens would introduce their friends to a peer with depression	7	50%
The majority of teenagers think people with depression are not strange	3	21%
Most teens view their peers with depression as being competent and capable	4	29%
The majority of people your age would hang around with other teenagers that depression	12	86%
Most students think other teens with emotional issues, such as depression, are good-natured	2	14%
Eight in ten teens do not think people with depression are responsible for the way they think and feel	5	36%
A lot of people like you and your friends would stick up for someone who had depression	7	50%
Teens who have problems such as depression are liked just as much as other teenagers are	11	79%

Note: The chosen normative messages are presented in bold.

11.4 Participants

A total of 116 (51 male and 64 female; 1 non-specified) adolescents took part in this study. Adolescents were recruited from three Irish secondary schools. Schools were selected for invitation using the following criteria; 1) Mixed-gendered school located within the west of Ireland; 2) A school population of over 200 pupils; 3) Students had not previously participated in Study 1 or Study 2; 4) Schools shared a similar religious ethos. Two schools were allocated as controls and one school was randomly allocated to the intervention group. Adolescents ranged in age between 14 to 17 years ($M = 16.21$, $SD = .73$; 1 non-specified). A total of 73 (37 male; 35 female; 1 non-specified) adolescents participated in the intervention condition and 43 (14 male; 29 female) adolescents participated in the control condition¹.

¹ Two schools were recruited to the control condition as only five adolescents participated from one school, with the remaining 38 adolescents being recruited from the second school.

11.5 Measures

11.5.1 Demographic Variables Participants were asked to provide information on their own age, gender and year of study in secondary school. In order to screen for any children who may identify with the symptoms displayed by the vignette character, parents were asked to indicate whether their child had a history of depression.

11.5.2 Depression Vignette Similarly, to the procedure used in Study 1 and 2, vignettes were employed in the current study in order to assess adolescents' responses to a hypothetical peer with depression. The vignette employed in the current study was identical to that used in Study 1 and 2 and provided a brief behavioural description of an age-matched, hypothetical peer displaying characteristic symptoms of depression. A control, 'typically developing' vignette was not employed in the current study in order to avoid participant fatigue. All participants read about a gender-matched peer with depression. In other words, boys read about a male peer with depression and girls read about a female peer with depression. As the purpose of this study was to conduct a pilot investigation into the utility of a normative approach it was not considered feasible to assess adolescents' response toward both male and female peers as a large sample size would be needed to test these effects. Instead, a decision was made to ask participants to read about gender matched targets, as same-sex friendships tend to be more common among adolescents Benenson, Apostoleris & Parness, 1997; Rose & Rudolph, 2006;.

11.5.3 Stigma Measures The measures used to assess stigma in the current study were identical to those employed to measure adolescents' stigmatising responses in Study 2 (see pp. 116-127) and were based on the model of stigma which was identified in Study 1 (see pp. 41-88). Specifically, this current study assessed adolescents explicit Stereotypes, Prejudice and Behavioural Intentions toward a fictional peer with depression. Adolescents' stereotypical beliefs were represented by four separate factors; Perceptions of Dangerousness (3-items), Warmth & Competence (8-items), Perceptions of Responsibility (3-items) and Negative Attributes (4-items). Prejudicial responses were measured by one factor, which was comprised of six-items assessing adolescents' expressions of fear and anger toward the depressed target. Adolescents' discrimination or behavioural intentions toward the target was assessed by two factors; Classroom Discrimination (4-items) and Friendship Discrimination (10-items) which measured adolescents' discrimination toward engaging in general

classroom-type or friendship-type behaviour, respectively, with the target. For more elaborate detail on the type of stigmatising responses assessed, please see Chapter 7 (pp.116-127).

11.5.4 Descriptive Norms Descriptive Norms were measured in order to test whether the relationship between normative feedback and stigma was mediated by changes in perceptions of how adolescents' friends would respond to the target. Descriptive Norms were measured on a 7-point Likert type scale from 1, Strongly Disagree, to 7, Strongly Agree. Higher scores on the Descriptive Norms scale (4-items) represented higher beliefs that the adolescent's friends would respond positively to the target. See Study 2, Chapters 7 and 8 (pp. 116- 144) for more information.

11.5.5 Normative Mechanisms (Moderator Variables) In order to test whether Injunctive Norms, Outcome Expectations and Group Identity moderated the effects of the normative intervention, as proposed by the TNSB (Rimal & Real, 2005), separate measures were employed to assess these three moderator variables.

Injunctive Norms The Injunctive Norms measured employed in the current study was similar to the measure which was used to assess Injunctive Norms in Study 2. In Study 2, the Injunctive Norms measure assessed adolescents' beliefs about the negative social sanctions they would experience in their friendship group if they befriended the target. For the purposes of the current study this scale was modified to assess adolescents' beliefs about the negative social sanctions that 'other teenagers' would impose on the adolescent if he/she befriended the target. This change was made in order to ensure that the normative measure was in line with the referent group used in the normative feedback intervention. The scale consisted on 5-items that were measured on a 7-point Likert type scale from 1, Strongly Disagree, to 7, Strongly Agree. All items were reversed scored so that higher scores reflected greater beliefs that befriending the target would be associated with fewer negative social sanctions. High internal consistency was found for this scale in Study 2 ($\alpha = .92$).

Outcome Expectations The Outcome Expectations measure was first employed in the current study and was operationalised as adolescents' beliefs that 'being friendly' with the target would result in specific benefits. Following Rimal and Real's (2005) conceptualisation, two forms of outcome expectations were assessed; *Benefits to Oneself* and *Benefits to Others*. Both scales were composed of 4-items and were measured on a Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The Benefits to Oneself scale assessed the extent to which adolescents believed that being friendly with the target would be 'enjoyable',

‘rewarding’, ‘pleasurable’ or ‘fun’. The Benefits to Others scale employed identical items except it assessed adolescents’ beliefs about how being friendly with the target would benefit most other teens. Higher scores on each scale reflected greater endorsements that being friendly with the target would result in greater benefits. Rimal and Real (2005) reported high internal reliability for these two scales ($\alpha = .95$ for Benefits to Oneself and $\alpha = .93$ for Benefits to Others).

Group Identity For the purposes of this study, group identity was conceptualised as the degree to which adolescents felt connected to the other teenagers. Connectedness to other teenagers was assessed in order to mirror the referent group which was cited in the normative feedback information. Group Identity was operationalised in two ways, which were modelled on the measures employed by Rimal and Real (2005). One factor assessed *Aspiration* and consisted of 4-items measuring the extent to which adolescents in the study sought to be like other teenagers. This scale was measured on a 7-point Likert type scale which ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). Higher scores on this factor reflected greater aspirations to be like other teenagers. Rimal and Real (2005) reported high internal consistency for this scale ($\alpha = .89$). Another factor assessed *Perceived Similarity* and measured the extent to which adolescents believed they were similar to most other teenagers. This scale was comprised of 4-items and scores were also rated on a Likert-type scale, ranging from which ranged from 1 (Not at all Similar) to 7 (Extremely Similar). Higher scores on this factor reflected greater endorsements of perceived similarity to other teenagers. Rimal and Real (2005) reported high internal consistency for this scale ($\alpha = .81$). However, it is important to note that Rimal and Real (2005) referred to a different referent group in their scale measures (e.g. other university students).

Manipulation Check Items The post-intervention (Time 2) questionnaire contained an additional set of items aimed at assessing the degree to which adolescents were exposed or attended to the normative information. Participants in both the experimental and control groups were asked to respond to these items which were located at the end of the survey instrument. One item depicted a picture of the posters used in the manipulation intervention and asked students to indicate whether they had seen any similar posters displayed in their school. Students were asked to respond to this question using a ‘yes’ or ‘no’ format. Students were then asked to indicate when they first noticed the posters and the amount of attention they paid to reading the information displayed there. See Appendix M for a copy of the

questionnaire booklet employed in the current study, including vignettes, stigma measures, normative mechanisms and the manipulation check items.

11.6 Procedure

11.6.1 Procedure for School Recruitment Post-primary schools listed on the Department of Education and Skills website were simultaneously invited to participate in the current study. In an attempt to ensure that schools with similar ethos were selected to the study, only mixed-gender, Catholic schools located within the Connacht region were invited to participate. Initial contact was established with each school via an email invitation to the acting School Principal (see Appendix N). Follow-up contact was established by telephone 1-3 days later. During this follow-up call, if the principal agreed to allow the school to participate in the research, a date was arranged to meet the principal or a designated staff member. Participating schools were then randomly assigned to either the experimental (normative feedback) or control (no feedback) conditions. Schools were informed about which condition they had been allocated to at the initial meeting between the lead researcher and the designated staff member. In total, 8 schools were invited to participate in Study 3, with a total of 4 schools agreeing to participate. Although 4 schools initially agreed to participate, one school withdrew from the study prior to the data collection phase. This school withdrew as staff reconsidered the feasibility of carrying out the study given other commitments at the time. This left one school allocated to the experimental condition and two schools allocated to the control condition. A general school response rate of approximately 37.5% was observed.

11.6.2 Recruiting Participants Post-primary school students in their 4th and 5th year of participating secondary schools were invited to take part in this study. Identical recruitment procedures were followed for students allocated to both the control and experimental conditions. The researcher addressed students in their classrooms and introduced the research study to the students directly. Students in both conditions were told that they were being asked to take part in a study on friendship behaviour in teenagers. Students were provided with a brief verbal description of the study and participant information sheets (see Appendix O) were distributed to all students. These sheets outlined what would be required of the students if they chose to participate in the study. All students were informed that they would be asked to complete a questionnaire booklet which would ask them to read a short story about a teenager that they did not know and be required to answer

questions about how they would think, feel and act toward these teenagers. All students were also informed that they would be asked questions about how they think and feel about other teenagers and how they think other teenagers would respond to the character. All students were also informed that they would be asked to complete this questionnaire twice, approximately two weeks apart. All students were then provided with parental consent forms (see Appendix P). Students were informed that if they wished to participate in the study they would need to return a signed parental consent form to the school before the researcher returned. Adolescents were informed that the researcher would likely return to the school within the next week to carry out the study.

11.6.3 Completion of the Study The researcher returned to all participating schools within one week after distributing the information sheets and consent forms. All students who had returned signed parental consent forms, and were present in school on the day, were gathered in a classroom by a designated staff member. These students were once again reminded of the aims and objectives of the study and were given an opportunity to ask the researcher any questions that they had pertaining to the study. Students were also reminded that they could withdraw from the study at any time or choose not to respond to any of the questions presented in the booklet.

Students in both conditions were administered a questionnaire booklet. Male students were provided with a questionnaire that contained a depiction of a male vignette character with depression and female students were provided with a questionnaire that depicted a female teenage target. The researcher directed students' attention to the questionnaire booklets and instructed participants to indicate their gender and date of birth on the booklet cover. The researcher informed the students that instructions for completing each section of the questionnaire were located throughout the booklet but they could speak to the researcher at any stage if they had any further queries. Both the researcher and a member of school staff remained in the room while students completed the questionnaires (Time 1 data). On average, it took students approximately 15-20 minutes to complete the questionnaire. Once all students in each class had completed the questionnaires, they were thanked for their participation and reminded that the researcher would return to the school again in approximately two weeks to ask students to complete the second questionnaire.

Once students had completed the Time 1 assessment phase, different procedures were followed in the experimental and control schools. In the experimental school, the researcher

distributed a set of posters containing the normative feedback information, to a designated member of staff. This staff member agreed to display the posters in strategic areas throughout the school where the participating students would be most likely to see them. Students were not provided with any information or instructions about the posters. Students were not informed that these posters were connected to the researcher or to the research study. Each individual poster displayed one of the five separate normative messages, with all five selected messages being displayed in different areas of the school. Each of these five messages was displayed using three different colour schemes. This combination led to a total of 15 posters being displayed in the school (See Appendix L). All posters were displayed in the experimental school for approximately two weeks. In addition to the poster display, all students in the participating years were distributed flyers in class by a designated teacher. Approximately, one week after completing the Time 1 assessment, the researcher phoned the experimental school to ensure that the posters had been displayed and to remind staff to distribute the additional flyers. These flyers outlined the same normative messages that were communicated on the posters, but each flyer detailed all five of the normative messages. Similarly, students were not informed that these messages were connected with the research study. In the control schools, once Time 1 data had been collected the researcher left the school. No normative information (posters or flyers) were displayed in the school. After a period of approximately two weeks, the researcher returned to each school in order to collect the Time 2 data.

Upon the researchers return to the school, all students who had participated in the study at Time 1 and who were also present in the school on the day in question were gathered in a classroom by a member of staff. The researcher reminded students of the questionnaire which they completed two weeks previously and were told they were being asked to complete the questionnaire again for a second time. All participants received a questionnaire booklet which was identical to the one they completed at Time 1. The only difference between the Time 1 and Time 2 booklets is that a number of additional items were added to the Time 2 questionnaire in order to check whether participants had seen and/or attended to the normative information. Students in both the experimental and control conditions were asked to respond to these items assessing their degree of exposure to the normative information or other similar information. Upon completing the questionnaire booklet (Time 2 data), students were thanked for their participation and debriefed.

11.7 Ethical Issues and Considerations

Full ethical approval for this study was granted by the Research Ethics Committee at the National University of Ireland, Galway on February 27th, 2015. Similar ethical considerations were made for this study as with Study 1 and 2. Specifically, all participants provided informed verbal assent and written parental consent was obtained from each adolescent prior to participation. Steps were taken to ensure the anonymity and confidentiality of all information obtained. Additionally, all participants were assured that they were free to withdraw from the study at any time, without fear of duress or other negative consequences. For more detail on these ethical considerations please see Study 1, Chapter 3 (pp.38-39).

It is important to note that although no diagnostic labels accompanied the vignette character or any of the questionnaire materials employed in the current study, the term ‘depression’ was referred to in the normative feedback information. It was anticipated that use of the term ‘depression’ may be distressing to those adolescents who identified with this label. In an attempt to deal with these ethical concerns, all information communicated to participants in the normative feedback intervention portrayed positive norms, intended to promote a norm of acceptance toward adolescents with depression. No negative or stigmatising information was displayed to students. Additionally, students were aware that this information was based on real data, collected from other adolescents attending different secondary schools. A decision was made to use real normative data in order to avoid the use of deception and any ethical issues which may have arisen from informing students that the positive norms presented to them was falsified.

An additional ethical consideration unique to the current study pertains to the demographic information which was collected regarding participants’ history of mental health problems. In order to screen for adolescents who may have identified with the target character, parents were provided with a ‘Background Information’ sheet, in conjunction with the informed consent form, which they were asked to complete. Parents were asked to indicate whether their child had a history of ‘Depression’, ‘ADHD’ or ‘Anxiety’. As the collection of this information was considered a potential breach of the adolescents’ privacy, parents were ensured that disclosure of this information was optional and that participation in this study was not contingent on providing this information. Additionally, parents and adolescents were ensured that any information provided would be held securely and confidentially.

11.8 Statistical Analyses

All quantitative data collected from the questionnaire booklets were analysed using PASW Statistics 20 (IBM, 2011) software. Specifically, this study employed a 2 x 2 mixed-group ANOVA in order to determine whether there were significant changes between the pre-test and post-test responses of the intervention group, relative to the control condition. Mediated regression analyses were carried out using the PROCESS macro add-on for SPSS (version 21; Hayes, 2013). In order to examine whether the intervention effects were moderated by Injunctive Norms, Outcome Expectations or Group Identity, moderated multiple regression analyses were also conducted using the PROCESS macro.

Chapter 12

Study 3 Results

12.1 Aim of Chapter

The aim of this chapter is to provide a description of the results observed in Study 3. This chapter will outline the results observed for the various statistical analyses that were conducted, which included: mixed-subject analyses of variance (ANOVAs) mediated multiple regression and moderated multiple regression analyses.

12.2 Screening of Participants

One adolescent was identified as having previously experienced symptoms of depression, as indicated on the returned Background Information sheets distributed to parents. In order to ensure that participants' responses on the stigma measures were limited to adolescents who did not display signs of emotional difficulties (Rusch et al., 2011a), this participant was removed from further analyses leaving a total sample of 115 adolescents (50 male, 64 female; 1 non-specified).

12.3 Missing Data

In order to examine whether missing values in the current stigma measures were Missing Completely at Random (MCAR), Little's (1988) MCAR test was applied to Time 1 (T1) and Time 2 (T2) responses. For Time 1 measures, Little's test was found to be non-significant ($\chi^2 [1148] = 1201.58, p = .13$). Additionally, Little's MCAR test was also found to be non-significant ($\chi^2 [789] = 756.92, p = .79$) for the Time 2 measures, indicating that the data was missing completely at random at both Time 1 and Time 2. Hence, the data was deemed suitable for EM and the EM algorithm for imputing missing values was employed on the dataset.

12.4 Descriptive Statistics

Descriptive statistics, including means, standard deviations, reliability, skewness and kurtosis scores are displayed in Table 12.1. As can be seen in this table, all measures showed acceptable kurtosis levels (Kurtosis <3) at both Time 1 and Time 2. However, a small number of measures evidenced some degree of skewness (skew > .80) at Time 1 or Time 2. Specifically, at Time 1, the Dangerousness, Responsibility and Prejudice scales all showed evidence of skewness. Additionally, at Time 2, the Responsibility and Negative Attributes scales also showed some degree of skewness. However, estimates of normal distribution are

sensitive to sample size and it is often observed that small sample sizes may result in non-normally distributed data (Krithikadatta, 2014; Tabachnick and Fidell, 2007). As Analysis of Variance (ANOVA) techniques are robust to violations of the assumption of normality (Field, 2009), no transformations were carried out on the data.

All Time 1 and Time 2 measures were also assessed for univariate and multivariate normality. Two participants were found to show evidence of univariate skewness on the Negative Attributes factor at Time 1, and the Prejudice factor at Time 2 (i.e. values greater than 3.0; Tabachnick & Fidell, 2007). Thus, both cases were removed from the analyses. Multivariate outliers were identified using Mahalanobis distance analyses. Two cases were identified as being significant outliers through this process and thus were removed from further analyses. This left a final sample size of 111 (48 male and 62 female; 1 non-specified) adolescents.

An overall attrition rate of approximately 25% was observed between Time 1 and Time 2. For the Intervention condition, 70 (36 male and 33 female; 1 non-specified) adolescents participated at Time 1 and 51 (25 male and 26 female) adolescents participated at Time 2, indicating an overall attrition rate of approximately 27%, for this group. In the Control condition, 41 (12 male and 29 female) adolescents participated at Time 1 and 32 (7 male and 25 female) adolescents participated at Time 2, indicating an approximate attrition rate of 22%.

Additionally, although the majority of scales showed evidence of good reliability (i.e., $\alpha > .70$), a number of scales showed alpha levels in excess of .90. All inter-item correlations on each scale were inspected for multicollinearity. Multicollinearity was not deemed to be a problem for the majority of scales as inter-item correlations did not exceed the suggested cut-off point (i.e. all $r_s < .85$; Kline, 2005). However, for both the Time 1 and Time 2 measures of Personal Benefits and Perceived Benefits, one item (Item 3) was found to correlate highly (i.e. $r > .85$) with other items in the scale. Therefore, a decision was made to remove this item on these measures. Upon removing this item, multicollinearity no longer appeared to be an issue (all $r_s < .80$), and acceptable Cronbach's alpha levels were observed for these scales (see Table 12.1). Furthermore, two Time 1 factors; Responsibility and Classroom Discrimination, were found to produce reliability estimates lower than .70 (i.e., .69 and .65 respectively). The Classroom Discrimination factor also evidenced a less than optimal Cronbach's alpha level (.65) at Time 2. Thus, these scales were indicative of acceptable, rather than good, internal consistency. These issues with Cronbach's alpha may have been influenced by the small amount of items comprising these scales.

A full overview of the Descriptive Statistics for each measure utilised in Study 3 is provided in Table 12.1. As can be seen in this table, endorsements on each stigma measure, at both Time 1 and Time 2, appear to be relatively low. In particular, responses on the ‘Dangerousness’, ‘Responsibility’ and ‘Classroom Discrimination’ factors appear to be especially low across both time points. Moderately ranged scores were found on the Warmth & Competence, Negative Attributes and Friendship Discrimination factors. In addition, low-to-moderate scores were observed on the Prejudice factor at both Time 1 and Time 2.

For the mediation factor, low-to-moderate scores were found for Descriptive Norms, indicating that adolescents did not endorse strong beliefs that their friends would respond positively to the target. For the moderation variables, adolescents were found to endorse slightly more positive responses on the Injunctive Norms factor, suggesting that adolescents did not believe that other teenagers would sanction them for befriending the target. Adolescents were also found to endorse relatively low responses on the Personal and Perceived Benefits factors. This suggests that adolescents did not believe that befriending the target was associated with benefits nor did they appear to believe that other adolescents would perceive there to be benefits to befriending the target. Finally, low to moderate scores were observed on the Similarity and Aspiration factors, indicating that adolescents did not show high levels of identification with ‘other teenagers’.

Although assessments of Descriptive Norms, Injunctive Norms, Perceived Benefits, Personal Benefits, Similarity and Aspiration were included at both time points. For the purposes of the analyses, only the Time 2 assessment of Descriptive Norms was included in the mediation analyses, following mediational recommendations that mediator variables are dependent on the effect of the Intervention (Kraemer, Wilson, Fairburn & Agras, 2002). Furthermore, only Time 1 assessments of Perceived Benefits, Personal Benefits, Similarity and Aspiration were included in the moderation analyses. This was carried out following suggestions by Kraemer et al. (2002) that in order for a variable to act as a moderator it should not be contingent on condition effects.

Table 12.1

Descriptive Statistics, Reliability and Normal Distributions (Skewness[S] and Kurtosis [K]) for all Measures in Study 3

Factor	<u>Time 1</u>						<u>Time 2</u>							
	M	SD	Possible Range	α	CI(95%)	S	K	M	SD	Possible Range	α	CI(95%)	S	K
Dangerousness	5.03	2.13	3-15	.75	4.53-5.50	.91	.15	5.98	2.66	3-15	.88	5.38-6.57	.44	-.77
Warmth & Competence	20.63	4.23	8-40	.75	19.68-21.57	.59	-.06	20.75	4.54	8-40	.81	19.74-21.76	-.20	.16
Responsibility	4.16	1.50	3-12	.69	3.83-4.50	.95	-.39	4.51	1.74	3-12	.77	4.12-4.90	.89	-.37
Negative Attributes	11.28	2.29	4-20	.71	10.77-11.78	-.52	.42	11.35	2.36	4-20	.83	10.84-11.89	-.92	1.94
Prejudice	12.83	6.08	6-30	.88	11.48-14.17	1.08	.38	13.36	5.67	6-30	.88	12.10-14.62	.74	.02
Classroom Discrimination	6.14	1.72	4-16	.65	5.76-6.52	.76	.24	6.12	1.96	4-16	.65	5.68-6.56	.62	-.68
Friendship Discrimination	25.92	5.58	10-40	.91	24.69-27.15	-.01	-.27	26.60	6.47	10-40	.91	25.15-28.05	-.43	-.19
Descriptive Norms	13.16	4.99	4-28	.86	12.05-14.27	.53	.38	13.13	4.99	4-28	.89	12.02-14.24	.66	.28
Injunctive Norms	23.36	7.46	5-35	.93	21.70-25.02	-.59	-.34	24.89	7.78	5-35	.93	23.16-26.62	-.59	-.49
Personal Benefits	10.95	3.96	3-21	.79	9.79-11.51	.28	-.13	10.27	3.88	3-21	.84	9.29-10.99	.63	-.00
Perceived Benefits	9.36	3.67	3-21	.88	8.16-9.74	.31	-.18	9.43	3.76	3-21	.89	8.55-10.23	.54	.05
Aspiration	14.01	5.02	4-28	.85	12.89-15.13	.06	-.84	14.06	5.04	4-28	.87	12.94-15.18	-.21	-.32
Similarity	15.81	4.55	4-28	.75	14.80-16.81	-.15	-.39	14.65	5.29	4-28	.86	13.47-15.83	-.13	-.63

12.5 Preliminary Analysis

Preliminary analyses were initially carried out in order to assess the association between all Time 1 and Time 2 stigma measures as well as the moderation (Injunctive Norms Time 1, Personal Benefits Time 1 Perceived Benefits Time 1, Similarity Time 1 and Aspiration Time 1) and mediation (Descriptive Norms Time 2) variables. In order to examine these relationships Spearman's rho correlations were carried out on the data. All correlations are displayed in Table 12.2. As can be seen in this table, the majority of Time 1 and Time 2 stigma measures correlated positively with each other. However, a number of non-significant correlations were observed between these stigma factors. Additionally, as can be seen in Table 12.3, consistent with expectations, significant negative correlations were observed between the Descriptive Norms factor and the Dangerousness (Time 2), Warmth & Competency (Time 2), Negative Attributes (Time 1 and Time 2), Prejudice (Time 2), Classroom Discrimination (Time 1 and Time 2) and Friendship Discrimination (Time 1 and Time 2) factors (all $ps < .05$). Furthermore, although Injunctive Norms were also found to have a negative association with the majority of the Time 1 and Time 2 stigma factors, only one significant correlation was observed, namely between Injunctive Norms and Dangerousness (Time 1; $r = -.19, p = .045$). However, significant, positive correlations were also observed between Injunctive Norms and all other moderation variables (all $ps < .05$), apart from Similarity ($r = -.06, p = .62$). Similarity correlated positively with Injunctive Norms ($r = .19, p < .05$) and Aspirations ($r = .38, p < .001$), but had non-significant negative relationships with all other moderators. Positive correlations were found between all other moderation variables.

