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Addressing the Determinants of Positive Mental Health: Concepts, Evidence and Practice

Keywords: positive mental health; mental health promotion; determinants of mental health; effective interventions

Introduction

There is increasing recognition throughout the world of the need to address mental health as an integral part of improving overall health and well-being (WHO, 2001, 2002, 2005a). Mental health is fundamental to good health and quality of life, it is a resource for every-day life and it contributes to the functioning of individuals, families, communities and society. The WHO phrase 'there is no health without mental health' conveys clearly this positive sense of mental health.

Concepts of mental health vary as a function of time, place, culture and context (Rogers & Pilgrim, 2005).

Through the years there have been competing perspectives on the nature of mental health and mental ill-health. With some exceptions, the mental health literature has focused primarily on the study and treatment of mental disorder, which has been conceived as a medical, psychological and/or sociological phenomenon. While these perspectives have merged to some extent into the current biopsychosocial model, there is increasing interest in exploring the concept of positive mental health as an entity that is distinct from, and more than the absence of, mental disorder. The emerging focus on positive mental health is aligned to the more general development of a health promotion perspective which focuses on positive health rather than illness, and the emergence of areas such as positive psychology and the development of a well-being policy agenda.

A B S T R A C T

Positive mental health is recognised as a key resource for population well-being and the social and economic prosperity of society. This paper provides an overview of current concepts of positive mental health and its contribution to the health and well-being of society. Frameworks for promoting mental health are presented, together with an overview of key concepts and principles underpinning this multi-disciplinary area of practice.

Drawing on empirical studies, the article reviews the determinants of positive mental health across the lifespan. Enhancing factors for promoting mental health at the structural, community and individual levels are identified. The growing evidence base on the effectiveness of mental health promotion interventions is discussed, and the implications of addressing the psychosocial determinants of mental health for policy and practice are considered.

Promoting positive mental health overlaps with wider concerns about population health and well-being. Emotional well-being is recognised as a predictor of physical health at all ages (Goodwin, 2000). There is growing evidence on the relationship between physical and mental health. Prince *et al* (2007) reported evidence from systematic reviews of population-based research that there are moderate to strong prospective associations between depression, anxiety and coronary heart disease, Type II diabetes, and fatal and non-fatal stroke. Studies also support a strong association between mental disorder and risk factors for chronic diseases, such as smoking, reduced activity, poor diet, obesity and hypertension. The relationship between health behaviours and mental health points to the intertwined nature of physical and mental health and the wider health and social gains that may be achieved through effective mental health promotion. Mental health needs to be recognised as an integral component of population health policy and practice.

Alongside the development of a public health perspective on mental health, there is increasing emphasis on the importance of positive mental health for well-being and overall development at population level (WHO, 2002, 2005). For example, the World Health Organization Mental Health Declaration and Action Plan for Europe (WHO, 2005) and the European Commission Mental Health Green Paper and Strategy (European Commission, 2005) highlight that the social and economic prosperity of Europe will depend on improving mental health and well-being.

Mental health and well-being are fundamental to quality of life, enabling people to experience life as meaningful and to be creative and active citizens. Mental health is an essential component of social cohesion, productivity, and peace and stability in the living environment, contributing to social capital and economic development in societies.
(WHO, 2005)

The Foresight Project on Mental Capital and Wellbeing (2008), which seeks to advise the UK Government on how to achieve the best possible development of mental well-being, identifies the following key message.

.... if we are to prosper and thrive in our changing society and in an increasingly connected and competitive world, both our mental and material resources will be vital. Encouraging and enabling everyone to realise their potential throughout their lives will be crucial for our future prosperity and wellbeing.

There is growing interest in how a 'well-being focus' could influence the future direction of public policy. The assumption that a continuing increase in economic growth in wealthy countries results in an increase in well-being has been challenged (Layard, 2005) and there is a rethinking of how public policies in areas such as education, employment, culture and sustainable development affect well-being and human flourishing (Marks & Shah, 2005; Dolan *et al*, 2006; Pickett *et al*, 2006; Eckersley, 2006; Marks *et al*, 2006; Carlisle, 2007; Friedli, 2009). This is articulated succinctly in the question posed by the New Economics Foundation in their 2003 *Well-being Manifesto for a Flourishing Society*.

What would politics look like if promoting people's well-being was one of the Government's main aims?

This document calls for the integration of social, economic and ecological policies in order to ensure that maximising population well-being is viewed as complementary to and equal in importance to maximising economic growth.