Table 12.2

Correlations between all Time 1 (T1) and Time 2 (T2) Stigma Measures, Moderation and Mediation Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Dangerousness T1	-																		
2. Dangerousness T2	.41**																		
3. Responsibility T1	.33**	.32**																	
4. Responsibility T2	.34**	.35**	.64**																
5. Warmth & Competency T1	.06	.22	.21*	.30**															
6. Warmth & Competency T2	.14	.26*	.19	.40**	.55**														
7. Negative Attributes T1	.33**	.37**	.22*	.20	.39**	.32**													
8. Negative Attributes T2	.19	.24*	.05	.18	.27*	.39**	.52**												
9. Prejudice T1	.29**	.44**	.22*	.27*	.28*	.21	.46**	.25*											
10. Prejudice T2	.28**	.32**	.13	.36**	.14	.18	.29*	.32**	.46**										
11. Classroom Discrimination T1	.40**	.34**	.21*	.17	.18	.19	.41**	.30**	.37**	.09									
12. Classroom Discrimination T2	.18	.34**	.22	.36**	.12	.26*	.24*	.24*	.15	.14	.52**								
13. Friendship Discrimination T1	.24*	.31**	.24*	.22	.14	.02	.32*	.40**	.34**	.28*	.54**	.45**							
14. Friendship Discrimination T2	-.05	.25**	.09	.18	.09	.12	.28*	.29**	.19	.27*	.26*	.55**	.70**						
15. Descriptive Norms T2	-.03	-.28**	-.12	-.21	-.15	-.33**	-.25*	-.30**	-.17	-.21	-.25*	-.40**	-.42**	-.46**					
16. Injunctive Norms T1	-.19*	-.11	-.01	-.02	.03	.01	-.09	-.10	-.09	-.18	-.01	-.18	-.09	-.05	.28*				
17. Personal Benefits T1	-.10	-.25*	-.28**	-.21	-.31**	-.13	-.28**	-.29**	-.17	-.10	-.34**	-.32**	-.58**	-.41**	.25*	.03			
18. Perceived Benefits T1	.16	-.13	-.11	.12	-.18	-.02	-.16	-.06	-.13	-.02	-.09	-.08	-.23*	-.28*	.36*	.03	.54**		
19. Similarity T1	.12	.12	.30**	.30**	-.02	-.01	-.04	-.00	.05	.29**	.17	.23*	.17	.11	-.06	.19*	-.17	-.13	
20. Aspirations T1	.10	.04	-.05	.03	-.16	.11	-.12	.04	-.11	.18	-.12	.07	-.19	-.13	.15	.15	.07	.19*	.38**

Additionally, prior to conducting the main group comparisons, a series of preliminary analyses were carried out in order to investigate whether participants in both conditions were comparable on important demographic characteristics, such as age and gender. Specifically, in order to examine whether the Control and Intervention groups were comparable in age, an Independent samples t-test was conducted. Results revealed a significant [$F(108) = -6.10, p < .001, r = .45$] difference in age between the two conditions, with participants in the Control group appearing significantly younger ($M = 15.73, SD = .78$) than participants in the Intervention group ($M = 16.49, SD = .53$). A chi-square analysis was also conducted in order to compare whether the Intervention and Control condition were comparable in gender. Results revealed significant differences in the gender distribution between the two groups, $\chi^2(1, N = 110) = 5.50, p = .02$. Specifically, 70% of participants in the Control group were female and 30% were male. However, 52% of the Intervention group were male and 48% were female. Further analyses were then employed to investigate whether the Control and Intervention groups evidenced significant differences in their stigma responses at baseline (Time 1). In order to assess these potential differences a series of independent samples t-tests were conducted using each stigma factor as separate dependent variables. A Bonferroni correction was employed in order to control for the family-wise error rate. Results revealed no significant differences in responses between adolescents in the Intervention and Control group on any of the seven (Time 1) stigma factors (all $ps > .007$). For a full comparison of stigma responses between Intervention and Control participants see Table 12.3.

Table 12.3

Summary of Means (Standard Deviations) on Time 1 Stigma Responses between Intervention and Control Group Participants

Factor	Control (n = 32)	Intervention (n = 51)
Dangerousness	4.51 (1.89)	5.44 (2.25)
Warmth & Competence	19.33 (4.15)	20.73 (4.15)
Responsibility	4.17 (1.46)	4.12 (1.50)
Negative Attributes	10.73 (2.25)	11.58 (2.05)
Prejudice	11.61 (5.65)	14.12 (5.66)
Classroom Discrimination	5.95 (1.61)	6.53 (2.12)
Friendship Discrimination	24.68 (6.17)	25.44 (6.14)

Note: All group comparisons were non-significant at the new alpha level (all $ps > .007$).

Although there appeared to be significant differences in the age and gender of participants in the Control and Intervention groups, as both these groups evidenced equivalent levels of stigma on all Time 1 measures, the groups were deemed comparable and suitable for further analyses.

12.5.1 Manipulation Check Results A manipulation check was also carried out in order to assess whether participants in the Intervention group had been successfully exposed to the normative feedback information displayed in the poster campaign. Specifically, all participants, whom completed Time 2 assessments, were asked to indicate whether they had seen the normative feedback posters on display in their school. In the Intervention group, approximately 4% of participants ($n = 2$) did not respond to the manipulation check measure. However, of those who did complete the measure, 84% ($n = 42$) reported having seen the posters displayed in their school, whereas only 16% ($n = 8$) in the Intervention condition claimed to have not seen these posters. For the Control group, all participants who completed Time 2 assessments provided information on this item. Approximately 81% ($n = 26$) of this group reported not having seen the normative posters. However, 6 adolescents (19%) reported that they had seen these posters displayed in their school, despite no such posters being displayed. A series of independent samples t-tests were conducted between participants who reported viewing the posters and those that reported not having viewed the posters, in both conditions. Results revealed no significant differences between those who viewed the information and those who did not view the normative information on any of the stigma outcome measures, for either the Control or Intervention group. Thus, a decision was made to include all adolescents in the main analyses, regardless of their exposure to the normative messages.

12.6 Results

12.6.1 Results on the Utility of the Normative Feedback Intervention A series of Mixed-Subject ANOVAs were carried out on each stigma factor in order to test the main research question: Can exposing adolescents to positive normative information significantly reduce the amount of stigma expressed by these adolescents toward a peer with depression, in comparison to a control group? As the observed sample size ($n=83$) at Time 2 was relatively small, the data was not deemed appropriate for Analyses of Covariance (ANCOVA) as these analyses would have been under powered. Therefore, Mixed-Subject ANOVAs were chosen as the most appropriate statistical analyses to employ in this instance, as these analyses

produce sufficient power to detect an effect while using a smaller sample size (as indicated through G*Power analyses).

Seven separate ANOVAs were conducted using each measure of stigma (e.g. Dangerousness, Warmth & Competence, Responsibility, Negative Attributes, Prejudice, Classroom Discrimination and Friendship Discrimination) as a separate outcome. The within-subjects factor was Time and had two levels; Time 1 (Pre-Test) and Time 2 (Post-Time). The Between-subjects factor was Condition and also had two levels (Intervention and Control). Levene's test for equality of variance was non-significant for the majority of stigma measures (all $ps > .05$), indicating the assumption of homogeneity of variance had not been violated. Only two exceptions to this rule were observed; Levene's test was significant for the Responsibility factor at both Time 1 ($F = 6.48, p = .01$) and Time 2 ($F = 6.62, p = .01$) and the Negative Attributes factor at Time 2 ($F = 6.87, p = .01$), indicating that the assumption of homogeneity of variance had been violated on these measures. However, ANOVA is considered robust to violations of this assumption (Pallant, 2011). Results are displayed in Table 12.4.

Table 12.4

Means and (Standard Deviations) for the Intervention and Control Conditions, at Time 1 and Time 2, and the Overall Total for each Condition

Factor	<u>Intervention</u>			<u>Control</u>		
	Time 1	Time 2	Total	Time 1	Time 2	Total
Dangerousness	5.35(2.25)	6.60(2.46)	5.95(2.36)	4.53 (1.87)	5.35 (2.25)	4.94(2.06)
Warmth & Competence	21.35(4.00)	22.31(4.10)	21.83(4.05)	19.53 (4.37)	18.40(4.21)	18.97(4.29)
Responsibility	4.31(1.65)	4.85(1.86)	4.58(1.76)	3.94 (1.24)	4.00 (1.43)	3.97(1.34)
Negative Attributes	11.67(2.15)	11.81(1.88)	11.74(2.02)	10.69(2.40)	10.69(2.82)	10.69(2.61)
Prejudice	13.42(6.01)	12.98(4.80)	13.46(5.41)	11.94(6.09)	13.94(6.81)	12.68(6.45)
Classroom Discrimination	6.37(1.87)	6.53(1.91)	6.46(1.89)	5.79(1.42)	5.50(1.90)	5.64(1.66)
Friendship Discrimination	26.63(5.09)	27.33(6.02)	26.98(5.56)	24.87(6.09)	25.50(7.18)	25.19(6.64)

For the Dangerousness factor, results indicated that there was a significant main effect for Time ($F_{(1,78)} = 8.98, p = .004, \text{partial } \eta^2 = .10$) and a significant main effect for Condition ($F_{(1,78)} = 7.17, p = .01, \text{partial } \eta^2 = .08$). As can be seen in Table 12.4, results indicated that adolescents endorsed significantly higher perceptions of Dangerousness at Time 2 ($M = 5.98, SD = 2.65$) than at Time 1 ($M = 5.03, SD = 2.13$). Additionally, adolescents in the Intervention condition endorsed significant more negative stigmatising responses on this factor ($M = 5.99, SD = 2.36$) than adolescents in the Control condition ($M = 5.83, SD = 2.28$). However, a relatively small effect size was observed for both of these main effects and the results were not qualified by a significant interaction effect ($F_{(1,78)} = 1.65, p = .20, \text{partial } \eta^2 = .02$). For the Warmth & Competency factor a significant interaction effect was also observed ($F_{(1,78)} = 5.03, p = .03, \text{partial } \eta^2 = .06$). As can be seen in Figure 12.1, participants in the Control condition tend to show less stigmatising responses at Time 2 ($M = 18.40, SD = 4.21$) compared to Time 1 ($M = 19.53, SD = 4.37$), whereas stigmatising responses appear to increase from Time 1 ($M = 21.35, SD = 4.00$) to Time 2 ($M = 22.31, SD = 4.10$) for participants in the Intervention condition. Furthermore, a significant effect was observed for Condition ($F_{(1,78)} = 12.06, p = .001, \text{partial } \eta^2 = .13$); overall the Intervention group appeared to express more stigmatising responses on this measure ($M = 21.83, SD = 4.05$) than the Control group ($M = 18.97, SD = 4.29$), although the effect size was relatively small. Conversely, no significant main effect was observed for Time ($F_{(1,78)} = .03, p = .86, \text{partial } \eta^2 = .00$). Furthermore, Results also indicated a significant main effect for Time for the Responsibility factor ($F_{(1,78)} = 4.09, p = .047$), whereby adolescents appeared to endorse more stigmatising responses on this measure at Time 2 ($M = 4.43, SD = 1.65$) than at Time 1 ($M = 4.12, SD = 1.45$). However, this effect was small (partial $\eta^2 = .05$). No significant effects were observed for Condition ($F_{(1,78)} = 3.37, p = .07, \text{partial } \eta^2 = .04$) or the interaction ($F_{(1,78)} = 2.57, p = .12, \text{partial } \eta^2 = .03$). Additionally, for the Negative Attributes factor, no significant effect was found for Time ($F_{(1,78)} = .09, p = .77, \text{partial } \eta^2 = .001$) and no significant interaction effect was observed ($F_{(1,78)} = .09, p = .77, \text{partial } \eta^2 = .001$). However, a significant main effect was observed for Condition ($F_{(1,78)} = 5.30, p = .02$); participants in the Intervention condition tended to endorse significantly more stigmatising responses ($M = 11.74, SD = 2.02$) on this Negative Attributes factor than the Control condition ($M = 10.69, SD = 2.61$), although only a small effect was observed (partial $\eta^2 = .06$).

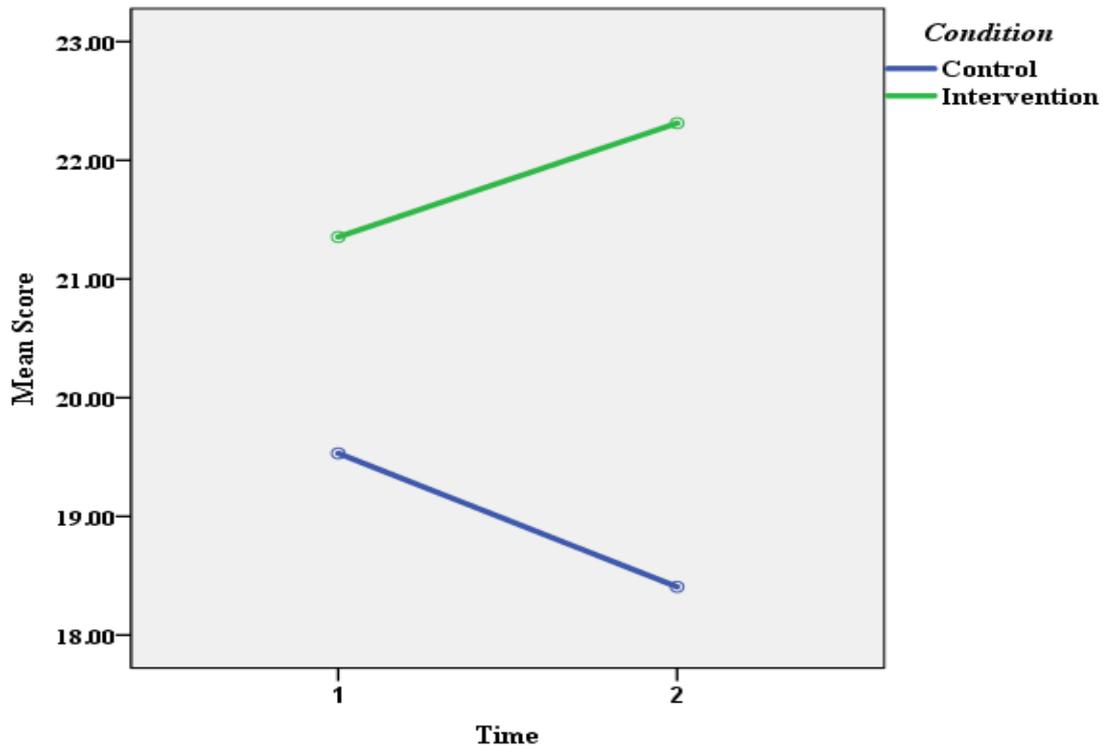


Figure 12.1. Interaction between Condition and Time on Warmth & Competence scores.

For the Prejudice factor, no significant main effects were observed for either Time ($F_{(1,78)} = 1.16, p = .28, \text{partial } \eta^2 = .02$) or Condition ($F_{(1,78)} = .05, p = .82, \text{partial } \eta^2 = .001$). Similarly, no significant interaction effect was observed ($F_{(1,78)} = 2.82, p = .10, \text{partial } \eta^2 = .04$). No main effect was observed for Time ($F_{(1,78)} = .10, p = .75, \text{partial } \eta^2 = .001$) on the Classroom Discrimination factor. Furthermore, no significant interaction effect was found ($F_{(1,78)} = 1.28, p = .26, \text{partial } \eta^2 = .02$). However, a significant main effect, with a small effect size, was observed for Condition ($F_{(1,78)} = 4.99, p = .03, \text{partial } \eta^2 = .06$), whereby participants in the Intervention condition expressed significantly higher stigma responses ($M = 6.46, SD = 1.89$) than participants in the Control condition ($M = 5.64, SD = 1.66$). Finally, for the Friendship Discrimination factor results indicated no significant main effect for Time ($F_{(1,78)} = 1.45, p = .22, \text{partial } \eta^2 = .02$), no significant main effect for Condition ($F_{(1,78)} = 2.04, p = .16, \text{partial } \eta^2 = .03$) and no significant interaction effect ($F_{(1,78)} = .004, p = .95, \text{partial } \eta^2 < .001$). A full summary of the means and standard deviations observed on each stigma measure for both the Intervention and Control condition, at Time 1 and Time 2, is displayed in Table 12.4.

12.6.2 Mediation Analysis To assess whether the relationship between the normative feedback information and each stigma measure could be, at least in part, explained by participants' perceptions of Descriptive Norms, multiple mediator models were conducted using a set of ordinary least-squares regression analyses following the specifications set out by Hayes (2013). All analyses were carried out using the PROCESS macro add-on for SPSS (version 21; Hayes, 2013). Model 4 was specified using PROCESS to test the hypotheses. A series of mediation analyses were conducted using each Time 2 stigma measure as a separate dependent variable (Y). The independent variable (X) in each model was Condition. This was a dichotomous variable with two levels; Intervention and Control. The mediator variable (M) in each model was Descriptive Norms, which was measured following the experimental manipulation (Time 2). Each mediator model also contained one covariate (U), which controlled for the effect of the Time 1 stigma measures on the outcome variable. See Figure 12.2 for a conceptual diagram of a simple mediation model containing a covariate.

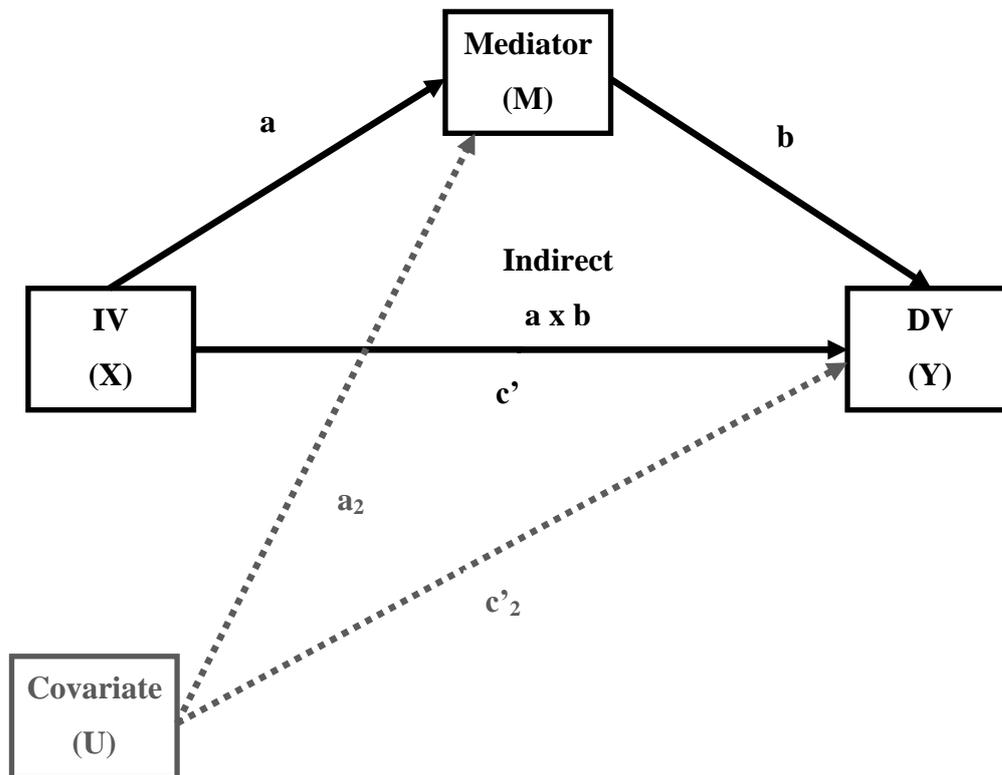


Figure 12.2. Diagram Showing a Simple Mediation Model with one Covariate.

As can be seen in Figure 12.2, mediation effects are represented by the indirect path ($a \times b$) and path c' represents the direct effect of X on Y, while controlling for M. All paths are estimated by holding the specified covariate (U) constant. For the purposes of these analyses, both indirect and direct effects were evaluated for significance at $p < 0.05$, with 95% confidence intervals (CIs) established via bootstrapping techniques, implemented using 10,000 bootstrap samples (as recommended by Hayes, 2013). Significant mediation was considered to be present when zero was not contained within the CI for the indirect ($a \times b$) path (Preacher, Rucker & Hayes, 2007). In contrast to traditional approaches to tests of mediation (e.g. Baron & Kenny, 1986), the current statistical approach does not necessitate a significant direct pathway from the IV to the DV prior to testing for mediation (Hayes, 2013; Westfall, Kenny & Judd, 2014; Preacher et al., 2007). Hence, mediation analyses were carried out on all seven stigma factors. For an example of a meditation model, as it applies to the current research, see Figure 12.3.

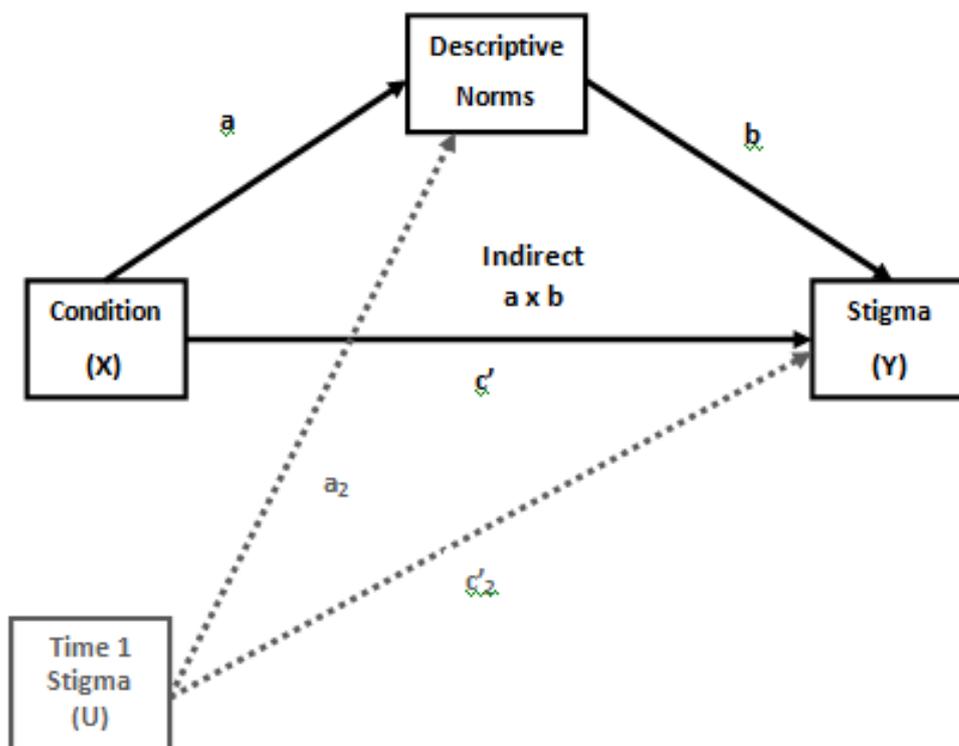


Figure 12.3. Diagram Showing Simple Mediation between Condition (Control or Intervention) and Stigma, with Descriptive Norms as the Mediator and Time 1 Stigma Score as the Covariate.

Mediation results, showing unstandardised regression coefficient estimates, significance values and confidence intervals are displayed in Table 12.5. Unstandardised coefficients are reported in accordance with the recommendation of Hayes (2013). Standardised regression coefficients are not produced by PROCESS, and the absolute size of the direct and indirect effects does not indicate whether effects are small or large, as they are tied to the individual instruments which may differ across questionnaires/tests (Gray, Rogers, Martinussen & Tannock, 2015; Hayes, 2013). A full summary of direct and indirect effects for each mediation model can be found in Table 12.5.

As can be seen in this table, for the mediational (regression) models, the direct path indicating the effect of Condition (X) on Stigma (Y), was only found to be significant for the Warmth & Competence factor ($B = 2.28, p = .01$). However, the covariate (i.e., Time 1 stigma responses), which is designated by the c'_2 path, was found to have a significant, positive effect on all seven stigma factors (i.e., Time 2 responses). Additionally, the a path, which indicates the effect of Condition on the mediator variable (i.e., Descriptive Norms) was found to be significant for all regression models (all $ps < .05$). However, the b path, which refers to the effect of the mediator on stigma responses, was only significant for the Warmth & Competence ($B = -.24, p = .02$) and the Negative Attributes ($B = -.14, p = .01$) factors. Nonetheless, a review of the Confidence Intervals (CIs) for the indirect effects (a x b path) indicated that Descriptive Norms significantly mediated the effect between Condition and stigma responses on the Dangerousness (95% CI = .03; 1.26), Warmth & Competence (95% CI = .07; 2.04), Negative Attributes (95% CI = .03; .53) and Classroom Discrimination (95% CI = .01; .38) factors, even after controlling for Time 1 stigma responses. An examination of the B values indicated that participants in the Intervention group endorsed greater beliefs that their friends would respond negatively to the target (indicated by lower endorsements on the normative measure), which in turn resulted in more negative endorsements on these stigma measures. Although Descriptive Norms were not found to significantly mediate the relationship between Condition and Responsibility (95% CI = -.0; .38), Prejudice (95% CI = -.10; 1.76) or Friendship Discrimination (95% CI = -.01; 2.61), as the CIs for these indirect effects were found to contain zero, a similar trend was observed in that adolescents who believed that their friends would respond negatively to the target, also showed higher stigma responses. A full summary of direct and indirect effects for each mediation model can be found in Table 12.5.

Table 12.5

Tests of the Mediating Effect of Descriptive Norms between Condition and Stigma Responses

Variables	Effect of IV on M (a path)		Effect of M on DV (b path)		Effect of U on DV (c' ₂ path)		Direct Effect (c' path)		Total effect (c path)		Indirect Effect (a x b)		Indirect Effect (a x b)	
	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>	<i>B</i>	<i>p</i>	<i>B</i>	<i>SE</i>	Lower	Upper
Dangerousness	-3.17	.01	-.13	.07	.51	< .001	.76	.28	1.16	.06	.40	.31	.03	1.26
Responsibility	-3.01	.01	-.03	.30	.75	< .001	.48	.11	.57	.06	.09	.11	-.05	.38
Warmth & Competency	-2.86	.01	-.24	.02	.49	< .001	2.28	.01	2.96	< .001	.69	.47	.07	2.04
Negative Attributes	-2.67	.03	-.14	.01	.50	< .001	.20	.67	.58	.24	.38	.47	.03	.53
Prejudice	-3.03	.01	-.20	.12	.38	.01	-2.14	.10	-1.54	.25	.61	.46	-.10	1.76
Classroom Discrimination	-2.73	.02	-.08	.06	.56	< .001	.46	.26	.67	.09	.13	.09	.01	.38
Friendship Discrimination	-2.52	.02	-.29	.14	.70	< .001	-.32	.77	.42	.70	.74	.68	-.01	2.61

Note: IV = Condition (Intervention or Control); M = Descriptive Norms; U = Time 1 Stigma Measure

Significant effects are highlighted in bold.

12.6.3 Moderation Analyses In order to test whether Injunctive Norms, Outcome Expectations (Personal and Perceived Benefits) and Group Identity (Similarity and Aspirations) moderated the effects of the normative intervention, as proposed by the TNSB (Rimal & Real, 2005), a series of moderated regression analyses were conducted. All analyses were carried out using the PROCESS macro add-on for SPSS (version 21; Hayes, 2013), with Model 1 being specified to test the hypotheses following the recommendations of Hayes (2013). A separate model was specified in order to examine the effects of each proposed moderator on each Time 2 stigma measure. All moderator variables were measured at Time 1. The Independent Variable in each model was Condition, where the Control group was coded as 1 and the Intervention group was coded as 2. Each model contained one covariate, controlling for the effect of the Time 1 stigma measure. All products were mean-centred. The Johnson-Neyman (J-N) regions of significance analysis were used to probe conditional effects of the IV (Condition) on the DV (Stigma Measure) at specific values of the moderator. See Figure 12.4 for a sample conceptual diagram of a simple moderation model with one covariate, as it applies to the current study. A summary of the model results is presented in Table 12.6. This table shows the overall model results for the effect of Condition on stigma (Time 2 responses), after controlling for the covariate (Time 1 stigma responses), when the moderators (Injunctive Norms, Personal Benefits, Perceived Benefits, Similarity and Aspirations) were included as predictors.

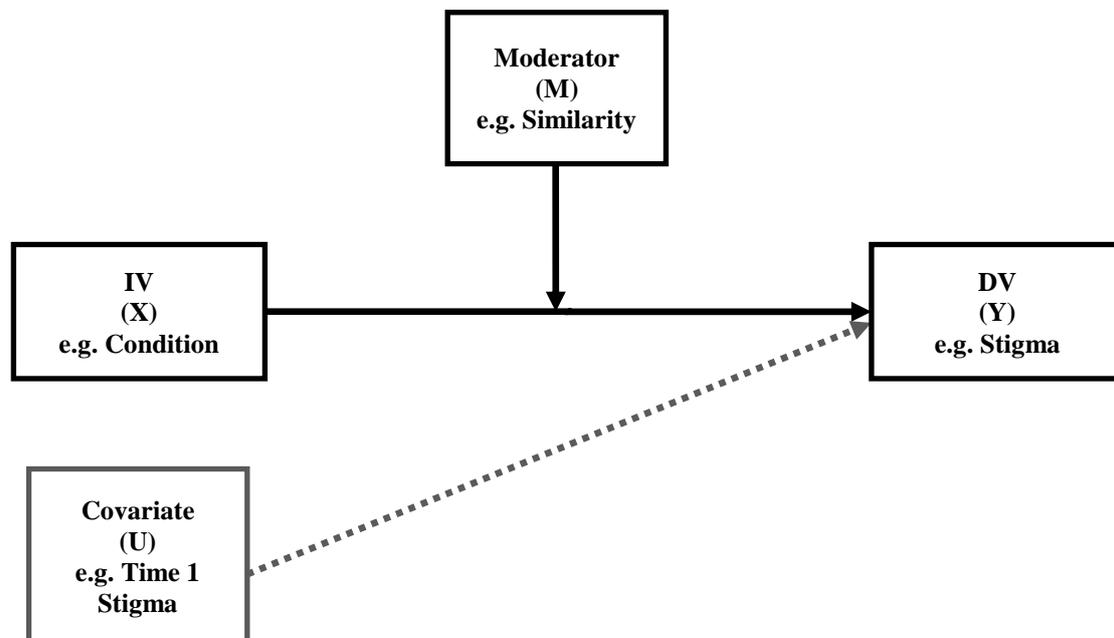


Figure 12.4. Diagram Showing a Simple Moderation Model with one Covariate.

Table 12.6

Summary of Results for the Overall Model with Each Moderator on each Measure of Stigma

Stigma Measure	Moderator	R	R²	F	P
Dangerousness	Injunctive Norms	.49	.25	9.34	<.001
	Aspirations	.49	.24	8.73	<.001
	Similarity	.50	.25	8.97	<.001
	Personal Benefits	.53	.28	13.23	<.001
	Perceived Benefits	.55	.30	12.48	<.001
Warmth & Competence	Injunctive Norms	.64	.41	14.12	<.001
	Aspirations	.65	.42	13.89	<.001
	Similarity	.65	.43	14.78	<.001
	Personal Benefits	.63	.40	14.02	<.001
	Perceived Benefits	.64	.41	14.85	<.001
Responsibility	Injunctive Norms	.70	.49	17.55	<.001
	Aspirations	.70	.49	20.08	<.001
	Similarity	.71	.50	20.91	<.001
	Personal Benefits	.70	.49	17.37	<.001
	Perceived Benefits	.70	.50	20.94	<.001
Negative Attributes	Injunctive Norms	.59	.35	5.57	<.001
	Aspirations	.59	.35	5.28	<.001
	Similarity	.63	.39	7.20	<.001
	Personal Benefits	.59	.35	5.73	<.001
	Perceived Benefits	.59	.35	5.50	<.001

Stigma Measure	Moderator	R	R²	F	P
Prejudice	Injunctive Norms	.44	.19	2.34	.06
	Aspirations	.47	.22	3.71	.008
	Similarity	.49	.24	4.31	.003
	Personal Benefits	.43	.18	2.03	.09
	Perceived Benefits	.46	.24	4.31	.003
Classroom Discrimination	Injunctive Norms	.60	.36	15.48	<.001
	Aspirations	.60	.36	15.32	<.001
	Similarity	.61	.38	14.03	<.001
	Personal Benefits	.62	.39	16.99	<.001
	Perceived Benefits	.60	.36	14.41	<.001
Friendship Discrimination	Injunctive Norms	.70	.48	24.32	<.001
	Aspirations	.67	.48	22.77	<.001
	Similarity	.69	.47	21.28	<.001
	Personal Benefits	.69	.47	22.20	<.001
	Perceived Benefits	.70	.49	21.28	<.001

As can be seen in Table 12.6, when the moderators were included as predictors, the overall models were significant for each stigma outcome measure. Only two exceptions to this trend were observed; for the Prejudice factor, the overall model was found to be non-significant when Injunctive Norms ($F_{(4, 75)} = 2.34$, $R = .44$, $R^2 = .19$, $p = .06$) and Personal Benefits ($F_{(4, 75)} = 2.03$, $R = .43$, $R^2 = .18$, $p = .09$) were included as predictors. All other models were significant. However, although these overall regression models were found to be

significant, no significant interaction effects were observed between any moderator and Condition, for the majority of the stigma factors.

The predictive effects of the moderators (M), Condition (X) and the covariates (U) on adolescents' stigma responses are displayed in Table 12.7. The interaction effects between each moderator and Condition (XM), for each stigma measure, are also presented in this table. As can be seen in Table 12.7, the covariate (e.g. Time 1 responses) appeared to significantly influence responses on each of the Time 2 stigma measures, suggesting that adolescents evidencing more negative stigma scores at Time 1 also evidenced more negative stigma scores at Time 2. However, once this effect was controlled for, minimal significant effects were observed for any of the moderation variables. Specifically, the predictors Perceived Benefits ($B = -.18, p < .001$) and Personal Benefits ($B = -.15, p < .05$) were found to exert significant main effects on stigma responses on the Dangerousness factor. Indicating that as adolescents' perceptions about the personal and perceived benefits associated with befriending the target increased, Time 2 endorsements of Dangerousness lowered. Additionally, Similarity, as an individual predictor variable, was found to exert a significant effect on adolescents' Prejudice responses ($B = .31, p < .05$). Results indicated that adolescents who perceived themselves as being more similar to other teenagers also evidenced higher levels of Prejudice toward the target. No other moderator variable was found to exert a significant effect as an individual predictor variable, on any stigma measure.

Additionally, the majority of interaction effects between the moderator variables and Condition were non-significant for all (Time 2) stigma responses. Only one exception was observed, namely, the interaction between Similarity ($B = .02, p = .77$) and Condition ($B = .54, p = .25$), was found to significantly influence responses on the Negative Attributes measure ($B = -.22, p = .03$). However, a review of the J-N analysis indicated that this interaction effect did not make substantive sense as the observed regions of significance lay outside the actual range of the scale. Therefore, this interaction was not considered significantly meaningful. The J-N method was not used to probe non-significant interaction effects following recommendations outlined by Preacher et al. (2007). Thus, contrary to the expected trend, Injunctive Norms, Outcome Expectations and Group Identity did not appear to moderate the relationship between Condition and stigma. See Table 12.7 for a full summary of variable estimates, standard errors and t-values for each stigma measure.

Table 12.7

Unstandardised Estimates, Standard Errors and t-values of all Predictors for all Moderated Regression Models

Stigma Measure	Moderator	M			X			XM			U		
		B	SE	t-value	B	SE	t-value	B	SE	t-value	B	SE	t-value
Dangerousness	Injunctive Norms	.02	.69	4.90	1.17	.03	.71	.05	.06	.90	.51	.13	3.81**
	Aspirations	-.02	.05	-.41	1.18	.63	1.88	-.05	.10	-.47	.49	.14	3.48**
	Similarity	.05	.07	.71	1.16	.62	1.88	-.07	.13	-.56	.47	.13	3.71**
	Personal Benefits	-.15	.06	-2.41*	1.14	.61	1.88	.07	.13	.54	.46	.13	3.45**
	Perceived Benefits	-.18	.69	4.65**	1.24	.59	2.10*	-.05	.17	-.30	.55	.13	4.09**
Warmth & Competence	Injunctive Norms	.04	.06	.67	2.99	.86	3.47**	.06	.11	.52	.52	.09	5.81**
	Aspirations	.07	.10	.72	2.82	.80	3.54**	-.20	.17	-1.13	.51	.09	5.93**
	Similarity	-.10	.09	-1.13	2.96	.82	3.59**	-.32	.16	-1.98	.53	.09	6.09**
	Personal Benefits	.06	.12	.47	2.95	.86	3.44**	.00	.21	.01	.54	.10	5.37**
	Perceived Benefits	.08	.11	.78	2.90	.83	3.49**	.19	.22	.90	.53	.09	5.81**
Responsibility	Injunctive Norms	-.00	.02	-.11	.58	.29	1.98	-.04	.03	-1.07	.75	.11	6.99**
	Aspirations	.01	.03	.29	.55	.30	1.82	-.03	.06	-.55	.76	.11	7.08**
	Similarity	.05	.03	1.61	.55	.30	1.87	.01	.05	.09	.73	.12	6.11**
	Personal Benefits	-.04	.04	-.99	.56	.31	1.84	.03	.08	.36	.74	.12	6.27**
	Perceived Benefits	.02	.04	.37	.56	.31	1.84	.10	.09	1.11	.78	.11	7.32**

Stigma Measure	Moderator	M			X			XM			U		
		B	SE	t-value	B	SE	t-value	B	SE	t-value	B	SE	t-value
Negative Attributes	Injunctive Norms	-.00	.02	-.10	.55	.49	1.13	.05	.05	1.19	.56	.15	3.89**
	Aspirations	.05	.04	1.18	.49	.46	1.05	-.02	.08	-.28	.57	.15	3.94**
	Similarity	.02	.05	.29	.54	.47	1.16	-.22	.10	-2.17*	.57	.14	4.05**
	Personal Benefits	-.06	.06	-.89	.57	.50	1.16	.08	.13	.62	.54	.16	3.41*
	Perceived Benefits	-.01	.07	-.22	.61	.51	1.21	.13	.14	.89	.55	.15	3.67**
Prejudice	Injunctive Norms	-.09	.08	-1.10	-1.65	1.34	-1.24	-.02	.17	-.13	.39	.15	2.56*
	Aspirations	.18	.11	1.62	-1.86	1.34	-1.39	-.19	.26	-.73	.39	.15	2.62*
	Similarity	.31	.13	2.37*	-1.65	1.31	-1.26	-.02	.25	-.10	.37	.15	2.45*
	Personal Benefits	-.01	.17	-.08	-1.57	1.33	-1.18	.25	.33	.75	.40	.17	2.37*
	Perceived Benefits	.03	.18	.16	-1.47	1.30	-1.13	.62	.39	1.58	.39	.15	2.60*
Classroom Discrimination	Injunctive Norms	-.03	.03	-1.36	.62	.41	1.54	.01	.05	.19	.61	.10	5.91**
	Aspirations	.05	.04	1.21	.60	.41	1.44	.02	.08	.31	.63	.10	6.41**
	Similarity	.08	.04	1.92	.66	.39	1.69	.03	.08	.45	.58	.10	6.01**
	Personal Benefits	-.07	.05	-1.46	.66	.39	1.68	.16	.10	1.60	.58	.12	4.69**
	Perceived Benefits	.01	.06	.25	.65	.40	1.61	-.12	.11	-1.02	.61	.11	5.42**

Stigma Measure	Moderator	M			X			XM			U		
		B	SE	t-value	B	SE	t-value	B	SE	t-value	B	SE	t-value
Friendship Discrimination	Injunctive Norms	.03	.07	.45	.41	1.13	.36	.18	.14	1.31	.81	.09	9.23**
	Aspirations	.09	.14	.63	.28	1.05	.27	.10	.26	.41	.83	.09	8.82**
	Similarity	.10	.13	.78	.40	1.12	.35	.04	.25	.16	.80	.09	8.99**
	Personal Benefits	-.01	.17	-.07	.42	1.13	.38	.04	.30	.13	.80	.11	7.32**
	Perceived Benefits	-.15	.15	-1.00	.55	1.09	.51	-.33	.30	-1.11	.76	.09	8.23**

*Note: *p<.05, **p<.001*

: M = Moderator Variable; X = Independent Variable (Control or Intervention Condition); XM = Interaction Effect (Condition x Moderator); U = Covariate (Time 1 Stigma Responses)

12.7 Conclusions

In sum, results from the preliminary analyses indicated that the Control and Intervention groups were not equivalent on some important demographic variables; age and gender. However, analyses of differences on Time 1 stigma responses between the Intervention and Control conditions did not reveal any significant differences between the two groups at baseline. Overall, results from the main analyses indicated limited significant effects for the Normative Feedback Intervention. Results revealed few significant differences in stigma responses between the Control and Intervention conditions at Time 2. Only one significant interaction effect between Condition and Time was observed, namely on the Warmth & Competence factor. However, this effect was contrary to the proposed hypothesis; Results indicated that in comparison to their Time 1 scores, stigma responses showed an increase at Time 2 for the Intervention group, while stigma scores appeared to decline at Time 2 for the Control group. Results also indicated that, overall (e.g. totalling both time points), adolescents in the Intervention tended to endorse significantly more stigmatising responses than adolescents in the Control group, on the Dangerousness, Warmth & Competence, Negative Attributes and Classroom Discrimination factors.

Results from the mediation analyses also indicated that Descriptive Norms significantly mediated the effect of the normative intervention on participants' stigma responses for a number of stigma measures (e.g. Dangerousness, Warmth & Competency, Negative Attributes and Classroom Discrimination). However, the pattern of results indicated that participants in the Intervention group tended to endorse more negative Descriptive Norms at Time 2 and in turn also endorsed significantly more stigmatising responses on these (post-test) measures, compared to participants in the Control group. This is an interesting finding as it is contrary to the research hypothesis. Furthermore, findings from the current study did not find support for the TNSB (Rimal & Real, 2005; Rimal, 2008). Results indicated that, in the current sample, the effect of the Normative Feedback Information was not influenced by proposed moderators; Outcome Expectations, Group Identity or Injunctive Norms. The moderators were found to exert minimal main effects on any of the stigma outcome measures and no (meaningful) significant interaction effects between the moderators and Condition were observed.

Chapter 13

Study 3 Discussion

13.1 Aim of Chapter

The aim of this chapter is to discuss the relevant findings which emerged in Study 3 of this doctoral research project. These findings will be discussed in relation to the results which have emerged from other research on mental health stigma reduction, as well as from the global stigma literature and other research incorporating normative approaches. This chapter will comment on the limitations associated with the current research and provide recommendations for future research and practical initiatives. Consideration will also be given to the implication these results have for future stigma reduction research.

13.2 Effectiveness of the Normative Feedback Intervention

The current study set out to investigate the effectiveness of a school-based normative feedback intervention at reducing public mental health stigma among adolescents. Specifically, the main aim of this research was to examine whether providing adolescents with normative information, which suggested that their peers held positive attitudes toward teenagers with depression, would lead to the expression of less stigmatising responses toward a (fictional) peer with depression, when compared to a control group. Overall, the study evidenced little support for the effectiveness of a normative feedback intervention at reducing stigma among adolescents. Results indicated few significant differences between the Control and Intervention conditions on any of the post-test stigma measures. In general, the Intervention group tended to express more stigmatising responses than the Control group. However, this effect was only significant for the Dangerousness, Responsibility, Negative Attributes and Classroom Discrimination factors. Additionally, a significant interaction between Condition and Time was only observed on the Warmth & Competence factor, indicating an increase in stigma responses for the Intervention group and a decline in stigma responses for the Control group, from Time 1 to Time 2. Therefore, no support was evidenced for hypothesis one.

The finding that the normative intervention was not effective at reducing stigmatising responses in this sample of adolescents is important as it indicates that either normative feedback is not an effective method of reducing mental health stigma among adolescents, or the manner in which this intervention was carried out was not effective at inducing an experimental change. Given the paucity of research investigating the effectiveness of

normative feedback approaches at reducing mental health stigma, it is difficult to compare the current findings with that of other research. However, evidence from non-experimental research indicates that normative perceptions do play a role in influencing individuals' stigmatising responses toward people with mental health problems (Norman et al., 2008; Shamblaw et al., 2015). Additionally, evidence from the non-mental health stigma literature also indicates that norms appear to play an important role in shaping adolescents' attitudes and friendship patterns (Hughes et al., 2013; Nesdale et al., 2005; Poteat, 2008; Rutland et al., 2005). Furthermore, given the documented success of normative feedback approaches at reducing negative attitudes and promoting behaviour change in other fields (Finnegan et al., 2014; Perkins et al., 2011; Puhl et al., 2005), there appears to be substantive reason to believe that a normative intervention could be a worthwhile method of reducing public mental health stigma in adolescents. Thus, the current lack of observed significance may be better accounted for by the manner in which the normative feedback intervention was implemented.

There are several potential explanations for why the normative feedback intervention was unsuccessful at reducing the stigma expressed by adolescents toward their peers with depression. First, it is important to comment on the general trend of responding; although adolescents in the Intervention condition tended to express higher levels of stigma than adolescents in the Control condition, overall, adolescents in both conditions evidenced relatively low levels of stigma. The observed mean scores for all seven stigma measures tended to fall within the lower spectrum of the scales. This trend was apparent for both Time 1 and Time 2 responses. Thus, in comparison to other normative intervention approaches, the normative information presented to adolescents in the current study may have been inefficacious at reducing stigma because adolescents already appeared to be reporting relatively low levels of stigma. For example, Perkins et al. (2011) used a similar normative feedback approach to reduce perpetration levels of bullying among children and adolescents in a number of U.S schools. While Perkins et al. found this normative feedback approach to be successful at reducing bullying perpetration, victimisation and pro-bullying attitudes, baseline measurements appeared relatively high in this study. Hence, normative feedback approaches may be more effective in situations where higher levels of undesired attitudes or behaviours are present from the outset.

The effectiveness of the normative intervention may also have been influenced by the manner in which the normative information was communicated. First, all the normative feedback information was communicated to adolescents in the intervention condition via a

series of posters. These posters were displayed in key areas throughout the intervention school, as designated by a school staff member. Although the number of normative messages communicated and the graphical design of the posters were carefully chosen based on recommended guidelines for promoting behaviour change (Michie, 2013), recent research by Ilic and Rowe (2013) claims that posters may not be effective at facilitating knowledge transfer. Ilic and Rowe (2013) carried out a systematic review of the effectiveness of poster presentations at increasing health knowledge and changing health related attitudes or behaviour. This review reported that posters as single interventions did not elicit changes in knowledge, attitudes or behaviour (Ilic & Rowe, 2013). However, this article only reviewed the effectiveness of poster interventions in the area of health behaviour change and knowledge transfer. The effectiveness of posters in changing attitudes and behaviour in other (e.g. social) domains has not been evaluated. Researchers such as Glasziou and Haynes (2005) have contended that these types of interventions may have limited effects on knowledge transfer because the majority of respondents may not have read, and thus be unaware of, the information contained in the posters/leaflets. However, the current study contained a manipulation check which assessed whether participants had viewed the posters containing the normative information. Results from this manipulation check indicated that the majority of participants in the Intervention condition had seen the posters displayed in their school. Nonetheless, this manipulation check did not assess whether adolescents read or recalled any of the information displayed in these posters/brochures or whether this information had impacted on them. Thus, it is recommended that a more sophisticated manipulation check is used in future research and that further consideration of how best to facilitate adolescents' engagement with the normative messages is given.

Additionally, although researchers have proposed that posters may not be effective at changing attitudes and behaviours as stand-alone interventions, researchers have also argued that posters can successfully change attitudes and behaviours, provided they are integrated into other forms of educational interventions (Ilic & Rowe, 2013; Rowe & Ilic, 2009). For example, Gilaberte et al. (2008) carried out an intervention which aimed to change children's knowledge, practice and behaviour about sun safety. Gilaberte et al. incorporated poster presentations into a larger, teacher led educational programme which aimed to educate children about the negative effects of sun damage. This study found significant effects for this combined educational approach (Gilaberte et al., 2008). Thus, the current normative intervention may have been unsuccessful at reducing stigma among adolescents because no

other educational information was provided to participants about either mental health or depression. Future research should investigate whether the utility of normative feedback approaches at reducing mental health stigma is contingent upon the provision of educational information about mental health and/or illness.

It is also important to note, that the Perkins et al. (2011) study, which the current study is modelled upon, also used school-based poster displays to communicate normative feedback information to children and adolescents. Importantly, the poster campaign in this study was found to produce significant changes in the rates of bullying perpetration and victimisation and pro-bullying attitudes, even as a stand-alone intervention. Thus, the results from the Perkins et al. (2011) study indicates that posters can produce significant changes in social attitudes and behaviour, even in the absence of additional educational information. However, the posters utilised by Perkins et al. were displayed in these schools for a period of over a year. Conversely, the posters used in the current study were only displayed to the Intervention group for two weeks. However, in order to compensate for the comparatively short exposure to the experimental manipulation, the normative messages in the current study were also displayed on brochures. These leaflets were then distributed to adolescents in the Intervention group. This is a unique feature of the current study, which was not adopted in the Perkins et al. (2011) study. Nonetheless, the length of time that was allowed between Time 1 and Time 2 stigma assessments may have affected the utility of the intervention and the type of stigma responses observed at Time 2, as adolescents may have needed more time to appraise or 'digest' this information. Furthermore, given the exclusive focus of the questionnaire, and the short amount of time that had elapsed between Time 1 and Time 2 measurements, it is possible that adolescents were able to recall how they responded on the measures at Time 1 and this influenced their responses at Time 2.

Evidence from research outside the mental health stigma literature shows that brief normative feedback exposure can be effective at inducing attitude or behaviour change immediately following the experimental manipulation (Tan et al., 2001), at one to two weeks post-test (Celio & Lisman, 2014; Schultz et al., 2014) as well as at later follow-up assessments (Neighbors et al., 2015). These other findings suggest that the two weeks should have been a sufficient length of time to induce an experimental change in stigma responses in the current study. However, these studies neither employed poster presentations as a means of communicating the normative information, nor examined stigma in the mental health area; thus, it is difficult to compare results. Future research should investigate whether the length

of time in which adolescents are exposed to normative information can influence the efficacy of a stigma reduction intervention.