The increasing focus on well-being is also reflected in the development of well-being indicators which seek to capture people's sense of well-being and how their lives are progressing, alongside indicators of economic growth. The *National Accounts of Wellbeing* (NEF, 2008) urges national governments to:

measure and act on wellbeing within the broader context of societal and environmental stability (p6).

A number of countries have developed national well-being indices, most notably the National Happiness Index in Bhutan, as a measure of a social progress designed to inform policy-making.

Mental health policies which embrace this positive well-being focus and advocate for a flourishing society based on promoting population mental health and well-being are being introduced and strengthened in a number of countries (among them Australia, Canada, Scotland, New Zealand and the UK). Promotion of mental health is being incorporated into both population health and mental health policies. To promote and enhance positive mental health effectively requires an understanding of how mental health is conceptualised, the nature of its determinants and how their influence varies across population groups.

Concepts of positive mental health

Positive mental health has been conceptualised as a positive emotion or affect such as subjective sense of well-being

and feelings of happiness, a personality trait encompassing concepts of self-esteem and sense of control, and resilience in the face of adversity and the capacity to cope with life stressors (WHO, 2004a). Marie Jahoda in her 1958 book *Current Concepts of Positive Mental Health* – one of the few publications addressing this topic – sought to define positive mental health in terms of a list of attributes such as an efficient perception of reality, self-knowledge, exercise of voluntary control over behaviour, self-esteem and self-acceptance, the ability to form affectionate relationships and productivity.

While many of these attributes feature in current definitions, there is a concern that these characteristics may be specific to culture, gender, time and place. For example, Kovess-Masfety *et al* (2005) points out that the definition of mental health is clearly influenced by the culture that defines it, and may have different meanings depending on socioeconomic and political influences. From a cross-cultural perspective it is important to realise that our understanding of what constitutes positive functioning is likely to be very influenced by cultural beliefs about health and illness, societal values, norms and social influences. As mental health is embedded in the social and cultural framework of societies, the development of culturally sensitive and reliable indicators of mental health poses an important, though difficult, methodological challenge (Barry *et al*, 2007).

The WHO definition of mental health as a:

state of well-being in which the individual realises his or her own abilities, copes with the normal stresses of life, works productively and fruitfully, and makes a contribution to his or her community (WHO, 2001 p1)

challenges the idea that mental health is simply the opposite of mental ill-health. This description highlights the various aspects of positive mental health including subjective well-being and affective balance, and development of abilities to manage life, maximise one's potential, participate and contribute to society. The concept of positive mental health, therefore, encompasses the abilities to develop psychologically, emotionally, intellectually, socially and spiritually.

Empirical work by Keyes (2002, 2005) and Huppert and Whittington (2003) points to the independence of positive and negative well-being and shows that mental health and mental disorders are not opposite ends of a single continuum, but rather constitute distinct, though correlated, axes. Thus the absence of mental disorder does not equal the presence of mental health, and individuals without a mental disorder

may experience varying degrees of positive mental health. Keyes (2005) reports data from the MIDUS study in the USA which indicates that some 50% of the general population are moderately mentally healthy, 17% are flourishing, 10% are languishing and a further 23% meet the criteria for diagnosable mental disorders such as depression. A Scottish survey reports some 14% of the population as having 'good mental well-being' (as measured on the Warwick Edinburgh Mental Well-being scale), 73% with average and 14% with poor mental well-being (Braunholtz *et al*, 2007). Keyes (2005) argues that, compared with those who are flourishing, moderately mentally healthy and languishing adults have significant psychosocial impairment and poorer physical health, lower productivity and limitations to daily living (Keyes, 2004, 2005).

The emergence of positive psychology also brings a greater focus on the study of optimal human functioning (Seligman & Csikszentmihalyi, 2000; Seligman *et al*, 2005), which includes studying positive psychological constructs such as optimism, love, emotional intelligence, creativity, hope, humour and a focus on positive subjective experiences, positive individual characteristics (strengths and virtues) and positive institutions and communities. To date, much of the scientific endeavour has focused on individual-level interventions to increase happiness and enhance positive emotions and characteristics. While the focus on positive emotions, such as happiness, has indeed captured the public imagination, as Gable and Haidt (2005) point out, there has been a lack of progress in studying the positive institutions and social conditions necessary for flourishing and optimal functioning.