Furthermore, although previous research has found significant effects for normative interventions, typically, the type of normative feedback communicated in these studies differs from the type of normative feedback provided in the current study. For example, the majority of normative feedback approaches tend to communicate *personalised* feedback to participants, whereby participants are provided with feedback about how their own behaviour relates to the behaviour of others. For example, Celio and Lisman (2014) demonstrated how a brief normative feedback manipulation could successfully reduce students' gambling behaviour at a one to week follow-up assessment. However, in this study Celio and Lisman (2014) provided participants with normative feedback information about 1. How much they personally gambled 2. How much they thought other students gambled and 3. How much the other students actually gambled. The purpose of this personalised feedback was to highlight the discrepancy between participants' own behaviour and the behaviour of others (descriptive norms). The authors found that directly contrasting these two behaviours and correcting participants' misperceptions about descriptive norms, resulted in a significant decrease in gambling activity. However, for the current research, it was not considered feasible to provide personalised normative feedback to each adolescent. This decision was made in consideration of the applied utility and ethical implications of incorporating a normative feedback approach into a school setting. Hence, a modified normative feedback approach was employed, whereby adolescents were informed about how other teenagers react toward people with depression. It is possible that normative feedback approaches may be less effective when they do not directly contrast personal and perceived norms. The utility of these types of normative approaches does not appear to have been directly compared in the literature, and may be an important topic for future research to elucidate upon.

Perkins et al. (2011) also utilised a modified form of personalised normative feedback. In this case, the normative information displayed on the posters in each school provided information about how students in that particular school felt about bullying. Thus, the normative referent group utilised in that study were the children's peers at their own school. Similarly, other normative studies also use participants' close peers (e.g. neighbours, other students in the same college) as the normative, referent social group to induce behaviour change (Doumas et al., 2014; Neighbors et al., 2010; Schultz et al., 2014). Evidence from the normative literature indicates that in order for norms to effectively

influence an individual's behaviour, the person must identify with the referent social group (Paluck & Sheppard, 2012; Rimal & Real, 2005). In the current study, participants in the normative feedback condition were provided with information communicating how 'other teenagers' respond toward their peers with depression. It was hypothesised that the adolescents in this study would identify with 'other people [their] own age'. However, a review of the descriptive statistics revealed that adolescents in this study only reported moderate levels of similarity to other teenagers. If adolescents did not identify with the social group referenced in the normative feedback information, this may explain why the intervention was unsuccessful at reducing stigma responses in adolescents. It is possible that greater effects would have been observed had a more relevant social referent group been provided. Future research should investigate this potential effect.

Finally, it is also important to comment on the type of normative messages communicated to adolescents in this study and their potential effect on the utility of the normative intervention. Adolescents in the Intervention condition were exposed to five key messages highlighting positive descriptive norms that 'other teenagers' demonstrated toward people with depression (see Appendix L). Although these normative messages were based on real information, extracted from the findings from Study 2, and evaluated by mental health stigma experts, it is not known whether these messages were substantively meaningful to the adolescents. For example, it is possible that informing adolescents that 'the majority of people [their] age would hang around with other teenagers with depression' or that 'teens who have problems such as depression are liked just as much as other teenagers are' were not powerful enough forms of descriptive norms to evoke a change on the aspects of stigma measured in the current research.

Additionally, the normative messages communicated portrayed descriptive norms about how other teens responded toward people with depression. However, although stigma was measured by assessing how adolescents responded toward a fictional peer with depression, no diagnostic label was included in the vignette. Thus, the normative feedback information referenced norms about a wider social category (e.g. people with depression) and the stigma measures assessed responses toward a specific target within that social category (e.g. a teen who appears to be experiencing symptoms of depression). It is possible that this observed discrepancy between the terms used in the normative feedback and the specific focus of the stigma measures may have diffused the potential effectiveness of this normative feedback approach.

In order to increase the potential effectiveness of a normative approach to stigma reduction, future research may benefit from involving adolescents more in the design of the study or by recruiting adolescents as subject-matter experts in the development and phrasing of the normative messages. Research suggests that involving youth in the planning and developing of programmes meant to serve them can increase the effectiveness of the intervention (Baas et al., 2013; Hohenemser & Marshall, 2002).

13.3 Do Changes in Descriptive Norms Mediate the Effectiveness of Normative Feedback?

The results from the mediation analyses indicated that Descriptive Norms significantly mediated the relationship between Condition and several of the stigma responses; namely, Dangerousness, Warmth & Competence, Negative Attributes and Classroom Discrimination, after controlling for Time 1 responses. However, results indicated that Descriptive Norms did not significantly mediate the relationship between the intervention and responses on the Responsibility, Prejudice or Friendship Discrimination factors. The current research hypothesised that providing normative feedback information would influence adolescents' stigma responses by changing their perception of descriptive norms. Hence, the current findings provide some support for this hypothesis. Given that the sample size in the current study was low ($n=83$ for Time 2 measures), the non significant results observed for the Responsibility, Prejudice and Friendship Discrimination factors may be explained by a lack of power. Thus, future research should include a larger sample size. However, this lack of significant mediation may also indicate that there is something different about adolescents' responses on these three factors which are unaffected by the descriptive norms communicated in this study.

An unexpected finding from the current research was the direction of the observed mediation relationship, which has potential ethical implications. Results suggested that adolescents who were exposed to the normative information reported more negative descriptive norms than adolescents who were not exposed to this information. In other words, adolescents in the normative feedback condition tended to report higher beliefs that their friends would respond negatively to the target, which in turned resulted in the expression of higher stigmatising responses toward the target. This is an important finding as it implies that the normative feedback intervention may have led to an increase, rather than a reduction, in stigma. However, it is important to note that although the normative feedback may have

significantly increased stigma, stigma responses still remained relatively low. Nonetheless, if providing normative feedback has the potential to increase stigma then this has crucial ethical implications for practical initiatives and future stigma intervention research. It is important for future researchers to be aware of the potential for normative feedback interventions to exert a negative impact on stigma and further consideration of the manner in which these interventions are conducted is paramount for future research initiatives.

One possible explanation for why the normative intervention exerted a negative impact on stigma in the current research is that the use of the label ‘depression’ in the normative feedback information had adverse effects on adolescents’ perceptions of descriptive norms. First, by exposing adolescents to normative feedback communicating information about how others respond to people with depression, it may have fostered a greater awareness of ‘depression’ and also made adolescents more sensitive to the diagnostic criteria for this disorder. Subsequently, adolescents who were exposed to this information may have been more readily able to recognise the behavioural characteristics outlined in the vignette as symptoms of depression. This appears plausible given certain characteristics of the experimental design employed in this study (i.e., the short time left between Time 1 and Time 2 measures of stigma, the exclusive focus on measuring reactions to a vignette character with symptoms of depression and the appearance of the posters immediately following the assessment at Time 1). If adolescents at Time 2 now associated the target with the label ‘depression’ they may have believed that their friends would respond more negatively to such an individual. This explanation is in line with other stigma literature which contends that individuals are stigmatised when they are labelled with a mark that is seen as being socially deviant in some manner (Link & Phelan, 2001). Additionally, Corrigan (2005) also argues that the diagnostic classification of mental health disorders can increase the expression of stigma by intensifying the public's sense of ‘groupness’ or ‘differentness’ when evaluating people with mental health problems. Thus, future research may benefit from investigating the effect of normative feedback approaches when diagnostic labels are not used or, alternatively, when they are used as the sole method of assessment.

Retrospectively, considering the observed pattern of responding, the results from these mediation analyses may also point to limitations associated with the manner in which the normative approach was conducted. As stated above, it is possible that using labels in the normative feedback process fostered a greater awareness of depression as a mental health disorder. However, this appears to have led to adolescents perceiving there to be a greater

culture of stigma among their friends. This may have occurred because no additional information accompanied any of the normative feedback information. In essence, this normative approach may have created a greater awareness of depression in adolescents but made no attempt to improve mental health literacy among these adolescents. Thus, these results may also suggest that normative feedback approaches may not be sufficient as stand-alone interventions for mental health stigma and the inclusion of other educational approaches may be paramount for the successful reduction of stigmatising attitudes and behaviours. This is an important ethical consideration for future research or normative approaches.

Alternatively, it is also possible that the increase in stigmatising responses may reflect a form of resistance to the normative feedback provided, on the part of the adolescents. Past research has indicated that, in some instances, proscribing descriptive norms can have an adverse affect on individuals' attitudes and behaviours, which is referred to as the 'boomerang effect' (Schmitt, 2014; Schultz et al., 2015). Da Silva (2006) contended that if individuals' feel as though their freedom of choice is being limited or manipulated it may cause these individuals to deliberately resist making positive changes or into thinking negatively about the credibility of the source of the normative messages. Thus, an important step in designing effective normative feedback approaches may be to first conduct a pilot investigation on how adolescents respond to the chosen normative messages or to include adolescents more formally in the generation of these positive normative messages. This could potentially be done through the use of more qualitative investigations. This approach is in line with the recommendation that social norm interventions should be tailored to the specific characteristics of the individualised group in order to fully unfold their effects (Loock et al., 2012)

13.4 Do Injunctive Norms, Group Identity and Perceived Benefits moderate the relationship between Normative Feedback and Stigma?

An additional aim of this research was to examine whether the effectiveness of the normative feedback intervention was moderated by adolescents' perception of Injunctive Norms, Outcome Expectations or Group Identity, as proposed by the TNSB (Rimal & Real, 2005). However, contrary to the hypothesised trend, no support for the TNSB was found by the current study. Results indicated that the effect of the Normative Feedback Information, on

any stigma factor, was not moderated by any aspect of Outcome Expectations, Group Identity or Injunctive Norms.

There are several potential explanations for this lack of significant results. Although the TNSB was formulated as a potential explanation for how normative information can exert differential effects on participants' responses; this theory was developed for use within the alcohol-use literature (Rimal & Real, 2005) and the majority of research evaluating the TNSB, appears to have been carried out within the health behaviour literature (Paek, 2009). For example, although Rimal (2008) indicated that these three cognitive mechanisms significantly moderate the effects of a normative feedback intervention, this intervention also focused on reducing alcohol consumption. Additionally, this past research was all conducted with adult samples. Although other research has suggested that factors such as injunctive norms, group identity and perceived benefits may also have an effect on adolescents' social behaviours (De Tezanos-Pinto, Bratt & Brown, 2010; Killen & Malti, 2015; Nesdale et al., 2005; Sierksma et al., 2014), no previous research has investigated how these variables may moderate the relationship between social norms and stigma. Thus, it is possible that the effects of outcome expectations, injunctive norms and group identity as moderators of normative approaches either do not generalise to mental health stigma or are not effective moderators among an adolescent sample. Researchers argue that establishing a theoretical base is an important step in designing effective interventions and that the lack of a consolidated theoretical framework is a major limitation of normative feedback approaches (Tankard & Paluck, 2015; Rimal, 2008). Given the lack of support observed for the TNSB, as well as the lack of alternative theoretical models available in the literature, the current research highlights the need carry out future research that aims to establish a greater understanding of the mechanisms which underline the effectiveness of normative feedback approaches under various circumstances.

Furthermore, it is also possible that the lack of significant moderation effects may also be explained by limitations associated with the manner in which these three cognitive mechanisms were measured. Specifically, the Outcome Expectation scales (Personal Benefits and Perceived Benefits) and the Group Identity (Similarity and Aspiration) scales were both adapted from the research by Rimal and Real (2005) and Rimal (2008), which aimed to measure attitudes associated with binge-drinking. Thus, it is possible that the items used to compose these scales do not adequately reflect these constructs when assessed in a mental health stigma context. Moreover, as high-inter item correlations were observed on all

moderator variables this may also indicate that these items/measures were not a good fit to assess these constructs in the current sample. A possible recommendation for future research is to explore alternative methods to assess these constructs among adolescents. Qualitative research may be particularly useful in this instance in order to explore what type of benefits adolescents associate with making new friends or to probe how adolescents identify with other teenagers their own age. Had different instruments been used to assess these moderator variables, it is possible that different patterns of results would have emerged.

13.5 Limitations and Considerations for Future Research

There are a number of limitations associated with the current research which are important to acknowledge when discussing these research findings. First, it is important to note that the results indicated that the adolescents who participated in the Intervention group were not comparable to the adolescents in the Control group in terms of their age and gender. Specifically, results indicated that the adolescents in the Intervention group were significantly older than the adolescents in the Control group. Additionally, these results also indicated that there were significantly more males in the Intervention condition than the Control condition. These differences are particularly important when considering the finding that adolescents in the Intervention condition expressed significantly more stigma (overall), on four of the stigma measures (e.g. Dangerousness, Warmth & Competency, Negative Attributes, Classroom Discrimination) than adolescents in the Control group. Previous research has indicated that stigmatising responses may vary in magnitude depending on the gender and age of the respondent. Typically research has found that older respondents tend to show more stigmatising responses than younger adolescents or children (Griffiths et al., 2008; O'Driscoll et al., 2012) and that males tend to direct more stigma toward people with mental health issues, than females (Reavley & Jorm, 2011; Rusch et al., 2011b). Thus, it is possible that these differences may account for some of the variation in responses between the Control and Intervention group. It is important that future research investigating the efficacy of stigma reduction interventions attempts to rectify these differences and ensures the equal dispersion of participants' gender and age, in order to ensure that any observed differences between the two groups are not influenced by these discrepancies. Alternatively, future research may benefit from including these variables as covariates, which was not possible in the current study due to sample size restrictions.

These age and gender effects are particularly important to consider when interpreting the effects of the normative intervention. Although no significant effect was found for the normative feedback intervention, this research did not assess how the age or gender of the participating adolescents may have affected the observed results. For example, given that males tend to express higher levels of stigma than females (Arbanas, 2008; Calexar et al., 2009), it is possible that males may also be less likely to respond to anti-stigma strategies. Previous anti-stigma research with adults appears to support this notion, in that studies have found that females typically tend to show significantly greater changes in stigmatising attitudes toward people with mental health problems than males (Pinfold et al., 2003; Martinez-Zambrano et al. 2013). As such it is plausible that a normative feedback approach to stigma reduction may be less effective among adolescent males in comparison to adolescent females. Given that the Intervention group tended to show more stigmatising responses than the Control group, and the Intervention condition contained a larger percentage (52%) of male respondents, than the Control group (29%), the gender dynamic may be an important issue to consider in future research. Additionally, all participants in this study fell within a narrow age range. Although adolescents in the Intervention condition were significantly older than the adolescents in the Control condition, all participants in the study were aged between 15-17 years. Thus, while the results of this study may be informative about the effectiveness of a normative feedback approach among older adolescents, these results do not shed light on how younger adolescents or children may respond to a normative feedback approach. Hence, an important avenue for future research is to examine the potential role that gender and age may play in moderating the effect between normative feedback and stigma.

Additionally, it is also important to note that this research utilised a school-based (clustered) randomisation design, whereby adolescents were randomly assigned to the intervention or control condition at a school level. The decision was made to adopt this methodology as this is the procedure that was followed by Perkins et al. (2011) and this approach was considered advantageous as it would lessen the risk of experimental contamination (Donner & Klar, 2004). However, this approach does not control for important differences that may have existed between the schools. For example, these schools may have differed in their type of 'school ethos' or in their employment of educational strategies on mental health issues in ways that were not accounted for in the current study. Hence, other research may benefit from employing a classroom level randomisation design, in order to

minimise the potential of bias from other extraneous variables, or by employing a more stringent screening process in order to minimise potential confounding differences between participating schools. Alternatively advanced statistical techniques may be employed to control for the bias created by cluster randomisation (Cameron & Miller, 2015). However, these were beyond the scope of this research.

Another limitation associated with the current study relates to the sample size employed, and the subsequent implications this may have had on the power of the study. First, unequal sample sizes were observed for the control ($n=32$) and intervention ($n=51$) groups. While unequal sample sizes are common in the behavioural sciences (Cohen, 2013), they can result in confounding effects, such as violations of the assumption of homogeneity of variance, or a lack of power in detecting significant interactions (McClland & Judd, 1993). Thus, future research may benefit from attempting to minimise the discrepancy in sample size between the groups or by employing an alternative analysis method (Cohen, 2013; Field, 2009). Furthermore, due to the attrition rate, which occurred between Time 1 and Time 2, the overall sample size retained at Time 2 was especially small ($n=83$). Although a priori analyses indicated that the current sample size should possess sufficient power to detect significant effects across all forms of analyses employed in this study (Dawson, 2014; Kelley & Maxwell, 2003); these a priori analyses were based on medium effect sizes. Given that only small effects were observed, the sample size employed may have lacked sufficient power to detect significance under these circumstances.

This lack of statistical power may have important implications for the moderation analyses. Although sample size is the single biggest factor affecting statistical power, measurement error (e.g., lack of reliability) is also a major source of loss of power in moderation analyses (Dawson, 2014), as this error can often be exacerbated in the interaction term (Dunlap and Kemery, 1988). Crucially, an overly high Cronbach's alpha coefficient (α close to .90) was observed for the majority of the moderation variables and multicollinearity was found to be an issue for two of these scales (e.g. Perceived Benefits, Personal Benefits). This may indicate the presence of some form of measurement error, which in turn may have reduced the power of these moderation analyses. Additionally, although the problem of multicollinearity was corrected for by removing the problematic item in the affected scales, range restrictions can also affect the power of moderation to detect significant interaction effects (Aguinis & Stone-Romero, 1997). Thus, a lack of power may be a serious limitation of the moderation analyses and a larger sample size is advisable. Future research would

benefit from exploring alternative methods of resolving these potential power and measurement error issues. For example, by adopting an ulterior theoretical framework or by developing alternative measures for assessing the current theoretical moderators.

Another important potential limitation of the current research was the decision to include all adolescents in the main analyses, irrespective of whether they reported having viewed the posters or not. However, this approach was adopted following the procedure employed by the Perkins et al. (2011) study. Based on postulations from previous theoretical research (Neighbors et al., 2010; Rimal, 2008), it was anticipated that the current normative feedback approach would change perceptions of descriptive norms in adolescents in the Intervention condition. In other words, it was assumed that these normative messages would foster a cultural or normative change within the experimental school. As adolescents in the current research were allocated to each condition at a school, rather than an individual, level, it was considered possible that adolescents in the Intervention group would be exposed to or aware of these normative changes, even if they did not recall being directly exposed to the normative messages. Furthermore, researchers argue that using an all-inclusive approach such as this reduces problems associated with selection bias and increases ecological validity (Juni, Altman & Egger, 2001; Schulz & Grimes, 2002). For these reasons, it was considered prudent to include all adolescents in the main analyses, regardless of their direct exposure to the normative messages.

Finally, there are other methodological limitations associated with the current research that are important to mention when interpreting these findings. First, the current study only assessed adolescents' responses toward fictional, same-sex peers with depression. Thus, these findings may not generalise to peers of the opposite sex or to peers with other mental health disorders. In addition, the current study only measured explicit assessments of stigma. A decision was based to only include explicit stigma measures in this pilot investigation, given the findings from Study 2, which indicated that (descriptive or injunctive) norms did not appear to play a role in influencing implicit responses. However, prior research has indicated that explicit measurements of stigma are often subject to social-desirability bias (Dovidio et al. 1997; Greenwald & Banaji, 1995; Payne & Gawronski, 2010). Thus, it is possible that the adolescents' endorsements of stigma in the current study may have been affected by concerns about self-presentation bias. Moreover, as adolescents were presented with only one vignette, portraying an account of a fictional peer with

depression, social-desirability bias may have been even more of an issue under the current circumstances.

Results also indicated that a number of Time 1 and Time 2 stigma measures did not appear to correlate significantly with each other. This is unexpected given the support found for these stigma factors in Study 1. Additionally, the pattern of non-significance appears to be sporadic and does not seem to follow an observable trend. This may suggest that adolescents evidenced some degree of disengagement with the stigma responses. This could be due to a heightened awareness of social desirability bias, which may have resulted from only including assessments of explicit stigma responses toward a target with depression. A common method used among other researchers that have also attempted to measure stigma responses over multiple time points is to ask participants to respond to a battery of tests in order to keep participants from guessing the main research hypothesis (Tan et al., 2001). This approach was not used in the current study due to concerns about participant fatigue. However, in retrospect, given the observed findings, this approach may be more suitable to incorporate into future research studies.

13.6 Consideration of the Applied Implications of the Research

When considering the wider practical implications and applications of this research, one of the most important findings that emerged from this study was the observation that the normative feedback appeared to increase the perception of negative descriptive norms, which in turn increased adolescents' stigmatising responses toward a peer with depression. The current findings have crucial significance as they provide evidence to suggest that not only may normative feedback approaches not be an effective method of reducing public mental health stigma among adolescents, but that they may actually lead to an increase in stigma. Although other researchers have reported similar 'boomerang' type effects (Costa & Kahn, 2013; Schultz et al. 2007; Yakobovitch & Grinstein, 2015), in general, normative feedback approaches are typically considered an effective form of behaviour and attitude change (Dotson, Dunn & Bowers, 2015; Stangor et al., 2001). Thus, the current research acts as a precautionary warning for any initiatives that may consider using a social normative approach as a stand-alone stigma reduction strategy, in the mental health domain, and highlights potential ethical implications involved with using a social norm approach in future research or programme design.

Conversely, this research has important implications because it simultaneously also highlights the important role that descriptive norms play in influencing adolescents' stigma responses. Although this research did not find normative feedback to be an effective method of stigma reduction, this research is among the first, in the social domain, to evaluate the processes through which these normative feedback interventions exert their effects. As a result of these additional meditational analyses, this research was able to uncover that as adolescents' perceptions of descriptive norms become more negative, the level of stigmatising responses expressed toward their peers with depression also increases. Hence, this research has important implications for practical initiatives and future anti-stigma approaches, as it suggests that descriptive norms do play a role in the expression of stigma. However, given the non-significant effect observed for the normative feedback intervention used in the current study, these findings also suggest that researchers and practitioners need to consider alternative strategies for tackling and changing perceptions of negative norms among adolescents. In other words, the findings from this research do not necessarily support the abandonment of social normative approaches in this area. Rather, it is proposed that future research should carry out more feasibility work in this area in order to help the design and development of more effective normative strategies. Feasibility research is useful for estimating the parameters that are important in the design of effective interventions (Arain, Campbell, Cooper & Lancaster, 2010). Given the lack of research conducted in this area, feasibility work may be useful in helping to create a better understanding of how best to deliver and implement these normative interventions with adolescents. Similarly, employing more qualitative research or other exploratory work with school personnel and students may be helpful for the development of more appropriate normative messages or implementation strategies. Overall, further work in this area is needed before a full evaluation of the effectiveness of normative feedback as a stigma reduction technique can take place.

Crucially, this research also highlights the weakness of the TNSB (Rimal & Real, 2005) in accounting for the moderating effect of normative feedback interventions outside of the alcohol literature. Collectively, the findings from this research highlight the need to develop a stronger theoretical and methodological framework that can provide a greater explanatory account of how normative feedback approaches work. This finding has knock-on implications for practical initiatives and other applied stigma research given the value placed on theoretical foundations in programme evaluation (Pinto-Foltz & Logsdon, 2009). Hence, greater exploration into the theoretical mechanisms guiding normative feedback approaches

is recommended. Through the establishment of a more sophisticated theoretical framework practitioners and researchers will be able to draw more conclusive inferences about the effective elements of normative approaches (Mellor, 2014) and design more efficient, targeted approaches with more versatile utility (Neighbors et al., 2010; Rimal & Real, 2005).

13.7 Conclusions

In conclusion, the research found limited support for the effectiveness of a normative feedback intervention in reducing public stigma among adolescents. Additionally, the research found no support to indicate that effectiveness of normative intervention is moderated by injunctive norms, outcome expectations or group identity, as proposed by the TNSB (Rimal & Real, 2005). Importantly, this research indicated that normative feedback appeared to increase the belief in adolescents that their friends would respond negatively to the target which in turned resulted in an increase in a number of stigma responses (e.g. Dangerousness, Warmth & Competence, Negative Attributes and Classroom Discrimination) among these adolescents. This research suggests that some caution may be warranted by any future research or anti-stigma initiatives considering employing a normative intervention approach as a stand-alone stigma reduction method. However, due to restrictions with the methodology employed in the current study, and the lack of comparative research in the field, it is difficult to conclusively gauge whether normative approaches in general are inefficacious at reducing stigma, or whether alternative designs could produce different patterns of responding. Thus, before a comprehensive evaluation of the effectiveness of social norm approaches can take place, it is recommended that future research should explore alternative methods of designing and implementing these approaches. Overall, this research provides an innovative investigation into the potential effectiveness of a normative feedback intervention as a method of stigma reduction among adolescents. This study highlighted the influential role that descriptive norms appear to play in influencing stigma responses among adolescents. Hence, this research provides a good starting base for evaluating the relationship between social norms and stigma and it is recommended that future anti-stigma research continues to explore alternative strategies for reducing perceptions of negative descriptive norms among adolescents.

Chapter 14

Concluding Comments

14.1 Aim of Chapter

In this final chapter, a brief summary of the aims/objectives and main findings of the current research will be presented. Following this a brief commentary on the key contributions and practical implications of the research will be provided. Furthermore, limitations of the project and pertinent issues raised by this research are discussed.

14.2 Overview of Thesis

This dissertation contributed to a relatively neglected field by carrying out research relating to how adolescents stigmatise their (fictional) peers with depression. Through three inter-related studies this research helped to advance knowledge and generate greater understanding of public mental health stigma among adolescents. Specifically, Study 1 employed factor analytic approaches to investigate the validity and reliability of a selection of (explicit) stigma measures for use among an adolescent sample. This study also assessed the tripartite conceptualisation of stigma (Corrigan & Watson, 2002) by exploring whether these measures empirically represented the three theoretical components; Stereotypes, Prejudice and Discrimination. The results supported a seven factor solution of stigma, representing cognitive, affective and behavioural aspects of stigma, and highlighted important discrepancies between the validity of measures when used amongst adult or adolescent samples. As the adolescent literature is deplete of validated stigma instruments, this study represented a crucial step in the establishment of better, more uniform measurements of stigma among adolescents. This may help to provide further understanding of the construct by allowing for more direct synthesis and comparison between research findings. Additionally, this study evidenced support for the tripartite model of stigma by indicating that the seven observed stigma factors empirically represented aspects of stereotypes, prejudice and discrimination. This observed support for the tripartite model outlines the importance of including assessments of all three aspects of stigma in future investigations of the construct and highlights the complex, multidimensional nature of stigma. This finding has important practical implications, as it is postulated that factors which may contribute to the expression or maintenance of one stigma component (e.g. prejudice), may not contribute to the expression of another component (e.g. behaviour; Jorm & Wright, 2008). It is only through using accurate measurements of all three aspects of stigma that greater clarity and insight into

the factors that influence or maintain stigma can be established (Martin, 2010; Mukolo & Heflinger, 2010).

Once the validity of the stigma measurements had been established, Study 2 was carried out in order to examine whether empathy and peer norms, significantly influenced adolescents' responses on these seven explicit, stigma factors. Due to the limitations associated with explicit measures of stigma (Dovidio et al., 1997; Greenwald & Banaji, 1995; Michaels & Corrigan, 2013), Study 2 also assessed the potential role that empathy and peer group norms would play in influencing adolescents' implicit stigma responses. Evidence from social psychological research indicates that dispositional empathetic responding and perceptions of social norms can exert a substantial effect on the type of stigma expressed toward an array of socially marginalised groups (Aboud & Sankar, 2007; Batson et al., 1997; Belman & Flanagan, 2010; Crandall et al., 2002; Davis, 2015; Malti et al., 2012; Poteat, 2008; Stangor et al., 2001; Wentzel, 2014). However, there was a paucity of work examining the predictive effect of these factors in the context of (explicit and implicit) public mental health stigma among adolescents. Study 2 attempted to address this research, by exploring the role that (cognitive and affective) empathy and (descriptive and injunctive) group norms exerted on adolescents' implicit and explicit stigmatising responses toward male and female peers with depression. Findings from this study indicated that descriptive norms exerted a substantial effect on adolescents' explicit responses toward both male and female targets, but had little effect at predicting implicit responses. Additionally, empathy was not found to exert a significant effect on implicit responses and only appeared to exert a minor influence on explicit stigma responses. Overall, results indicated that descriptive norms may play a role in influencing explicit stigma responses among adolescents and, as such, tackling the perception of negative descriptive norms may be effective at reducing these explicit stigmatising responses.

Study 3 was conducted in order to examine the potential utility of a normative feedback approach at reducing explicit stigma responses among adolescents. Although there is a call for more effective anti-stigma programmes (Estroff et al., 2004; Murman et al., 2014), the utility of a normative feedback approach at reducing mental health stigma among adolescents had not been investigated, despite other research pointing at the effectiveness of these approaches at changing individuals behaviour and/or attitudes (Finnegan et al., 2014; Neighbors et al., 2011; Puhl et al., 2005; Perkins et al., 2011; Sechrist & Milford, 2007). Thus, Study 3 had the novel aim to examine the causal utility of a pilot normative feedback

approach at reducing the expression of explicit stigma in adolescents, toward their peers with depression. Furthermore, Study 3 also examined the theoretical mechanisms through which normative feedback interventions exert their effects, given the dearth of available research exploring the theoretical underpinnings of normative feedback approaches (Rimal & Real, 2005; Rimal, 2008). However, no support was found for this normative feedback approach as adolescents who were provided with positive descriptive norms did not show any significant reductions in stigmatising responses. Nonetheless, descriptive norms were found to be a significant mediator between condition type and several stigma responses, providing further evidence of the important role that descriptive norms play in the expression of stigma among adolescents. No support was observed for the Theory of Normative Social Behaviour (TNSB; Rimal & Real, 2005). These findings may be attributed to methodological shortcomings with how the normative feedback approach was carried out in the current study, or may be indicative of wider methodological/theoretical limitations associated with normative approaches in general.

14.3 Theoretical and Practical Implications, Limitations & Issues for Consideration

Overall, this research makes several important contributions to the literature by addressing a number of theoretical and methodological shortcomings associated with the child and adolescent mental health stigma area. Specifically, it is argued that the scientific evaluation of anti-stigma research among adolescents is limited by; the lack of valid assessment tools to measure stigma (Mellor, 2014; Schachter et al., 2008); the lack of focus on all three cognitive, affective and behavioural components of stigma (Murman et al., 2014; Yamaguchi et al., 2011); the lack of empirical knowledge about the contextual factors contributing to the expression and maintenance of stigma (Beelmann & Heinemann, 2014; Parsesepe & Cabassa, 2013; Sierksma et al., 2015); the lack of an appropriate theoretical framework (MRC, 2015). A relevant highlight of this research is that it addresses these research limitations by taking an incremental approach to stigma reduction, whilst also being guided by underlying theoretical frameworks.

First, this research establishes a valid assessment of (explicit) stigma among adolescents and uses this measurement model to assess stigma throughout the three research studies. This allows for easy interpretation and comparison of findings between the separate studies and helps to ensure the validity of the obtained results. The empirical structure of this measurement model was guided by the tripartite conceptualisation of stigma (Corrigan &

Watson, 2002; Hinshaw, 2005; Martin & Gallio, 2015; Rusch et al., 2005). This research was among the first to empirically test this tri-component structure among an adolescent sample and the confirmation of this tripartite model of stigma has important implications for research and practice as it suggests that in order to develop a more comprehensive understanding of the factors that influence and maintain stigma, measurements should include assessments of all three cognitive, affective and behavioural elements.

Additionally, it is also postulated that stigma should be measured through both explicit and implicit assessments in order to provide a full representation and understanding of the construct (Stier & Hinshaw, 2007). The inclusion of an implicit assessment of stigma in the current research represents a significant contribution to the field, given the paucity of information available on adolescents' implicit responses toward their peers with mental health problems (Kopera et al., 2015; O'Driscoll et al., 2012; Peris, Teachman & Nosek, 2008). However, implicit stigma assessments were not included in Study 3, given the pilot nature of this research and the findings from Study 2 which indicated that norms did not play a substantiate role in influencing implicit stigma among adolescents.

On this note, although a plethora of social research suggested that group norms and empathy play an important role in influencing intergroup relations (Kiesner et al., 2003; Malti et al., 2012); no previous research had assessed the role that these factors may play in influencing adolescents' responses, within a mental health stigma context. Thus, this project made an incremental advance on the literature by attempting to inform the design of more effective stigma-reduction strategies by generating a greater understanding of the potential contribution these variables exert on the expression of both explicit and implicit mental health stigma in adolescents (Gulliver et al., 2010; Mukolo & Heflinger, 2010; Sierksma et al., 2014). This research also offers significant practical implications for future anti-stigma efforts by finding evidence to suggest that descriptive norms play a substantial role in influencing adolescents' (explicit) cognitive, affective and behavioural (intentions) responses toward their peers with depression.

By employing an experimental, pilot normative feedback technique, this research was also able to evaluate the causal effect that targeting normative perceptions may have on adolescents' stigma responses. A major strength of the current stigma reduction approach is that it was first informed by evidence-based research indicating that descriptive norms have an influential effect on explicit stigma responses (Study 2). A common criticism of the extant

anti-stigma literature is that it often fails to adopt an empirically driven approach to stigma reduction (Emerton, 2010; Gulliver et al., 2010; Mukolo & Heflinger, 2010). Although the normative intervention was not effective at reducing stigma, the findings from this research are important as they highlight pertinent considerations for future research and practice. Namely, this research shows the potential negative impact normative approaches may have on stigma responses and raises awareness of the ethical considerations associated with using normative feedback techniques in this area. Additionally, the research highlights possible methodological issues that may bias the utility of normative feedback approaches in school settings. However, further research is needed in order to generate greater understanding of how to best design these normative ‘anti-stigma’ techniques and facilitate adolescents’ engagement with the intervention process. Conducting further feasibility and exploratory work in this area, such as involving adolescents in the research process, may lead to the development of a more effective normative feedback approach. Thus, future research in this area is paramount before the utility of these normative interventions can be fully appraised.

Another significant contribution of the research is that it attempted to advance understanding of how normative feedback approaches work by investigating the utility of the Theory of Normative Social Behaviour (TNSB; Rimal & Real, 2005) within an adolescent mental health stigma context. This is an important contribution as one of the major criticisms of normative approaches is their general lack of an underlying theoretical framework (Rimal, 2008). However, the importance of theory in interventions is increasingly recognised in the behaviour or attitude change literature (MRC, 2015). Michie et al. (2008) argue that employing a theoretical approach to intervention design is important, as it enables researchers to target the hypothesised causal processes involved in behaviour change (e.g. mechanisms of change). Theory also facilitates greater understanding of ‘what works’; which provides a better basis for the development of interventions that are effective across different contexts and populations (Michie et al., 2008). Hence, the lack of support observed for the TNSB in the current study has significant implications. First, these findings may highlight the importance of establishing a stronger, theoretical framework for normative feedback interventions that can account for the variation in the utility of these approaches under various circumstances. Alternatively, this apparent lack of support for the TNSB, may be indicative of methodological limitations associated with the manner in which the theoretical mechanisms (e.g. Injunctive Norms, Group Identity, Outcome Expectations) were measured or the way in which the intervention was conducted. Therefore, future research may benefit

from testing the effect of these theoretical moderators using a more rigorous experimental design or by employing alternative measures to assess these constructs with adolescents.

Thus, in sum, the novel, empirically driven approach adopted by this research has provided a number of beneficial contributions to the research field, and may have important implications for future anti-stigma research or practice. However, there are a number of limitations associated with this body of research, which are important to acknowledge. Furthermore, a number of important issues emerged from the findings of this dissertation which are relevant for discussion.

First, it is important to recognise that although a relevant highlight of this research is that it assesses which factors exert an influential effect on stigma and uses this empirical evidence to inform the design of a pilot intervention, this research exclusively assessed the influential effect of empathy and group norms on adolescents' stigmatising responses. The current research specifically targeted empathy and group norms as potential predictors of stigma, due to the wealth of research that has evidenced the significant role that these factors play in influencing and reducing stigma toward a variety of marginalised social groups (Beelmann & Heinemann, 2014; Lai et al., 2014; Poteat et al., 2013; Nesdale et al., 2005; Sierksma et al., 2015). However, other research has shown that adolescents' stigmatising responses toward people with mental health disorders can also be influenced by an array of factors, such as; knowing someone with a history of mental illness (Schachter et al., 2008); having a personal history of mental illness (Griffiths et al., 2008; Moses, 2010); parental attitudes (Jorm & Wright, 2008; Zhao et al., 2015); the individual's cultural background (Yang et al., 2007); and knowledge about the aetiology and treatability of specific mental health conditions (Jorm et al., 2006; Yap et al., 2013). Thus, to further enhance the applied utility of the current findings, future investigations should strive to compare the effect of empathy and group norms on adolescents' stigma responses, with other known predictors. Assessing the effect of these predictors simultaneously may help the development of more robust stigma reduction techniques among adolescents.

Crucially, the rationale for this doctoral project was based on previous research findings which suggested that adolescents evidence stigmatising attitudes toward their peers with mental health difficulties, such as depression (Adler & Wahl, 1998; Faulkner et al., 2012; Griffiths et al., 2009; Hoza, 2005; Ng & Chan, 2002; Parcesepe & Cabassa, 2013). Conversely, the findings which emerged from this research indicated that adolescents

appeared to express relatively low levels of stigma across the separate research studies. While this finding is unexpected, it is in line with findings from other similar investigations (Calear et al., 2011; Mason et al., 2015; Wahl et al., 2012; Yoshioka et al., 2014). For example, although past research has indicated that adolescents tend to express more stigmatising responses toward peers who evidence mental health difficulties, than they do toward typically developing peers or peers who experience other health conditions (Corrigan et al., 2005b; O'Driscoll et al., 2012; Walker et al., 2008); overall, adolescents in these studies were found to endorse relatively mild to moderate levels of stigma toward these peers. However, as with the current research, it is difficult to quantify the level of stigmatisation expressed by adolescents as these investigations tend to rely on the interpretation of mean scores as proxy measures of stigmatisation. As these stigma assessments may be subject to floor effects (Corrigan et al., 2005b; Corrigan et al., 2015), this may bias the interpretation of these mean responses (Harris et al., 2015; Stucki et al., 1999). Nonetheless, these findings may suggest that adolescents are not as overtly stigmatising toward peers with depression as initially expected.

On the other hand, findings from other stigma research indicate that public mental health stigma among adolescents does appear to be a major cause of concern. For example, evidence from experimental studies show that adolescents with depression are more likely to be rejected by their peers than typically developing adolescents. For instance, Connolly et al. (1992) found that adolescents who interacted with depressed peers rated these peers more negatively than the other typically developing adolescents they interacted with, even though they were unaware of the teens' diagnoses. Additionally, research investigating the real-life experiences of adolescents who experience depressive symptoms also indicates that rejection from the peer social group is a very real possibility facing these adolescents (Moses, 2010). Vernberg (1990) found that higher levels of depressive affect in adolescents contributed to increases in rejection over time. Additionally, Moses (2014) found that 70% of adolescents who had experienced psychiatric treatment (where 66.7% of the sample experienced depressive disorders) reported experiencing some form of stigma, with disrespect and insults from peers being the most common form of enacted stigma. Furthermore, observations from recent qualitative investigations also provide evidence to suggest that adolescents tend to express negative connotations in their evaluations of their peers with mental health problems, such as depression (O'Driscoll et al., 2014; Rose et al., 2007).

Thus, there appears to be contrasting evidence emerging regarding the magnitude of public stigma among adolescents. Given the inconsistencies that exist across these studies in terms of the different methods employed, the age range of participants, the operationalisation of stigma, the severity of symptoms depicted, and the gender and age of the target characters/peers, comparison of these findings are problematic (Dixon et al., 2012). Additionally, it is argued that the predominance of cross-sectional data and lack of longitudinal data makes it difficult to understand causal relationships in the expression of stigma over time (Parcesepe & Cabassa, 2013). However, the contrasting evidence which has emerged may suggest that the type of methodology employed by researchers, or the manner in which stigma is assessed, may affect the magnitude of stigmatising responses observed. For instance, the findings from the current (and other similar) research may indicate that adolescents are motivated to control the expression of stigma under cross-sectional research or surveys, which are often subject to social desirability responding (Greenwald & Banaji, 1995). Although this research employed implicit stigma assessments, which are advantageous for controlling for potential social desirability responses (Hinshaw, 2005), these implicit assessments were only included in Study 2 of this doctoral thesis. Additionally, the implicit measures employed in this research only assessed one aspect of stigma (e.g. implicit attitudes). Hence, it is difficult to compare the magnitude of stigma observed between the implicit and explicit assessments. If social desirability was an influential factor in the current research then the dominant focus on explicit assessments of stigma in this project may account for the low expression of stigma among these adolescents. It was beyond the scope of this research to include additional implicit assessments of stigma, given the time commitments associate with these assessments; however, this is an important recommendation for future research, in order to allow for a more direct comparison between the magnitude of explicit and implicit endorsements of the construct.

It may be possible that differences between the *types* of stigma assessed may also explain some of the observed discrepancies between the level of stigma expressed in the current research and that apparent from research on enacted stigma experiences and other qualitative investigations (e.g. Moses, 2010; Rose et al., 2007). For example, research from qualitative investigations by O'Driscoll et al. (2014) revealed that adolescents regarded their peers with depression as boring or unable to engage in reciprocal friendship. In contrast, the current research assessed other specific stigma responses, such as perceptions of dangerousness, responsibility, warmth & competency etc. Hence, it is possible that more

negative responses may have been observed had a more expansive measure of stigma been included in the research.

Additionally, although an advantage of this research is that it employed a wide selection of measures to assess various aspects of each component of stigma (e.g. Stereotypes, Prejudice and Discrimination), it is important to acknowledge that all measures included in this research were selected from pre-established stigma instruments. Nonetheless, there appears to be a discrepancy between the aspects of stigma measured in these instruments and the stereotypes and responses which have emerged from qualitative investigations with children and adolescents. For example, qualitative research, such as that carried out by O'Driscoll et al. (2012) and Rose et al. (2007), revealed that adolescents often use words such as 'boring' and 'weird' when referring to their peers with mental health problems. However, traditional measurements of stigma, which are often adapted from the adult literature, fail to assess these types of stigma responses. Thus, as this research did not include adolescents as stakeholders in this research, or involve adolescents more directly in the generation of stigma items, there may be important aspects of adolescents' stigma responses that are not captured within the current research. Hence, future stigma research would benefit from exploratory work or by involving adolescents more directly in the development of stigma measures.

Moreover, personal accounts of stigma often refer to actual behavioural experiences or encounters of adolescents with mental health problems (Moses, 2010), whereas the current research only assessed adolescents' behavioural intentions toward hypothetical, depressed peers. However, given the ethical and methodological constraints often associated with mental health stigma research, assessments of real-life behaviour toward children or adolescents with mental health difficulties is not always feasible. Although behavioural intentions are commonly used as a proxy measure of behaviour in these circumstances (Corrigan et al., 2012; McKeague et al., 2015), the current research cannot be considered reflective of adolescents' actual behaviour toward peers with depression. In order to improve the ecological validity of stigma research, it is recommended that future research explore actual behavioural responses. Alternatively, as assessments of real-life peer discrimination may be difficult, due to associated ethical considerations, it is also suggested that research may benefit from employing more experimental behavioural techniques, which may act as better proxy measures of actual behaviour (e.g. Cyberball; Williams & Jarvis, 2006).

Similarly, the reliance on written vignettes in the current research may have impeded the ecological validity of the findings and may help explain why adolescents expressed relatively low levels of stigma toward the depressed target. Although vignettes are considered a good-quality proxy tool for assessing children's intergroup responses (Mukolo et al. 2010) and are widely employed in stigma research (Burns & Rapee, 2006; Calexar et al., 2011; Griffiths et al., 2008; Jorm & Wright, 2008), some caution must be exerted when attempting to generalise these findings to real-life settings (Schoenberg & Ravdal, 2000). Crucially, it is argued that vignette based research may lack the ecological validity of research conducted in real-world settings. Although there is limited research available assessing children and adolescents' responses toward actual peers with mental health problems, initial evidence suggests that children may display more positive responses toward hypothetical peers with mental health problems than their real-life peers (Juvonen, 1991). In order to address some of these ecological concerns, social researchers have started employing other innovative, methodologies to assess intergroup responses, such as utilising videotaped, rather than written, vignettes (Cohn, Dupuis & Brown, 2009). It is argued that this technique may be advantageous in that it increases ecological validity, by providing greater contextual information, while avoiding the potential ethical implications involved in assessing responses toward real-life peers (Van Der Bruggen & Grubb, 2014). Thus, future research may benefit from moving away from traditional, written-vignette based investigations of stigma and attempting to evaluate this construct under more applied contexts.

A further important limitation of the current research is that these findings provide a representation of how adolescents respond toward their peers with depression, specifically. Hence, these results do not shed light on adolescents' (or any other age group's) responses toward peers with other forms of mental health difficulties. Previous research has shown that individuals' stigmatising responses can vary according to which mental health condition is being investigated (Crisp et al., 2000; Hinshaw, 2005), and that individuals may not stigmatise people with depression as readily as they stigmatise people with other conditions (Parcesepe & Cabassa, 2013; Walker et al., 2008). Given the prevalence of depression during adolescence (Martin et al., 2006; NIMH, 2012; WHO, 2014), this was considered an important condition to investigate but caution must be expressed if generalising these findings to other mental health conditions.

Finally, when considering the applications of this research it is important to comment on the representativeness of the sample. Although a major strength of this research is that,

across the three studies, a large sample of adolescents was recruited to this research, these adolescents were recruited using a stratified random sampling approach. Adolescents were recruited from a wide selection of secondary schools to ensure a variety in the type of schools targeted (e.g., mixed/ single sex, DEIS, etc.). There are approximately 325 public secondary schools in Ireland in which 190, 587 adolescents are enrolled in second level education in Ireland (Department of Education & Skills, 2016). Thus this research recruited approximately 12% of Irish secondary schools and 9% of secondary students. However, all schools were recruited to this research using a stratified random sampling approach, for convenience purposes. In order to ensure greater diversity in the type of adolescents recruited to this form of research, future studies may benefit from utilising a formal randomisation approach.

14.4 Overall Conclusion

The current investigation helps to further understanding of public stigma towards depression in adolescents and provides an important foundation for further exploration into anti-stigma research among adolescents. This research identifies the complex, multidimensional nature of stigma and highlights the importance of establishing validated measures of this construct among adolescents. This research also provides an important contribution to the field by conducting a novel investigation into the role that empathy and group norms may play in the expression of stigma among adolescents and used this empirical evidence to inform the design of a pilot stigma-reduction strategy. Notably, this research provides initial evidence to suggest that descriptive norms may play an influential role in the expression of mental health stigma among adolescents. However, this research also suggests that normative feedback interventions may not be universally effective at reducing public mental health stigma among adolescents and highlights several methodological and theoretical limitations that should be addressed by future research. Although there are a number of limitations associated with this research, overall, this project addresses a number of important research gaps evident in the adolescent mental health stigma literature and makes a novel contribution to the research area. However, findings from the current research indicate that new, standardised methods of exploring mental health stigma among adolescents may be necessary in order to generate greater understanding of the type, and magnitude, of stigma expressed by adolescents, in a manner which is more reflective of real-life encounters among adolescents. Additionally, future research would benefit from conducting further theory-based investigations in the area of adolescent mental health stigma, in order to identify the factors which may contribute to the expression of these stereotypic, prejudicial and discriminatory responses, and facilitate the design of more effective anti-stigma programmes.

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Appendices

Appendix A

Comparison of Original and Adapted Vignettes

O'Driscoll et al. (2012) Original Vignette:

Larry is in the same year as you. He used to love playing sports and hanging out with his friends after school. Last year, he was the captain of his football team, however, recently he has stopped going to training. His classmates have noticed that he isn't interested in anything lately and doesn't hang out with them anymore. He doesn't smile or laugh as much as he used to. Larry is falling behind in his school-work. When Larry's teacher asked him about this, Larry explained that he is feeling tired all the time and is finding it difficult to sleep at night. He wants to do better but thinks that he is not good at anything. Larry spends a lot of time thinking about all the things that he is not able to do and other sad thoughts.

Adapted Vignette:

Michael is in the same year as you. He used to enjoy lots of hobbies, such as hanging out with his friends and playing football for his local team. Although Michael sometimes complained about how much time the team had to spend training, he was normally quite good at turning up for practice. About six weeks ago, however, Michael started missing a lot of training sessions and has since stopped coming altogether. Over this time, Michael's friends have noticed a change in him, in that he doesn't seem interested in doing anything anymore and no longer makes an effort to hang out with them, or talk to them online. Some of Michael's close friends have also noticed that he seems to have lost his usual spark. Michael doesn't smile, or laugh, or appear to find as much enjoyment in things as he used to. Michael has also started to experience some problems at school. Over the past month or so, he has been constantly late for school and has started to fall behind on his school work. When the head teacher asked Michael about this, he said that he has been finding it extremely difficult to get to sleep at night and feels tired all the time. Michael explained that although he would like to do better in school, he just couldn't concentrate on things or think as well as he could before. Michael said that he feels sad all the time now and doesn't think that he is good at anything anymore.

Appendix B

Vignette Validation Cover Letter

Dear X,

My name is Charlotte Silke and I am a PhD student on the Child & Youth Research Programme in the School of Psychology at NUI, Galway. I am part of a research team that is interested in investigating how adolescents respond to peers who demonstrate different types of behaviours or characteristics. In order to investigate this, we are trying to create vignettes that are representative of the different types of peers that we wish to present.

I would like to ask for your help in the validation of these vignettes (see attached). If you agree to take part in this validation process, you will be asked to read two short vignettes describing two teenagers who demonstrate different characteristics and you will be asked to answer a few brief questions. This procedure should take approximately 5-10 minutes.

After completing this questionnaire I would be grateful if you could email the form back to me at c.silke1@nuigalway.ie

Thank you in advance for your help.