Kovess-Masfety *et al* (2005) argues that the challenge now is to gain a better understanding of the mechanisms that enable people to develop and maintain positive mental health, and to determine how they vary across populations and cultures. The development of validated indicators of positive mental health for different population groups is essential to supporting this endeavour and advancing our understanding of the field.

Researching positive mental health

Positive mental health is a broad concept, and there are a range of constructs and theories relevant to its understanding and assessment. As outlined above, positive mental health is usually conceptualised as encompassing aspects of emotional (affect/feeling), psychological (positive functioning), social (relations with others and society), physical (physical health) and spiritual (sense of meaning and purpose in life) well-being. The emerging literature on positive

mental health and well-being considers the necessary or sufficient elements of positive functioning (Keyes, 2002; Huppert, 2005; Kovess-Masfety *et al*, 2005; Zubrick & Kovess-Masfety, 2005; Ryff *et al*, 2006). At least two dimensions of positive mental health have been identified:

- the hedonic component, which refers to subjective well-being and life satisfaction
- the eudaimonic component, which includes positive functioning, engagement, fulfilment and social well-being.

Ryff (1989), for example, operationalised six theory-guided dimensions of psychological well-being derived from the literature. The scales included measures of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth.

The relatively few scales designed to measure positive mental health since then have also based their indicators on similar constructs, including resilience, self-esteem, self-efficacy, optimism, life satisfaction, hopefulness, perceptions and judgements about sense of coherence and meaning in life, and social integration (Antonovsky, 1993; Ryff & Singer, 1996; Stewart-Brown, 2005; Zubrick & Kovess-Masfety, 2005). Keyes developed scales of social well-being to explore how people perceive themselves functioning in their social and public life. They include measures of social acceptance, social actualisation, social contribution, social coherence and social integration (Keyes, 2005). A set of short indicators of mental health, which include measures of both positive and negative mental health, has been compiled for use across Europe (Lavikainen *et al*, 2006). The European Social Survey (ESS Wave 3 Questionnaire) now also includes measures of both hedonic (positive affect) and eudaimonic (positive functioning) well-being (www.europeansocialsurvey.org/). The recently developed 14-item Warwick Edinburgh Mental Well Being Scale (WEMWBS), which also covers hedonic and eudaimonic dimensions of mental well-being, has been validated for use in population surveys in England and Scotland, and is employed in addition to more traditional measures of mental ill-health such as the GHQ-12 (Tennant *et al*, 2007a).

Indicators of positive mental health, which include both general measures and validated scales of specific constructs (Zubrick & Kovess-Masfety, 2005), have been found to be associated with better physical health, fewer limitations in daily living, higher educational attainment, employment and earnings, better quality of life, relationships and health behaviours (NIMHE, 2005; Dolan *et al*, 2006; Lyubomirsky *et al*, 2005; Lehtinen *et al*, 2005; Barry *et al*,

2009; Friedli, 2009). Further research is needed to understand the factors and conditions that build psychological strengths, promote resilience and enhance positive relations with others and society. The development of this knowledge will be key to realising the potential of this new focus on positive aspects of mental health and well-being.

Adopting a mental health promotion approach

Mental health promotion is concerned with achieving positive mental health and well-being in the general population and addressing the needs of those at risk from, or experiencing, mental health problems. Many of the constructs discussed above have already been incorporated in the practice of mental health promotion, and have informed interventions designed to enhance the psychological strengths and competencies of individuals and communities (Jané-Llopis *et al*, 2005; Barry & Jenkins, 2007). While focusing on the positive aspects of mental health, mental health promotion also has relevance across the entire spectrum of mental health interventions, including for people experiencing mental health problems and disorders. It includes creating supportive environments, reducing stigmatisation and discrimination, and supporting the social and emotional well-being of service users and their families. The underlying principle of this approach is that mental health is an integral part of overall health and is, therefore, of relevance to all. Delivery of such programmes requires development of health and social policy which extends beyond the clinical and treatment focus of current mental health service delivery, to address the influence of broader social and environmental factors on mental health.

Adopting a mental health promotion approach builds on the basic tenets and framework of health promotion as outlined in the Ottawa Charter (WHO, 1986) and subsequent WHO directives. The principles of health promotion practice, as articulated in the Ottawa Charter for Health Promotion (WHO, 1986), are based on an empowering, participative and collaborative process which aims to increase control over health and its determinants. The inextricable link between people and their environments forms the basis of this socio-ecological approach to health and provides a conceptual framework for practice. The Ottawa Charter outlined five key areas for action to promote health:

- build healthy public policy
- create supportive environments
- strengthen community action
- develop personal skills
- re-orient health services.