Yours Sincerely,

Charlotte Silke

On behalf of the research team:

Charlotte Silke, MSc
National University of Ireland
Galway

Dr. Caroline Heary, Ph.D
National University of Ireland,
Galway

Dr. Lorraine Swords, Ph.D,
Trinity College, Dublin

Appendix C

Vignette Validation Questionnaire

Please read the following vignettes and answer the subsequent questions

Nick

Nick is in the same year as you. He likes socialising with his friends and spends a lot of his spare time hanging around with them and chatting to them online. Nick tends to get on well with most of his classmates at school and there are one or two people in particular that he gets on really well with. However, there are still some people in Nick's year that he doesn't like, or get on with, as well as he does with others. Nick usually gets on well in school. Sometimes he gets into trouble with his teachers for talking in class but, in general, Nick's teachers don't have any real problems with him. Out of all of the teachers in the school, Nick said that he likes his English teacher the best, but that he would like her even more if she didn't give the class quite as much homework. Nick also has several hobbies. He likes sport and plays for his school's basketball team. Nick is also trying to learn to play the guitar and has been taking guitar lessons for the past few months. Nick really enjoys playing basketball for the school team, but he still wishes that he was better at it than he is now. Nick also used to really enjoy learning to play the guitar as well, but he has recently started to think that the lessons take up too much of his free time and so he has decided to give them up.

Do you think the child described in this vignette meets the criteria for a clinical diagnosis of a particular disorder?

YES

NO

If YES, please indicate which diagnosis you would make for the child described in the vignette

Do you think the child described in this vignette meets the criteria for a clinical diagnosis of a particular disorder?

YES NO

If YES, please indicate which diagnosis you would make for the child described in the vignette

Depression most likely diagnosis based on information available.

Please rate this vignette in terms of its accuracy in describing an adolescent with this clinical diagnosis.

Very Inaccurate	1	2	3	4	5	6	7	Very Accurate
Description								Description

What do you think the strengths of this vignette are, if any? Please specify

What do you think the limitations of this vignette are, if any? Please specify

Appendix D

Letter to School Principal



School of Psychology,
National University of Ireland,
Galway.
Date

Dear Principal,

My name is Charlotte Silke and I am a PhD student in the School of Psychology at NUI, Galway. I am part of a research team investigating what factors influence how teenagers respond to peers with mental health problems. I am contacting you in order to enquire whether your school would be interested in participating in this research study?

The aim of this research is to assess how students respond to peers with mental health problems. As part of the project, students will first be asked to complete a questionnaire, which will take approximately 30-40 minutes to administer. Parental consent will be sought for all students wishing to participate in this study.

We are hoping to recruit approximately 40-50 students from either their 4th or 5th year to participate in this study. Based on these numbers, this research can be carried within a couple of hours at each participating school. Should your school consent to take part, all effort will be made to cause minimal disruption to the school during the course of the study. All materials necessary for the completion of this project will be provided by NUIG and all researchers have received Garda Clearance to collect this information in schools. The one resource which is required from each participating school is the use of a classroom where the questionnaires can be administered.

We believe this study is important in order to generate a greater understanding of how adolescents feel about peers with mental health problems and to learn more about how we might help students to develop more positive attitudes toward mental health and their peers with mental health problems.

If you think this school would be interested in participating or if you would like any further information about this study, please do not hesitate to contact me directly on 0863489729 or by email at c.silke1@nuigalway.ie or you may contact Dr. Caroline Heary, who is overseeing this research, at 091-493569 or caroline.heary@nuigalway.ie I will endeavour to contact you by telephone within the next few days in order to enquire about your school's interest in participating in this study.

I realise that you receive a number of requests for access so I appreciate you taking the time to review this letter.

Yours Sincerely

Charlotte Silke

On behalf of the research team:

Charlotte Silke, MSc
National University of Ireland
Galway

Dr. Caroline Heary, Ph.D
National University of Ireland,
Galway

Dr. Lorraine Swords, Ph.D,
Trinity College,
Dublin

Appendix E
Participant Information Sheet (Study 1)



Teenagers' Perceptions of Other Teenagers



Dear Student,

You are being invited to take part in a psychological research study. This Information Sheet is intended to tell you about the purpose and procedure of the study. If you have any further questions about the study feel free to ask the researcher.

What is the purpose of the study?

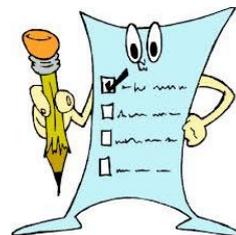
The purpose of the study is to learn more about friendship behaviour in young people and how teenagers view and feel about peers with different types of personalities.

Who can participate in this study?

Any teenager aged between 13-18 years of age who is currently enrolled in Secondary School can take part in this study.

What will I have to do?

You will be asked to read two short descriptions about two different teenagers. You will then be asked to answer questions about what you think and feel toward these teenagers and how you think your friends would react toward them. You will also answer some questions about how you think and feel in general.



How long will the study take to complete?

The questionnaire will take approximately 30-40 minutes to complete. It may take some students more or less time to finish the study.

Where/When will the study take place?

The study will be carried out in your school, during regular school hours. Each student that returns a signed parental consent form will be asked to complete a questionnaire in class.

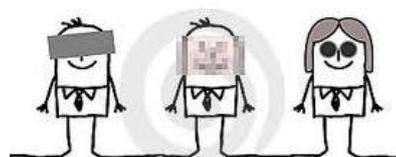
What are the benefits to taking part?

You will benefit from experiencing what it is like to take part in a psychological study and have an opportunity to ask the researcher any questions about the subject. Additionally, by participating in the study you will help to further understanding of why some teenagers are more or less liked than others. This information is important in designing future studies or programmes that can help excluded children or teenagers.

Will results from this study be kept confidential?

All information collected during the course of this study will be **anonymous** and no names will be attached to any information obtained. All information collected will be stored in a **confidential** manner. The only exception to confidentiality is if a child were to disclose information indicating that he/she was at risk of harm or danger. In such circumstances

parents and/or relevant school authorities would be informed.

**Do I have to take part?**

Participation is completely voluntary. Students are free to change their minds about participation at any stage during the study. Furthermore, students can refrain from answering any question that they do not feel comfortable answering. Parental consent is necessary for any student wishing to take part. Interested students will be asked to have a consent form signed by their parent/guardian and return it to the school before the day of the stud

Further Information

If you have any queries about this study, please do not hesitate to contact Charlotte Silke by email at c.silke1@nuigalway.ie or by telephone at 0863489729.

Appendix F
Parent Information Sheet and Consent Form (Study 1)



Dear Parent/Guardian,

I am writing to you to inform you about a research project which is being carried out by a research team at the National University of Ireland, Galway, on 'Teenagers' Perceptions of Peers'. Your child's school has agreed to facilitate this research and we are asking your child to take part in this study.

Students who take part in this study will be asked to read two short descriptions about two fictional teenagers who behave in different ways, and to answer questions in response to these teenagers. These questions will ask the students about how they think or feel toward the teenagers depicted in the stories and how they think their friends would respond to each character. Students will also be asked questions about how they think and feel in general.

The aim of this research is to investigate how children and adolescents react to peers who show atypical characteristics or behaviours and to learn more about what causes teenagers to react in this way. It is hoped that the information gathered in this study will be used to help design an intervention program which will promote and encourage the inclusion of similar teenagers who tend to be isolated or excluded by their peers.

Once the information collected has been analysed, a summary of our findings will be sent to all the schools and organisations that participated, so that the adolescents who took part in the study can learn more about the research findings. It is also possible that the results of this study may be published in an academic journal. However, this publication will make no reference to specific individuals or schools and no identifying material will be communicated.

We would be extremely grateful if you would grant your permission for your child to take part in this study. If you are willing to allow your child to take part, we ask that you complete and sign the consent form, located on the back of this letter, and ensure that it is returned to the school. This consent form also asks for some background details of your family. This information will be held confidentially. The reason we ask for this information is to ensure that the students who take part in this study are representative of all the different types of teenagers in Ireland. However, you are free to decline from completing this part of the form if you do not feel comfortable disclosing this information.

If you wish to know more about this research, an information sheet providing a detailed description of this study is included with this letter. Additionally, if you would like further details about any aspect of the study please feel free to contact me, Charlotte Silke, by telephone at 086 3489729 or by email at c.silke1@nuigalway.ie

Yours Faithfully,

On behalf of the research team:

Charlotte Silke, MSc
*National University of Ireland
Galway*

Dr. Caroline Heary, Ph.D
*National University of Ireland,
Galway*

Dr. Lorraine Swords, Ph.D,
*Trinity College,
Dublin*



Survey on Teenagers' Perceptions of Other Teenagers

Research Information Sheet

A group of researchers from NUI, Galway are carrying out a survey at your child's school and we are asking for your consent to allow your child to participate. Before you make this decision, it is important for you to understand why this research is being carried out and what will be required of your child should he/she take part. If there is anything that you are not clear about or wish to learn more about, feel free to contact the researchers involved. If you agree to allow your child to participate in this survey, please sign the Consent Form located at the end of this letter. Only those students who return signed parental consent forms to the school will be allowed to participate in this study. Thank you for taking the time to read this leaflet.

Who is doing this Research?

This research is being carried out by a team of researchers from the Schools of Psychology at The National University of Ireland, Galway and Trinity College Dublin.

What is the purpose of the study?

This study is concerned with creating a greater understanding of how teenagers feel and react toward various types of peers. The objective of this study is to learn more about what factors cause adolescents to respond more positively to typically developing peers as opposed to peers who show characteristics of mental health problems. It is hoped that the information gathered by this study will help to generate a greater understanding of why some teenagers are liked or included more than others.

Does my child have to take part?

Participation in this study is completely voluntary. Students will only be allowed to take part in this study if their parents have provided written consent. Only when you have signed and returned the consent form to the school will your child be allowed to participate. Your child will retain the final right to agree or decline to take part in the study.

What will my child have to do?

Your child will be asked to read two stories describing two fictional teenagers, who display different behavioural characteristics. Some of these stories will describe teenagers experiencing mental health issues or behavioural problems. Your child will be asked to answer questions about how they would think, feel and behave toward each story character. Your child will also be asked questions about how they think their friends would react to each character. Finally, your child will answer questions about his/her own general behaviour and feelings. This will be done to identify students who display similar characteristics to the story characters, and thus it is possible that your child may be sensitive to some of the questions being asked. However, your child will be informed at the start of the study that he/she may skip any questions that they do not feel comfortable answering.

What will I have to do?

Parents/Guardians are asked to indicate whether they wish their child to participate in this study or not by signing the Consent Form and returning it to the school. Parents/ Guardians will also be asked to provide some basic family background details. We ask for this information in order to investigate whether there are differences in the views of teenagers from different backgrounds. However, this information is optional and you do not have to disclose any information that you do not feel comfortable in giving.

How long will this survey take to complete?

It is estimated that the questionnaire will take approximately 30-40 minutes to complete and will be administered to students during class time.

What are the benefits to your child in taking part?

Your child will benefit from experiencing what it is like to take part in a psychological study. Additionally, your child may benefit from the knowledge that he/she will have helped to further understanding in this area and that the information gathered by the students who take part in this study may be used in further research studies or programmes that aim at promoting inclusion for all children and teenagers.

What are the potential risks associated with taking part?

There are no foreseen risks to taking part in this study. This study may take up some of your child's school time, however, it is hoped that this will not be upsetting to students. In one section of the questionnaire, students will be asked to complete questions about their own feelings and behaviours. However, students may refrain from responding to any questions which they do not feel comfortable answering.

What will happen at the end of the study?

All information obtained from the teenagers in this study will be transferred onto a computer in such a way that it cannot be linked to any named individuals. It is possible that the results of this study will be published in an academic journal; however, this publication will make no reference to specific individuals or schools. All information collected and reported will remain anonymous and confidential. A summary of the research findings will be sent to all participating schools and organisations.

Voluntary Participation/Withdrawal

Participation is entirely voluntary. If you decide to allow your child to participate, your child will then be approached and invited to participate in this study. Your child will reserve the final right to decline to take part. Your child will be told that he/she may skip any questions that he/she does not feel comfortable answering and that he/she is free to withdraw from the study at any time.

Will my child's results from this study be kept confidential?

All information that is collected during the course of the research will be held confidentially. Only members of the research team, Charlotte Silke, Dr. Caroline Heary and Dr. Lorraine Swords, will have access to this information. Results from this study will be reported in a way that keeps your child's identity anonymous. The only exception to confidentiality is if a child were to disclose information indicating that he/she was at risk of harm or danger. In such circumstances parents and/or relevant school authorities would have to be informed.

Further Information

If you have any questions, please do not hesitate to contact Charlotte Silke by telephone on 0863489729 or by email at c.silke1@nuigalway.ie You may also contact Dr. Caroline Heary who is currently facilitating this research at caroline.heary@nuigalway.ie

Thank you very much for allowing your child to take part in this study, your co-operation is much appreciated.



Parent/Guardian Consent Form

NOTE: Please ask your child to return this Consent Form to the School as soon as possible. Thank You.

Please read this form and tick the relevant boxes below to indicate whether or not you agree to allow your child to take part in the study. Please sign this form in the space provided below.

Please Tick

- | | |
|---|--------------------------|
| 1. I confirm that I have read the information sheet provided and that I understand the information provided. | <input type="checkbox"/> |
| 2. I am satisfied that I have had enough time to process the information. | <input type="checkbox"/> |
| 3. I understand that all information will be kept confidential, except for where a child indicates that he/she is a risk of harm or danger. | <input type="checkbox"/> |
| 4. I am aware of what this study involves and agree to allow my child to participate. | <input type="checkbox"/> |

Signed _____ **Date** _____

Child's Name: _____

Child Date of Birth: _____ / _____ / _____
(DD) (MM) (YEAR)

Parent Contact Number: _____

Appendix G
Participant Information Sheet Including Implicit Association Test Information (Study 2)



OÉ Gaillimh
NUI Galway

Teenagers' Perceptions of Other Teenagers



Dear Student,

You are being invited to take part in a psychological research study. This Information Sheet is intended to tell you about the purpose and procedure of the study. If you have any further questions about the study feel free to ask the researcher.

What is the purpose of the study?

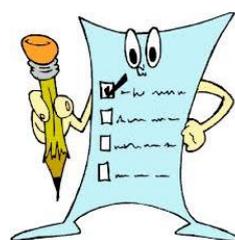
The purpose of the study is to learn more about friendship behaviour in young people and how teenagers view and feel about peers with different types of personalities.

Who can participate in this study?

Any teenager aged between 13-18 years of age who is currently enrolled in Secondary School can take part in this study.

What will I have to do?

You will be asked to read two short descriptions about two different teenagers. You will then be asked to answer questions about what you think and feel toward these teenagers and how you think your friends would react toward them. You will also answer some questions about how you think and feel in general.



After completing the questionnaire, you will take part in a short computer task. Here you will be asked to sort words and sentences together in a categorisation task.

How long will the study take to complete?

The questionnaire will take approximately 30-40 minutes to complete. The computer task will take approximately 10-15 minutes. It may take some students more or less time to finish the study.

Where/When will the study take place?

The study will be carried out in your school, during regular school hours. Each student that returns a signed parental consent form will be asked to complete a questionnaire in class. You will then be taken in small groups to complete the computer task.

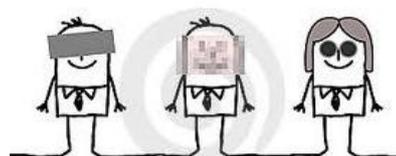
What are the benefits to taking part?

You will benefit from experiencing what it is like to take part in a psychological study and have an opportunity to ask the researcher any questions about the subject. Additionally, by participating in the study you will help to further understanding of why some teenagers are more or less liked than others. This information is important in designing future studies or programmes that can help excluded children or teenagers.

Will results from this study be kept confidential?

All information collected during the course of this study will be **anonymous** and no names will be attached to any information obtained. All information collected will be stored in a **confidential** manner. The only exception to confidentiality is if a child were to disclose information indicating that he/she was at risk of harm or danger. In such circumstances

parents and/or relevant school authorities would be informed.

**Do I have to take part?**

Participation is completely voluntary. Students are free to change their minds about participation at any stage during the study. Furthermore, students can refrain from answering any question that they do not feel comfortable answering. Parental consent is necessary for any student wishing to take part. Interested students will be asked to have a consent form signed by their parent/guardian and return it to the school before the day of the study.

Further Information

If you have any queries about this study, please do not hesitate to contact Charlotte Silke by email at c.silke1@nuigalway.ie or by telephone at 0863489729.

Appendix H
Parental Information Sheet and Consent Forms Containing Implicit Association Test
Information (Study 2)



Dear Parent/Guardian,

I am writing to you to inform you about a research project which is being carried out by a research team at the National University of Ireland, Galway, on 'Teenagers' Perceptions of Peers'. Your child's school has agreed to facilitate this research and we are asking your child to take part in this study.

Students who take part in this study will be asked to read two short descriptions about two fictional teenagers who behave in different ways, and to answer questions in response to these teenagers. These questions will ask the students about how they think or feel toward the teenagers depicted in the stories and how they think their friends would respond to each character. Students will also be asked questions about how they think and feel in general. Additionally, students will be asked to complete a brief computer task that will ask them to match descriptions of the teenagers described in the stories to words that they think best represent them. All this information will be collected anonymously from the students.

The aim of this research is to investigate how children and adolescents react to peers who show atypical characteristics or behaviours and to learn more about what causes teenagers to react in this way. It is hoped that the information gathered in this study will be used to help design an intervention program which will promote and encourage the inclusion of similar teenagers who tend to be isolated or excluded by their peers.

Once the information collected has been analysed, a summary of our findings will be sent to all the schools and organisations that participated, so that the adolescents who took part in the study can learn more about the research findings. It is also possible that the results of this study may be published in an academic journal. However, this publication will make no reference to specific individuals or schools and no identifying material will be communicated.

We would be extremely grateful if you would grant your permission for your child to take part in this study. If you are willing to allow your child to take part, we ask that you complete and sign the consent form, located on the back of this letter, and ensure that it is returned to the school. This consent form also asks for some background details of your family. This information will be held confidentially. The reason we ask for this information is to ensure that the students who take part in this study are representative of all the different types of teenagers in Ireland. However, you are free to decline from completing this part of the form if you do not feel comfortable disclosing this information.

If you wish to know more about this research, an information sheet providing a detailed description of this study is included with this letter. Additionally, if you would like further details about any aspect of the study please feel free to contact me, Charlotte Silke, by telephone at 086 3489729 or by email at c.silke1@nuigalway.ie

Yours Faithfully,

On behalf of the research team:

Charlotte Silke, MSc
*National University of Ireland
Galway*

Dr. Caroline Heary, Ph.D
*National University of Ireland,
Galway*

Dr. Lorraine Swords, Ph.D,
*Trinity College,
Dublin*



Survey on Teenagers' Perceptions of Other Teenagers

Research Information Sheet

A group of researchers from NUI, Galway are carrying out a survey at your child's school and we are asking for your consent to allow your child to participate. Before you make this decision, it is important for you to understand why this research is being carried out and what will be required of your child should he/she take part. If there is anything that you are not clear about or wish to learn more about, feel free to contact the researchers involved. If you agree to allow your child to participate in this survey, please sign the Consent Form located at the end of this letter. Only those students who return signed parental consent forms to the school will be allowed to participate in this study. Thank you for taking the time to read this leaflet.

Who is doing this Research?

This research is being carried out by a team of researchers from the Schools of Psychology at The National University of Ireland, Galway and Trinity College Dublin.

What is the purpose of the study?

This study is concerned with creating a greater understanding of how teenagers feel and react toward various types of peers. The objective of this study is to learn more about what factors cause adolescents to respond more positively to typically developing peers as opposed to peers who show characteristics of mental health problems. It is hoped that the information gathered by this study will help to generate a greater understanding of why some teenagers are liked or included more than others.

Does my child have to take part?

Participation in this study is completely voluntary. Students will only be allowed to take part in this study if their parents have provided written consent. Only when you have signed and returned the consent form to the school will your child be allowed to participate. Your child will retain the final right to agree or decline to take part in the study.

What will my child have to do?

Your child will be asked to read two stories describing two fictional teenagers, who display different behavioural characteristics. Some of these stories will describe teenagers experiencing mental health issues or behavioural problems. Your child will be asked to answer questions about how they would think, feel and behave toward each story character. Your child will also be asked questions about how they think their friends would react to each character. Finally, your child will answer questions about his/her own general behaviour and feelings. This will be done to identify students who display similar characteristics to the story characters, and thus it is possible that your child may be sensitive to some of the questions being asked. However, your child will be informed at the start of the study that he/she may skip any questions that they do not feel comfortable answering. Additionally, upon completion of the questionnaire, your child will be asked to complete a computer based word categorisation task.

What will I have to do?

Parents/Guardians are asked to indicate whether they wish their child to participate in this study or not by signing the Consent Form and returning it to the school. Parents/ Guardians will also be asked to provide some basic family background details. We ask for this information in order to investigate whether there are differences in the views of teenagers from different backgrounds. However, this information is optional and you do not have to disclose any information that you do not feel comfortable in giving.

How long will this survey take to complete?

It is estimated that the questionnaire will take approximately 30-40 minutes to complete and will be administered to students during class time. It is anticipated that the computer task will take approximately 15 minutes for students to complete.

What are the benefits to your child in taking part?

Your child will benefit from experiencing what it is like to take part in a psychological study. Additionally, your child may benefit from the knowledge that he/she will have helped to further understanding in this area and that the information gathered by the students who take part in this study may be used in further research studies or programmes that aim at promoting inclusion for all children and teenagers.

What are the potential risks associated with taking part?

There are no foreseen risks to taking part in this study. This study may take up some of your child's school time, however, it is hoped that this will not be upsetting to students. In one section of the questionnaire, students will be asked to complete questions about their own feelings and behaviours. However, students may refrain from responding to any questions which they do not feel comfortable answering.

What will happen at the end of the study?

All information obtained from the teenagers in this study will be transferred onto a computer in such a way that it cannot be linked to any named individuals. It is possible that the results of this study will be published in an academic journal; however, this publication will make no reference to specific individuals or schools. All information collected and reported will remain anonymous and confidential. A summary of the research findings will be sent to all participating schools and organisations.

Voluntary Participation/Withdrawal

Participation is entirely voluntary. If you decide to allow your child to participate, your child will then be approached and invited to participate in this study. Your child will reserve the final right to decline to take part. Your child will be told that he/she may skip any questions that he/she does not feel comfortable answering and that he/she is free to withdraw from the study at any time.

Will my child's results from this study be kept confidential?

All information that is collected during the course of the research will be held confidentially. Only members of the research team, Charlotte Silke, Dr. Caroline Heary and Dr. Lorraine Swords, will have access to this information. Results from this study will be reported in a way that keeps your child's identity anonymous. The only exception to confidentiality is if a child were to disclose information indicating that he/she was at risk of harm or danger. In such circumstances parents and/or relevant school authorities would have to be informed.

Further Information

If you have any questions, please do not hesitate to contact Charlotte Silke by telephone on 0863489729 or by email at c.silke1@nuigalway.ie You may also contact Dr. Caroline Heary who is currently facilitating this research at caroline.heary@nuigalway.ie

Thank you very much for allowing your child to take part in this study, your co-operation is much appreciated.



Parent/Guardian Consent Form

NOTE: Please ask your child to return this Consent Form to the School as soon as possible. Thank You.

Please read this form and tick the relevant boxes below to indicate whether or not you agree to allow your child to take part in the study. Please sign this form in the space provided below.

Please Tick

- 1. I confirm that I have read the information sheet provided and that I understand the information provided.
- 2. I am satisfied that I have had enough time to process the information.
- 3. I understand that all information will be kept confidential, except for where a child indicates that he/she is a risk of harm or danger.
- 4. I am aware of what this study involves and agree to allow my child to participate.

Signed _____ **Date** _____

Child's Name: _____

Child Date of Birth: _____ / _____ / _____
(DD) (MM) (YEAR)

Parent Contact Number: _____

Appendix I
Name Behaviour Training Task

Instructions

You are going to read about two teenagers named MICHELLE and NICOLA. These girls are the same age as you. You might know other teenagers with the same names as these girls but the teenagers mentioned here are not known by you and they do not live near you or go to the same school. Once you have read about both these teenagers, you will be asked to take part in a name-identifier task. You will first be shown sentences that describe either Michelle or Nicola. You will then be shown these sentences again and asked to identify whether the sentence is describing Michelle or Nicola. Please take as long as you need to read about Michelle and Nicola. When you are ready to start please turn over the page.

Michelle

Michelle is in the same year as you. She used to enjoy lots of hobbies, such as hanging out with her friends and playing football for her local team. Although Michelle sometimes complained about how much time the team had to spend training, she was usually quite good at turning up for practice. A few months ago, Michelle started missing a lot of training sessions and has since stopped coming altogether. Over this time, Michelle's friends have noticed a change in her, in that she doesn't seem to be interested in doing things with them anymore as she no longer makes an effort to hang out with them or talk to them online. Some of Michelle's close friends have also noticed that she seems more irritable lately and doesn't smile, or laugh, or appear to find as much enjoyment in things as she used to. Michelle has also started to experience some problems at school. Over the past six weeks or so, Michelle has been constantly late for school and has started to fall behind on her school work. When the head teacher asked Michelle about this, she said that she has been finding it extremely difficult to get to sleep at night and feels tired all the time. Michelle explained that although she would like to do better in school, she just couldn't concentrate on things or think as well as she used to. Michelle said that she just feels 'down' all the time now and doesn't think that she is good at anything anymore.

Nicola

Nicola is in the same year as you. She likes socialising with her friends and spends a lot of her spare time hanging around with them and chatting to them online. Nicola tends to get along well with most of her classmates at school and there are one or two people in particular that she gets on really well with. However, there are still a couple of people in Nicola's year that she doesn't especially like or click well with. Overall, Nicola usually gets on well in school. Sometimes she gets into trouble with her teachers for talking in class but, in general, Nicola's teachers don't have any real problems with her. Out of all of the teachers in the school, Nicola said that she likes her English teacher the best, but that she would like her even more if she didn't give the class quite as much homework. Nicola also has several hobbies. She likes sport and is a member of the school's basketball team. Nicola is also trying to learn to play the guitar and has been taking guitar lessons for the past few months. Nicola really enjoys playing basketball for the school, but she wishes that the team were slightly better than they are now. Nicola also used to really enjoy learning to play the guitar as well, but she has recently started to think that the lessons take up too much of her free time and so she has decided to give them up.

When you are ready, please turn the page to read the name-identifier sentences.

Please read these sentences carefully as your knowledge of Nicola and Michelle will be assessed.

1. MICHELLE feels tired all the time
2. NICOLA likes sport
3. MICHELLE is constantly late for school
4. NICOLA enjoys playing basketball
5. NICOLA likes her English teacher
6. MICHELLE seems irritable
7. MICHELLE can't concentrate on things
8. NICOLA has been taking guitar lessons
9. NICOLA wishes her team were better
10. MICHELLE feels down
11. NICOLA gets on well in school
12. MICHELLE stopped going to training

Once you have familiarised yourself with Michelle and Nicola and feel ready to begin the knowledge task please inform the researcher

Association Task

Please indicate which target you think each sentence is describing by writing their name into the space below

1. _____ Has Been Taking Guitar Lessons
2. _____ Feels Tired All the Time
3. _____ Gets On Well in School
4. _____ Enjoys Playing Basketball
5. _____ Can't Concentrate on Things
6. _____ Feels Down
7. _____ Is Constantly Late For School
8. _____ Likes Her English Teacher
9. _____ Stopped Going to Training
10. _____ Wishes her Team Was Better
11. _____ Likes Sport
12. _____ Seems Irritable



Your Views of Other Teenagers!

Questionnaire Booklet

Name.....

I.D. Number.....

Date of Birth/...../.....

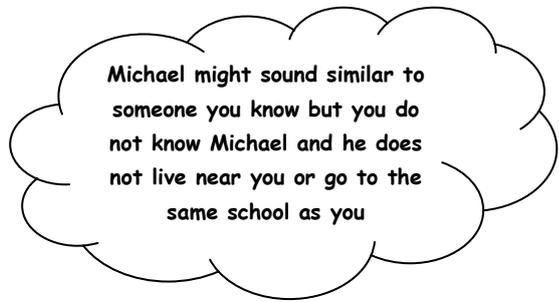
Year

Gender Male Female



You are going to read about two teenagers called MICHAEL and NICK. You will be asked to answer some questions about what you think and feel about these teenagers, what you think your friends would think about them and what you would feel comfortable doing with these boys. Please take your time to read these questions carefully and to respond as truthfully as possible. We are interested in your opinion. There are no right or wrong answers.

Michael



Michael is in the same year as you. He used to enjoy lots of hobbies, such as hanging out with his friends and playing football for his local team. Although Michael sometimes complained about how much time the team had to spend training, he was usually quite good at turning up for practice. A few months ago, Michael started missing a lot of training sessions and has since stopped coming altogether. Over this time, Michael's friends have noticed a change in him, in that he doesn't seem to be interested in doing things with them anymore as he no longer makes an effort to hang out with them or talk to them online. Some of Michael's close friends have also noticed that he seems more irritable lately and doesn't smile, or laugh, or appear to find as much enjoyment in things as he used to. Michael has also started to experience some problems at school. Over the past six weeks or so, Michael has been constantly late for school and has started to fall behind on his school work. When the head teacher asked Michael about this, he said that he has been finding it extremely difficult to get to sleep at night and feels tired all the time. Michael explained that although he would like to do better in school, he just couldn't concentrate on things or think as well as he used to. Michael said that he just feels 'down' all the time now and doesn't think that he is good at anything anymore.

	Yes	No
Do you know someone like Michael?		

	Once every few months	Once every few weeks	Every Week	Every Day
<i>IF</i> you know someone like Michael, how often do you see him/her?				

	Not At All	Not Really	A Little	A Lot
Do you think that you are like Michael?				

What Do You Think About Michael?

Please rate the extent to which you agree or disagree with the following statements

1. Michael is lacking in self-control
(Definitely Not True) 1 2 3 4 5 (Definitely True)
2. Michael is Unpredictable
(Definitely Not True) 1 2 3 4 5 (Definitely True)
3. Michael is Dangerous
(Definitely Not True) 1 2 3 4 5 (Definitely True)
4. Michael is Aggressive
(Definitely Not True) 1 2 3 4 5 (Definitely True)
5. Michael is Frightening
(Definitely Not True) 1 2 3 4 5 (Definitely True)
6. Michael is Strange
(Definitely Not True) 1 2 3 4 5 (Definitely True)
7. Michael is Helpless
(Definitely Not True) 1 2 3 4 5 (Definitely True)
8. Michael is Needy
(Definitely Not True) 1 2 3 4 5 (Definitely True)
9. Michael is Dependent on Others
(Definitely Not True) 1 2 3 4 5 (Definitely True)

Please rate the extent to which you think Michael shows the following traits.

1. In general, how much do you believe that Michael is WARM-HEARTED?
(Not At All) 1 2 3 4 5 (Extremely)
2. In general, how much do you believe that Michael is GOOD-NATURED?
(Not At All) 1 2 3 4 5 (Extremely)
3. In general, how much do you believe that Michael is HONEST?
(Not At All) 1 2 3 4 5 (Extremely)
4. In general, how much do you believe that Michael is FRIENDLY?
(Not At All) 1 2 3 4 5 (Extremely)
5. In general, how much do you believe that Michael is CLEVER?
(Not At All) 1 2 3 4 5 (Extremely)
6. In general, how much do you believe that Michael is CAPABLE?
(Not At All) 1 2 3 4 5 (Extremely)
7. In general, how much do you believe that Michael is INTELLIGENT?
(Not At All) 1 2 3 4 5 (Extremely)
8. In general, how much do you believe that Michael is SKILLED?
(Not At All) 1 2 3 4 5 (Extremely)

Please circle the response that best indicates what you think about Michael

1. **Michael acts like this because he copies other teenagers.**
 Agree a lot Agree a little Disagree a little Disagree a lot
2. **Michael acts this way just because he wants to and thinks it's cool.**
 Agree a lot Agree a little Disagree a little Disagree a lot
3. **Michael acts like this to show off or get attention from other teenagers**
 Agree a lot Agree a little Disagree a little Disagree a lot
4. **Do you think that Michael wants to act the way that he does?**
 Agree a lot Agree a little Disagree a little Disagree a lot

What Kind of Words Would You Associate with Michael?

Please rate the extent to which you would associate the following adjectives with Michael

Terrible	1	2	3	4	5	Excellent
Horrible	1	2	3	4	5	Wonderful
Nasty	1	2	3	4	5	Joyful
Awful	1	2	3	4	5	Great

How Do You Feel About Michael?

Please make a rating that best represents how you would feel toward Michael

1. **Michael would make me feel uneasy**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
2. **I would feel afraid of Michael**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
3. **Michael would make me feel embarrassed**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
4. **Michael would make me feel insecure**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
5. **I would want to help Michael**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
6. **I would pity Michael**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
7. **I would empathise with Michael**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
8. **I would make fun of Michael**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
9. **Michael would make me angry**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
10. **Michael would irritate me**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
11. **I would not understand Michael**
 (Definitely the Case) 1 2 3 4 5 (Definitely not the Case)

How Much Do You Like Michael?

How much do you like Michael?

(Not at all) 1 2 3 4 5 6 7 (Very Much)

What Would You Do With Michael?

Imagine that Michael is moving near you and will be joining your class in school. What types of activities would you like to do with him? Tick the answer that best shows how you feel about doing each of these things with Michael

		Yes	Probably Yes	Probably Not	No
a.	I would tell him about a homework assignment if he is absent from class.				
b.	I would stand next to him while waiting in line.				
c.	I would hang out with him after school.				
d.	I would lend him a pencil or a pen.				
e.	I would share a secret with him.				
f.	I would help him with a math problem.				
g.	I would talk to him in class during free time.				
h.	I would invite him to my house.				
i.	I would sit next to him in class.				
j.	I would defend him.				
k.	I would hang out with him during free time in school.				
l.	I would go up to him and say hello.				
m.	I would share part of my lunch with him.				
n.	I would call him on the telephone.				
o.	I would sit next to him on a bus on a field trip.				
p.	I would tell him about myself.				
q.	I would help him with a class project.				
r.	I would tell him something nobody else knows.				
s.	I would introduce him to my friends.				
t.	I would choose him as a partner in a game.				
u.	I would stick up for him.				

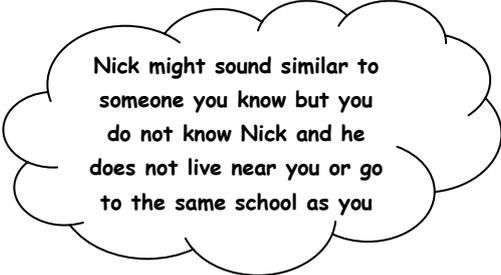
How would your friends react towards Michael?

Please rate how much you agree or disagree with each of the following statements

- I think that my friends would like Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I think that my friends would hang around with Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I think that my friends would become close friends with Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I think that my friends would try to get to know Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I believe my friends would distance themselves from Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I think that my friends would hang around with me less if I was friends with Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I believe that my friends would think less of me if I liked Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I think that my friends would disapprove of me trying to get to know Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I believe that my friends would like me less if I became close friends with Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I believe that my friends would distance themselves from me if I started hanging around with Michael**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

You are now going to read about Nick. Remember there are no right or wrong answers. Please answer all questions as honestly as possible.

Nick



Nick is in the same year as you. He likes socialising with his friends and spends a lot of his spare time hanging around with them and chatting to them online. Nick tends to get along well with most of his classmates at school and there are one or two people in particular that he gets on really well with. However, there are still a couple of people in Nick's year that he doesn't especially like or click well with. Overall, Nick usually gets on well in school. Sometimes he gets into trouble with his teachers for talking in class but, in general, Nick's teachers don't have any real problems with him. Out of all of the teachers in the school, Nick said that he likes his English teacher the best, but that he would like her even more if she didn't give the class quite as much homework. Nick also has several hobbies. He likes sport and is a member of the school's basketball team. Nick is also trying to learn to play the guitar and has been taking guitar lessons for the past few months. Nick really enjoys playing basketball for the school, but he wishes that the team were slightly better than they are now. Nick also used to really enjoy learning to play the guitar as well, but he has recently started to think that the lessons take up too much of his free time and so he has decided to give them up.

	Yes	No
Do you know someone like Nick?		

	Once every few months	Once every few weeks	Every Week	Every Day
<i>IF</i> you know someone like Nick, how often do you see him/her?				

	Not At All	Not Really	A Little	A Lot
Do you think that you are like Nick?				

What Do You Think About Nick?

Please rate the extent to which you agree or disagree with the following statements

- Nick is lacking in self-control
(Definitely Not True) 1 2 3 4 5 (Definitely True)
- Nick is Unpredictable
(Definitely Not True) 1 2 3 4 5 (Definitely True)

3. Nick is Dangerous (Definitely Not True)	1	2	3	4	5	(Definitely True)
4. Nick is Aggressive (Definitely Not True)	1	2	3	4	5	(Definitely True)
5. Nick is Frightening (Definitely Not True)	1	2	3	4	5	(Definitely True)
6. Nick is Strange (Definitely Not True)	1	2	3	4	5	(Definitely True)
7. Nick is Helpless (Definitely Not True)	1	2	3	4	5	(Definitely True)
8. Nick is Needy (Definitely Not True)	1	2	3	4	5	(Definitely True)
9. Nick is Dependent on Others (Definitely Not True)	1	2	3	4	5	(Definitely True)

Please rate the extent to which you think Nick shows the following traits.

1. In general, how much do you believe that Nick is WARM-HEARTED? (Not At All)	1	2	3	4	5	(Extremely)
2. In general, how much do you believe that Nick is GOOD-NATURED? (Not At All)	1	2	3	4	5	(Extremely)
3. In general, how much do you believe that Nick is HONEST? (Not At All)	1	2	3	4	5	(Extremely)
4. In general, how much do you believe that Nick is FRIENDLY? (Not At All)	1	2	3	4	5	(Extremely)
5. In general, how much do you believe that Nick is CLEVER? (Not At All)	1	2	3	4	5	(Extremely)
6. In general, how much do you believe that Nick is CAPABLE? (Not At All)	1	2	3	4	5	(Extremely)
7. In general, how much do you believe that Nick is INTELLIGENT? (Not At All)	1	2	3	4	5	(Extremely)
8. In general, how much do you believe that Nick is SKILLED? (Not At All)	1	2	3	4	5	(Extremely)

Please circle the response that best indicates what you think about Nick

1. Nick acts like this because he copies other teenagers.	Agree a lot	Agree a little	Disagree a little	Disagree a lot
2. Nick acts this way just because he wants to and thinks it's cool.	Agree a lot	Agree a little	Disagree a little	Disagree a lot
3. Nick acts like this to show off or get attention from other teenagers	Agree a lot	Agree a little	Disagree a little	Disagree a lot
4. Do you think that Nick wants to act the way that he does?	Agree a lot	Agree a little	Disagree a little	Disagree a lot

What Kind of Words Would You Associate with Nick?

Please rate the extent to which you would associate the following adjectives with Nick

Terrible	1	2	3	4	5	Excellent
Horrible	1	2	3	4	5	Wonderful
Nasty	1	2	3	4	5	Joyful
Awful	1	2	3	4	5	Great

How Do You Feel About Nick?

Please make a rating that best represents how you would feel toward Nick

1. Nick would make me feel uneasy
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
2. I would feel afraid of Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
3. I would feel embarrassed by Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
4. Nick would make me feel insecure
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
5. I would want to help Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
6. I would pity Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
7. I would empathise with Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
8. I would make fun of Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
9. Nick would make me angry
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
10. Nick would irritate me
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
11. I would not understand Nick
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)

How Much Do You Like Nick?

How much do you like Nick?

(Not at all) 1 2 3 4 5 6 7 (Very Much)

What Would You Do With Nick?

Imagine that Nick is moving near you and will be joining your class in school. What types of activities would you like to do with him? Tick the answer that best shows how you feel about doing each of these things with Nick

		Yes	Probably Yes	Probably Not	No
a.	I would tell him about a homework assignment if he is absent from class.				
b.	I would stand next to him while waiting in line.				
c.	I would hang out with him after school.				
d.	I would lend him a pencil or a pen.				
e.	I would share a secret with him.				
f.	I would help him with a math problem.				
g.	I would talk to him in class during free time.				
h.	I would invite him to my house.				
i.	I would sit next to him in class.				
j.	I would defend him.				
k.	I would hang out with him during free time in school.				
l.	I would go up to him and say hello.				
m.	I would share part of my lunch with him.				
n.	I would call him on the telephone.				
o.	I would sit next to him on a bus on a field trip.				
p.	I would tell him about myself.				
q.	I would help him with a class project.				
r.	I would tell him something nobody else knows.				
s.	I would introduce him to my friends.				
t.	I would choose him as a partner in a game.				
u.	I would stick up for him.				

How would your friends react towards Nick?

Please rate how much you agree or disagree with each of the following statements

1. I think that my friends would like Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- I think that my friends would hang around with Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
2. I think that my friends would become close friends with Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
3. I think that my friends would try to get to know Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
4. I believe my friends would distance themselves from Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
5. I think that my friends would hang around with me less if I was friends with Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
6. I believe that my friends would think less of me if I liked Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
7. I think that my friends would disapprove of me trying to get to know Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
8. I believe that my friends would like me less if I became close friends with Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
10. I believe that my friends would distance themselves from me if I started hanging around with Nick
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

How Do You Think And Feel?

You are now going to be asked some questions about how YOU feel and act. Please answer all questions as truthfully as possible. There are no right or wrong answers. For each statement, tick the box that best reflects how things have been for you over the past six months.

		Not True	Somewhat True	Certainly True
a	I try to be nice to other people. I care about their feelings			
b	I am restless, I cannot stay still for long			
c	I get a lot of headaches, stomach-aches or sickness			
d	I usually share with others (food, games, pens etc.)			
e	I get very angry and often lose my temper			
f	I am usually on my own. I generally play alone or keep to myself			
g	I usually do as I am told			
h	I worry a lot			
i	I am helpful if someone is hurt, upset or feeling ill			
j	I am constantly fidgeting or squirming			
k	I have one good friend or more			
l	I fight a lot. I can make other people do what I want			
m	I am often unhappy, down-hearted or tearful			
n	Other people my age generally like me			
o	I am easily distracted, I find it difficult to concentrate			
p	I am nervous in new situations. I easily lose confidence			
q	I am kind to younger children			
r	I am often accused of lying or cheating			
s	Other children or young people pick on me or bully me			
t	I often volunteer to help others (parents, teachers, children)			
u	I think before I do things			
v	I take things that are not mine from home, school or elsewhere			
w	I get on better with adults than with people my own age			
x	I have many fears, I am easily scared			
y	I finish the work I'm doing. My attention is good			

Please read the following statements and rate the degree to which you agree or disagree with each statement

- 1 My friend's emotions don't affect me much**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 2 After being with a friend who is sad about something, I usually feel sad**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 3 I can understand my friend's happiness when she/he does well at something**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 4 I get frightened when I watch characters in a good scary movie**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 5 I get caught up in other people's feelings easily**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 6 I find it hard to know when my friends are frightened**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 7 I don't become sad when I see other people crying**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 8 Other people's feelings don't bother me at all**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 9 When someone is feeling 'down' I can usually understand how they feel**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 10 I can usually work out when my friends are scared**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 11 I often become sad when watching sad things on TV or in films**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 12 I can often understand how people are feeling even before they tell me**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 13 Seeing a person who has been angered has no effect on my feelings**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 14 I can usually work out when people are cheerful**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 15 I tend to feel scared when I am with friends who are afraid**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 16 I can usually realise quickly when a friend is angry**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 17 I often get swept up in my friend's feelings**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 18 My friend's unhappiness doesn't make me feel anything**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 19 I am not usually aware of my friend's feelings**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
- 20 I have trouble figuring out when my friends are happy**
 (Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

What are your thoughts?

1. "Psycho" and "Maniac" are okay terms for mental illness
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
2. People with mental illness are hurt by slang names for their disorders
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
3. Mental illness is not a very serious problem
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
4. Parents are usually to blame for a child's mental illness
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
5. People with mental illness are often treated unfairly
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
6. Mental illness is often shown in negative ways on TV and in movies
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
7. Psychological treatment (such as talking to a psychologist or counsellor) is useful
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
8. People with mental illness tend to be violent and dangerous
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
9. People with mental illness are more likely to lie
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
10. People who have had mental illness include astronauts, presidents, and famous sports players
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
11. Mental illness is often confused with the effects of drug abuse
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
12. Mental illness is caused by something biological
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
13. Giving medicine is a useful way to treat mental illness
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
14. Mental illness and mental retardation are the same thing
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
15. A person with bipolar (manic-depressive) disorder acts overly energetic
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
16. Most people with severe forms of mental illness do not get better, even with treatment
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)
17. Schizophrenia involves multiple personalities
(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

You're finished! THANK YOU for taking the time to complete this questionnaire fully.

Appendix K
Normative Messages Validation Form



Dear All,

We are conducting a study that attempts to use a social normative approach to reduce public mental health stigma in adolescents. This study aims to provide adolescents with information on positive peer norms and investigate whether the communication of these norms is effective in reducing the amount of stigma demonstrated by adolescents toward a fictional (vignette-based) peer with depression. This normative information will be communicated to adolescents via a series of posters, which will be displayed in strategic areas in all participating schools. The information that is used in this study is based on real information collected by the research team in a previous study and an effort has been made to communicate this information in a manner that highlights only positive peer norms.

Currently, we are trying to select the most relevant messages to use in the normative intervention and are asking for your help in this process. We are seeking your help in this matter due to your familiarity with the research area. In order to ensure that the most appropriate normative information is selected for display amongst the intervention group we are asking you to rate some potential messages (see overleaf). We ask that you evaluate the normative information in terms of how *suitable* you believe this information would be for an adolescent population and its potential *effectiveness* in reducing stigma among this age group. We ask that you consider each message, and using the above mentioned criteria, select the five messages that you believe would be most appropriate to use in this intervention. Please complete this evaluation form and return to the following email address: c.silke1@nuigalway.ie

The research team would like to extend their gratitude to you for agreeing to take part in this initial evaluation process. Your help in this regard is much appreciated.

Kind Regards,

Charlotte Silke

On behalf of the research team:

Charlotte Silke, MSc
National University of Ireland
Galway

Dr. Caroline Heary, Ph.D
National University of Ireland,
Galway

Dr. Lorraine Swords, Ph.D,
Trinity College,
Dublin

Potential Normative Messages

Evaluation Form

Please consider the *suitability* of each message and its potential *effectiveness* at reducing stigma among an adolescent age group. Please choose five of the following messages to endorse for inclusion in a normative intervention study.

Please tick the boxes of the messages you would include as part of the normative intervention. Please tick up to five boxes

1.

Did You Know...

Most teenagers your age would act friendly towards their peers with problems such as depression

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

2.

Did You Know...

2 in every 5 teenagers knows someone with depression

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

3.

Did You Know...

4 in 5 teenagers would introduce their friends to a peer with depression

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

Please tick the boxes of the messages you would include as part of the normative intervention. Please tick up to five boxes

4.

Did You Know...

*The majority of teenagers think people with depression are **not** strange*

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

5.

Did You Know...

Most teens view their peers with depression as being competent and capable

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

Please tick the boxes of the messages you would include as part of the normative intervention. Please tick up to five boxes

6.

Did You Know...

The majority of people your age would hang around with other teenagers that had depression

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

7.

Did You Know...

Most students think other teens with emotional issues, such as depression, are good-natured

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

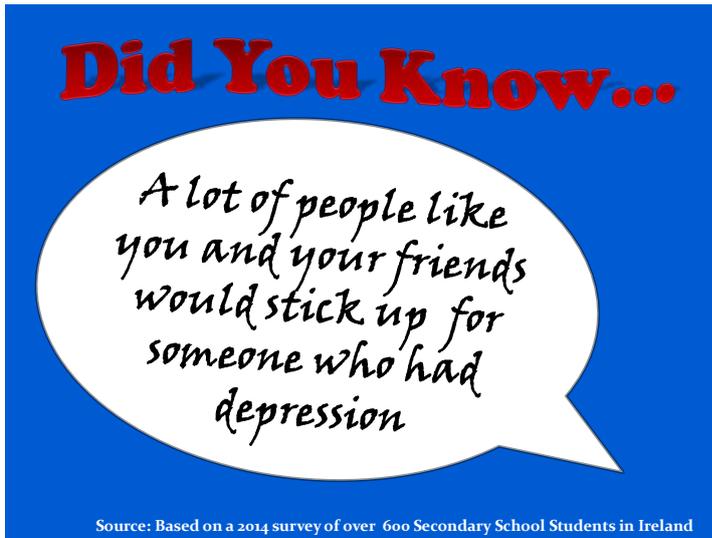
8.

Did You Know...

8 in 10 teens do not think that people with depression are responsible for the way they think and feel

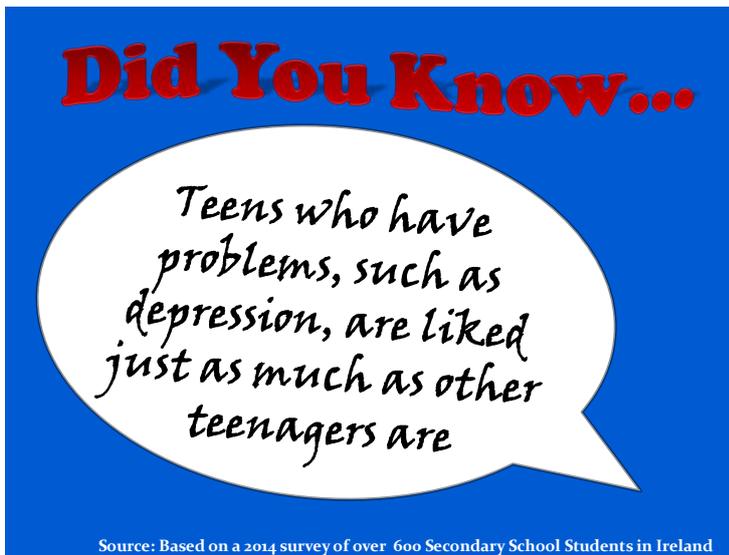
Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

9.



Please tick the boxes of the messages you would include as part of the normative intervention. Please tick up to five boxes

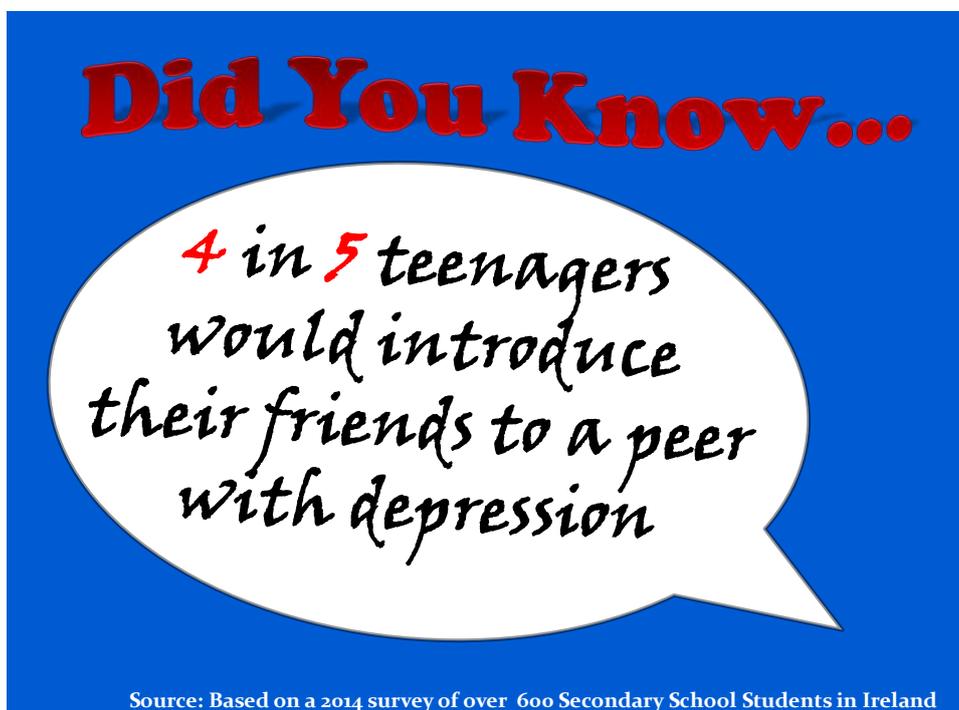
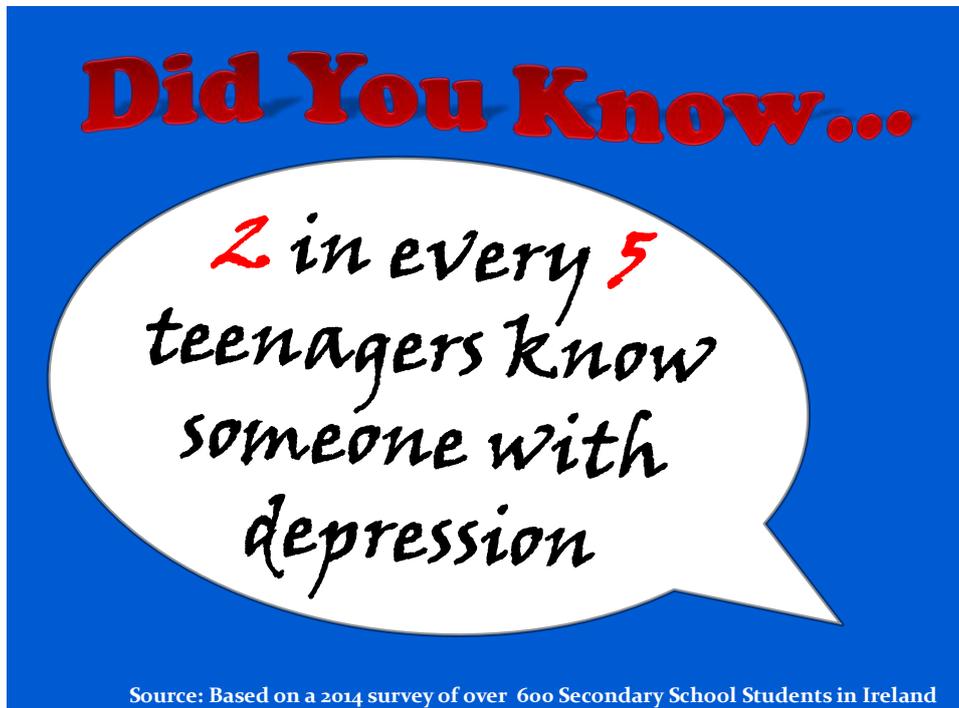
10.



Comments (optional):

Appendix L

Posters Displayed in the Normative Feedback Intervention



Did You Know...

A lot of people like
you and **your friends**
would stick up for
someone who had
depression.

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

Did You Know...

The majority of
people your age
would hang around
with someone who
had depression.

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland

Stand By Your Peers!

Teens who have problems, such as depression, are liked just as much as other teenagers are

Source: Based on a 2014 survey of over 600 Secondary School Students in Ireland



OÉ Gaillimh
NUI Galway

Participant I.D. Number

Your Views of Other Teenagers!

Questionnaire Booklet for Girls

Name.....

Date of Birth/...../.....

Age

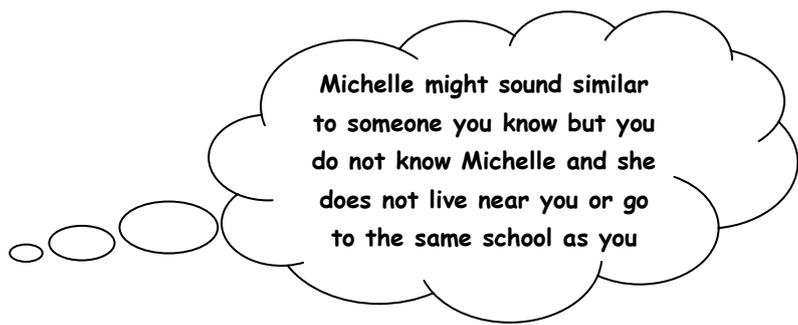
Name of School

School Year

Gender Male Female



You are going to read about a teenager called MICHELLE. You will be asked to answer some questions about what you think and feel about Michelle, what you think your friends would think about her and what kind of activities you would be willing to do with her. Please take your time to read these questions carefully and to respond as truthfully as possible. We are only interested in your opinion. There are no right or wrong answers.



Michelle

Michelle is in the same year as you. She used to enjoy lots of hobbies, such as hanging out with her friends and playing football for her local team. Although Michelle sometimes complained about how much time the team had to spend training, she was usually quite good at turning up for practice. A few months ago, Michelle started missing a lot of training sessions and has since stopped coming altogether. Over this time, Michelle's friends have noticed a change in her, in that she doesn't seem to be interested in doing things with them anymore as she no longer makes an effort to hang out with them or talk to them online. Some of Michelle's close friends have also noticed that she seems more irritable lately and doesn't smile, or laugh, or appear to find as much enjoyment in things as she used to. Michelle has also started to experience some problems at school. Over the past six weeks or so, Michelle has been constantly late for school and has started to fall behind on her school work. When the head teacher asked Michelle about this, she said that she has been finding it extremely difficult to get to sleep at night and feels tired all the time. Michelle explained that although she would like to do better in school, she just couldn't concentrate on things or think as well as she used to. Michelle said that she just feels 'down' all the time now and doesn't think that she is good at anything anymore.

	Yes	No
Do you know someone like Michelle?		

	Once every few months	Once every few weeks	Every Week	Every Day
<i>IF</i> you know someone like Michelle, how often do you see him/her?				

	Not At All	Not Really	A Little	A Lot
Do you think that your personality is like Michelle's?				

What Do You Think About Michelle?

Please place an 'X' beside the answer that best indicates what you think about Michelle

1. Michelle acts like this because she copies other teenagers.

Agree a lot Agree a little Disagree a little Disagree a lot

2. Michelle acts this way just because she wants to and thinks it's cool.

Agree a lot Agree a little Disagree a little Disagree a lot

3. Michelle acts like this to show off or get attention from other teenagers

Agree a lot Agree a little Disagree a little Disagree a lot

Please rate the extent to which you think Michelle shows the following traits.

1. In general, how much do you believe that Michelle is WARM-HEARTED?

(Not At All) 1 2 3 4 5 (Extremely)

2. In general, how much do you believe that Michelle is GOOD-NATURED?

(Not At All) 1 2 3 4 5 (Extremely)

3. In general, how much do you believe that Michelle is HONEST?

(Not At All) 1 2 3 4 5 (Extremely)

4. In general, how much do you believe that Michelle is FRIENDLY?

(Not At All) 1 2 3 4 5 (Extremely)

5. In general, how much do you believe that Michelle is CLEVER?

(Not At All) 1 2 3 4 5 (Extremely)

6. In general, how much do you believe that Michelle is CAPABLE?

(Not At All) 1 2 3 4 5 (Extremely)

7. In general, how much do you believe that Michelle is INTELLIGENT?

(Not At All) 1 2 3 4 5 (Extremely)

8. In general, how much do you believe that Michelle is SKILLED?

(Not At All) 1 2 3 4 5 (Extremely)

Please rate the extent to which you agree or disagree with the following statements

- 1. Michelle is Dangerous**
(Definitely Not True) 1 2 3 4 5 (Definitely True)
- 2. Michelle is Aggressive**
(Definitely Not True) 1 2 3 4 5 (Definitely True)
- 3. Michelle is Frightening**
(Definitely Not True) 1 2 3 4 5 (Definitely True)

What Kind of Words Would You Associate with Michelle?

Out of the following pairs of words, please indicate which word you would associate more with

Michelle

- | | | | | | | |
|-----------------|---|---|---|---|---|------------------|
| Terrible | 1 | 2 | 3 | 4 | 5 | Excellent |
| Horrible | 1 | 2 | 3 | 4 | 5 | Wonderful |
| Nasty | 1 | 2 | 3 | 4 | 5 | Joyful |
| Awful | 1 | 2 | 3 | 4 | 5 | Great |

How Do You Feel About Michelle?

Please indicate how you would feel about Michelle

- 1. I would feel afraid of Michelle**
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
- 2. Michelle would make me feel embarrassed**
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
- 3. Michelle would make me feel insecure**
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
- 4. I would make fun of Michelle**
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
- 5. Michelle would make me angry**
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)
- 6. Michelle would irritate me**
(Definitely the Case) 1 2 3 4 5 (Definitely not the Case)

What things would you do with Michelle?

Imagine that Michelle is moving near you and will be joining your class in school. What types of activities would you like to do with her? Tick the answer that best shows how you feel about doing each of these things with Michelle

		Yes	Probably Yes	Probably Not	No
a.	I would tell her a homework assignment if she is absent from class.				
b.	I would stand next to her while waiting in line.				
c.	I would hang out with her after school.				
d.	I would lend her a pencil or a pen.				
e.	I would share a secret with her.				
f.	I would help her with a math problem.				
g.	I would talk to her in class during free time.				
h.	I would invite her to my house.				
i.	I would sit next to her in class.				
j.	I would defend her.				
k.	I would hang out with her during free time in school.				
l.	I would go up to her and say hello.				
m.	I would share part of my lunch with her.				
n.	I would call her on the telephone.				
o.	I would sit next to her on a bus on a field trip.				
p.	I would tell her about myself.				
q.	I would help her with a class project.				
r.	I would tell her something nobody else knows.				
s.	I would introduce her to my friends.				
t.	I would choose her as a partner in a game.				
u.	I would stick up for her.				

How would your friends react?

1. I think that my friends would like Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

2. I think that my friends would hang around with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

3. I think that my friends would become close friends with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

4. I think that my friends would try to get to know Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

How would most other people your age react?

1. I think other teenagers would like Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

2. I think other teenagers would hang around with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

3. I think other teenagers would become close friends with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

4. I think other teenagers would try to get to know Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

5. I think other teenagers would hang around with me less if I was friends with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

6. I believe other teenagers would think less of me if I liked Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

7. I think other teenagers would disapprove of me trying to get to know Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

8. I believe other teenagers would like me less if I became close friends with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

9. I believe other teenagers would distance themselves from me if I started hanging around with Michelle

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

What do you think about being friends with Michelle?

1. Being friendly with Michelle would be rewarding

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

2. Being friendly with Michelle would be pleasurable

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

3. Being friendly with Michelle would be enjoyable

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

4. Being friendly with Michelle would be fun

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

What would most other teenagers think?

- 1. Being friendly with Michelle would be rewarding for most other teens**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 2. Being friendly with Michelle would be enjoyable for most other teens**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 3. Being friendly with Michelle would be pleasurable for most other teens**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 4. Being friendly with Michelle would be fun for most other teens**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

How do you feel about other people your age?

- 1. I believe most other people my age are respectable**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 2. I think most other people my age are inspiring**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 3. I look up to most other people my age**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 4. I think highly of most other people my age**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 5. How similar do you think most other teenagers are to you intellectually?**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 6. How similar do you think most other teenagers are to you in the way that they think?**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 7. How similar do you think most other teenagers are to you in their values?**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- 8. How similar do you think most other teenagers are to you in their behaviour?**
(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

Appendix N

Principal Letter for Study 3

School of Psychology,
National University of Ireland,
Galway

Dear Principal,

My name is Charlotte Silke and I am a researcher in the School of Psychology at NUI, Galway. I am part of a team researching how adolescents respond to peers with mental health issues, such as depression. We are currently carrying out an informational program that aims to reduce stigma and help promote more inclusion and positive attitudes toward adolescents who experience symptoms of depression. However, in order to test the effectiveness of this initiative, we need *your help*. I am contacting you to invite your school to participate in this research project.

Specifically, we are asking to be allowed to invite students from your school to participate in a survey. The survey will take students approximately 15-20 minutes to complete and students may complete the survey in large groups, similar to their normal classroom setting. This survey will ask students to read about a hypothetical teenager and to answer questions about their thoughts and feelings toward this teen. Although this character will be portrayed as experiencing symptoms of depression, no label will be used. Students will also be asked questions about how they think their friends would respond to the character. Students will not be asked any personal questions about themselves or their friends. Additionally, students will not be asked any questions about their own emotional state. Students will be asked to complete this survey twice; once in an initial sitting and once again two weeks later.

In addition to carrying out this survey we are asking some schools to display informational posters in certain classroom/common areas. These posters will display results from a previous study that we carried out and will inform students about some of the positive responses that other teenagers displayed toward peers with depression. These posters will be displayed for some time prior to students completing the survey. However, only some schools will be asked to display these posters in order for us to compare differences across schools. Students are asked to complete the survey twice in order for us to determine whether these posters are effective at promoting more positive attitudes in students toward their peers with depression.

As large numbers of participants are needed to fully assess the benefits of this program, we would be hoping to recruit as many 4th or 5th year students as possible from each participating school (approx. 50-100 students). Students will only be asked to participate in the study on a voluntary basis. Additionally, parental consent will be required from all students who wish to participate in the survey.

We believe that this research is extremely important, not only as it allows us to assess what factors influence how adolescents potentially respond to peers with emotional problems, such as depression, but also as it has the potential to foster more positive attitudes in adolescents' toward their peers. As such, I would very much appreciate it if you would allow me to recruit students from your school to participate in this survey. If you would like any further information about this study, please do not hesitate to contact me directly on 0863489729, or by email, c.silke1@nuigalway.ie or you may contact Dr. Caroline Heary, who oversees this research, at 091 495059. Alternatively, I will follow-up on this request by contacting the school again by telephone in a number of days.

Yours Sincerely,
Charlotte Silke

On behalf of the research team:

Charlotte Silke, MSc
National University of Ireland
Galway

Dr. Caroline Heary, Ph.D
National University of Ireland,
Galway

Dr. Lorraine Swords, Ph.D,
Trinity College,
Dublin

Appendix O

Participant Information Sheet for Study 3



Teenagers' Perceptions of Other Teens



Dear Student,

You are being invited to take part in a psychological research study. This Information Sheet is intended to tell you about the aims and procedure of this study. If you have any further questions about the study feel free to ask the researcher.

What is the purpose of the study?

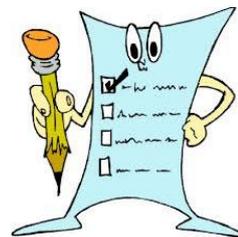
The purpose of the study is to learn more about friendship behaviour in young people and how teens view and feel about peers with different types of personalities.

Who can participate in this study?

Any teenager aged between 14-18 years of age who is currently enrolled in Secondary School can take part in this study.

What will I have to do?

You will be asked to read a short story about another teenager that you do not know. You will then be asked to complete a survey about what you think about this person and how you think your friends would react toward this person. You will also answer some questions about what you think about other teens your age in general. You may be asked to complete the same survey on two separate occasions.



How long will the survey take?

The survey will take approximately 15-20 minutes to complete. It may take some students more or less time to complete the study. The survey will take the same amount of time to finish on both occasions

Where/When will I have to complete the survey?

This study will be carried out in your school within the next number of weeks. Students who decide to take part in this study will be taken from class sometime in the next few weeks and asked to complete the first survey. A week or two after this, the researcher will return to the school and ask these students to complete the survey for a second time. The survey questions will be identical at both times. Again, students will be asked to complete this survey during their regular class times. Each student must return a signed parental consent form in order to be able to take part in the study.

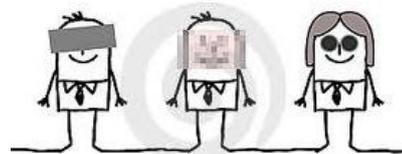
What are the benefits of taking part?

You will benefit from experiencing what it is like to take part in a psychological study and have an opportunity to ask the researcher any questions about the subject. We are also interested in learning about your own thoughts and opinions and this is an opportunity for you to express your opinions. Additionally, by participating in the study you will help to further understanding of why some adolescents are more or less liked than others. This information is important in designing future studies or programmes that can help include all types of children or teenagers.

Who will see what I say in the survey?

No one apart from the researchers in this study will have access to your information. Additionally, all information collected in the survey will be **anonymous**. All information collected will also be stored in a **confidential** manner. The one exception to this rule is if a student disclosed a child safety issue. At

which point school personnel and/or parents would be informed.



Do I have to take part?

Participation is completely voluntary. Parental consent is necessary for any student wishing to take part. Interested students will be asked to have a consent form signed by their parent/guardian and to return these forms to the school before completing the first survey. Any student who does not return a signed consent form will not be asked to take part in the survey. If you do decide to take part, and later change your mind, you can leave the survey at any time. You may also skip any questions that you do not wish to answer.

What do I do if I wish to participate?

Students must receive parental consent from their parent/guardian before taking part in the study. Students must have returned a signed copy of the consent form before completing the survey.

What if I want to know more?

If you are not sure about any of the information presented here or if you have more questions about the survey please feel free to ask the researcher, either in person, or via email, c.silke1@nuigalway.ie



Appendix P

Parent Information Sheet and Consent Forms for Study 3

Survey on Teenagers' Perceptions of Other Teens

Parent Information Sheet

Dear Parent(s)/Guardian(s),

We are carrying out a survey at your child's school and we are asking for your permission to allow your child to take part in this research. In order for you to make an informed decision, we would like to highlight the aims and procedure of this research to you, by providing you with this information sheet. If you agree to allow your child to participate, you will be asked to sign a Consent Form (see overleaf) and ask your child to return this to the school. Your child will not be asked to participate in this study if you do not sign the consent form. If there is any information that you are not clear about or would like to learn more about, the researchers are more than happy to clarify any issues further. Thank you for taking the time to read this document.

Who is doing this Research?

This research is being carried out by a team of three researchers from the Schools of Psychology in the National University of Ireland, Galway and Trinity College Dublin.

What is the purpose of the study?

This study aims at exploring ways to create a supportive and inclusive environment for teenagers at school. Specifically, this study hopes to change the way that teenagers can think about their peers with mental health problems.

Does my child have to take part?

Participation in this study is completely voluntary. Students will only be asked to take part in the study if their parents have given permission. If you do decide to allow your child to take part you will be asked to sign a Consent Form, which is located on the last page of this letter, and will be given this Information Sheet to keep. Only when the consent form has been signed by you and returned to the school will your child be allowed to participate in this study. However, it is also your child's decision whether he/she wishes to take part or not. Each student invited to participate in this study has the right to decline to take part in the study. If your child does agree to take part, but later changes his/her mind, he/she will be free to discontinue participation at anytime.

What will my child have to do?

This study will take part during school hours and will take the place of one of your child's normal classes. Should your child take part in this study he/she will be presented with a survey booklet. This booklet will ask students to read a short story describing a fictional peer who appears to be experiencing emotional problems. However, no diagnostic labels or terminology will be used. Students will then be asked to answer questions about how they think and feel about the character and how they think their friends would respond to the character. Your child will also be provided with information about the views of other teenagers (based on research we have done in other schools). We are interested in examining how being exposed to the views of others affects adolescents' own thoughts and attitudes. This information will be provided in order to help foster a more supportive and inclusive environment for teenagers in schools. However, only students in certain schools will be exposed to this information.

How long will my child's part in this study last?

The survey should take approximately 15-20 minutes to complete. Some teenagers may need more or less time to complete the questionnaire. In order to assess attitudes across schools and over time, students will be asked to complete this survey on two occasions, approximately two weeks apart. Both surveys will be identical and will be carried out during normal class time.

What are the benefits for my child in taking part?

Your child will benefit from experiencing what it is like to take part in a psychological study and have the opportunity to ask the researcher questions about the subject. Your child is also being given the opportunity to

have his/her opinions heard. Additionally, students may benefit from the knowledge that they will have helped to further understanding of how adolescents respond to different types of peers and that the information gathered by the participants in this study may be used in further research studies or programs which may benefit other children or teenagers.

Are there any potential risks associated with taking part?

It is not anticipated that this survey will pose any risks to students. However, if your child does experience any discomfort while taking part in this survey he/she can choose to withdraw from the study at any time, without any penalty. Additionally, your child can choose to not respond to any questions that he/she does not wish to answer. It is possible that your child will be exposed to information about how other students responded to peers who were experiencing emotional difficulties and your child may be uncomfortable with the use of this type of terminology. However, the goal of this information is to display a positive message that teenagers accept their peers and help foster a more supportive atmosphere.

Is this survey Anonymous or Confidential?

All information obtained in the survey will be transferred onto a computer in such a way that it cannot be linked to any named individuals. All information collected will remain anonymous and confidential. Only members of the research team, Charlotte Silke, Dr. Caroline Heary and Dr. Lorraine Swords, will have access to the collected information. After the information obtained is analysed, a summary of the findings will be sent to all participating schools. It is possible that these results may also be published in an academic journal; however, the publication will make no reference to specific individuals or schools. The only exception to confidentiality is if a child were to disclose information indicating that he/she was at risk of harm or danger. In such circumstances child protection policies of the school would have to be followed.

Voluntary Participation/Withdrawal

If you decide to allow your child to participate, you will be asked to return a signed consent form to the school. However, your child will reserve the final right to agree or decline to participate in the surveys. Your child will be told that he/she may skip any questions that he/she does not feel comfortable answering and that he/she is free to withdraw from the study at any time, without consequence or duress.

Further Information

If you have any questions, please do not hesitate to contact Charlotte Silke by telephone on 0863489729 or by email at c.silke1@nuigalway.ie You may also contact Dr. Caroline Heary who is supervising this research (091 495059).

Thank you very much for taking the time to read this information sheet. Your co-operation is very much appreciated.

If you have any concerns about this study and wish to contact someone independent and in confidence, you may contact 'The Chairperson of the NUI Galway Research Ethics Committee, c/o Office of the Vice-President for Research, NUI Galway, ethics@nuigalway.ie

Yours Sincerely,

On behalf of the research team:

Charlotte Silke, MSc
National University of Ireland
Galway

Dr. Caroline Heary, Ph.D
National University of Ireland,
Galway

Dr. Lorraine Swords, Ph.D,
Trinity College,
Dublin

Parent/Guardian Consent Form

NOTE: Please ask your child to return this Consent Form to the School as soon as possible, if you wish your child to participate. Thank You.

Please read this form and tick the relevant boxes below to indicate whether or not you agree to allow your child to take part in the study. Please sign this form in the space provided below.

Please Tick

- | | |
|---|--------------------------|
| 1. I confirm that I have read the information sheet provided and that I understand the information provided. | <input type="checkbox"/> |
| 2. I am satisfied that I have had enough time to process the information. | <input type="checkbox"/> |
| 3. I understand that all information will be kept confidential, except for where a child indicates that he/she is a risk of harm or danger. | <input type="checkbox"/> |
| 4. I am aware of what this study involves and agree to allow my child to participate. | <input type="checkbox"/> |

Signed _____ **Date** _____

Parent's Name (print): _____

Child's Name (print):

Child Date of Birth: _____ / _____ / _____

(DD)

(MM)

(YEAR)

Family Information Form

Note: Completion of this Form is Optional. However, your participation is greatly appreciated.

Background Information

In order to generate a greater understanding of the health and well-being of all adolescents who take part in the study, we are asking you for some additional background information about your child. We are asking for this information in order to establish whether adolescents respond differently to various types of peers because of their own backgrounds or history. This information will be helpful in designing an effective method for increasing inclusive attitudes among all adolescents. All information collected will be held confidentially. However, this information is collected at a voluntary basis and you may choose not to provide this information if you do not feel comfortable doing so. If you do feel comfortable answering these questions please return this form along with the consent form to the school.

Thank you very much.

Q1. Does your child have a history of experiencing any of the following (please tick as appropriate):

Anxiety

ADHD

Depression

Q2. Are you the child's: Mother Father Guardian

Q3. What is your highest level of education completed to date?

Primary or less	<input type="checkbox"/>
Intermediate/ Junior Certificate or equivalent	<input type="checkbox"/>
Leaving Certificate or equivalent	<input type="checkbox"/>
Diploma/Certificate	<input type="checkbox"/>
Undergraduate Degree	<input type="checkbox"/>
Postgraduate/Higher Degree	<input type="checkbox"/>
Doctorate	<input type="checkbox"/>

Other not listed (please specify) _____