This framework has been applied to the promotion of mental health, underscoring the need for integrated action at the level of the individual, community, supportive environments and policies, in order to bring about sustainable change that will create and promote positive mental health (Health Education Authority, 1997; Herrman *et al*, 2005; Barry, 2001, 2007a).

A socio-ecological model of mental health promotion recognises that positive mental health is embedded in, and influenced by, a wider social, economic and cultural ecology (Zubrick & Kovess-Masfety, 2005). This perspective stresses the interdependence of the individual, family, community and society, and moves the concept of mental health beyond an individualist focus to consider the broader social, economic and environmental determinants. The framework embraces a systems approach to mental health promotion spanning individual, social and environmental factors, and underlines the importance of synergistic action from the micro to the macro level to bring about tangible and enduring change. The Bangkok Charter for Health Promotion in a Globalized World (WHO, 2005), building on the Ottawa Charter, calls for an integrated policy approach across sectors and settings, strong political action, broad participation and sustained advocacy in order to progress towards a healthier society. These actions are equally important for the promotion of global mental health.

Adopting a settings-based approach, mental health promotion emphasises that mental health is created in the settings where people live their lives, and it is in the everyday contexts or settings, such as the home, school, workplace and community, that mental health can be promoted. Mental health promotion interventions also address the broader social and economic environments that determine the mental health of populations and individuals. Good progress has been made over the last decade in establishing a sound theoretical and evidence base for mental health promotion practice. There is compelling evidence from high-quality studies that mental health promotion interventions, when implemented effectively, can lead to lasting positive effects on a range of health and social outcomes (Friedli, 2003; Keleher & Armstrong, 2005; Herrman *et al*, 2005; Barry & Jenkins, 2007; Barry, 2007b). Findings from systematic reviews indicate that there is sufficient knowledge to move evidence into practice (Jané-Llopis *et al*, 2005).

The effectiveness of mental health promotion

The accumulating international evidence base demonstrates the feasibility of implementing effective mental health

promotion programmes in a range of diverse population groups and settings (Jané-Llopis & Barry, 2005; Barry & Jenkins, 2007). Programmes promoting positive mental health have been found to result in impressive long-lasting positive effects on health and social functioning, and to have the dual effect of reducing risks of mental disorders (Hosman & Jané-Llopis, 1999). The strength of evidence from systematic reviews and effectiveness studies supports the value of such programmes as effective initiatives capable of making a positive impact in multiple domains of functioning (Durlak & Wells, 1997; Tilford *et al*, 1997; Hosman & Jané-Llopis, 1999; Jané-Llopis *et al*, 2005; Keleher & Armstrong, 2005). The available evidence supports the view that competence-enhancing programmes, carried out in collaboration with families, schools and wider communities, have the potential to affect multiple positive outcomes in social and personal health domains (Jané-Llopis & Barry, 2005).

In exploring the characteristics of successful mental health promotion programmes, Barry and Jenkins (2007) examine the implementation details of both model programmes and international case studies. Drawing on the research evidence and the feedback from programme developers, the following characteristics of effective practice are identified:

- programme development based on underpinning theory, research principles of efficacy and needs assessment of the target population and setting
- a focused and targeted approach to programme planning, implementation and evaluation
- adoption of a competence enhancement approach and an implementation process that is empowering, collaborative and participatory, carried out in partnerships with key stakeholders
- addressing a range of protective and risk factors
- employing a combination of intervention methods operating at different levels
- comprehensive approaches that intervene at a number of different time periods rather than once-off
- including provision of training and support mechanisms that will ensure high-quality implementation and sustainability.

Addressing the determinants of mental health

Mental health is determined by biological, psychological, social, economic and environmental factors which interact in complex ways, so identifying direction of causality is rarely straightforward (Mrazek & Haggerty, 1994; Rogers

& Pilgrim, 2005). Demographics such as age, gender and ethnicity are important determinants, influencing exposure to risk and protective factors across the lifecourse. Further research is needed to determine the complex interaction or 'web of causation' between the biological, psychological, social and environmental determinants of mental health and how they affect the ability of individuals and communities to exercise a sense of control over their life. Improved knowledge of the relative impact of determinants operating at the structural, community and individual levels, and the synergistic impacts and outcomes that are likely to arise from comprehensive interventions operating across levels, is critical to understanding the key drivers of mental health.

Few epidemiological studies have focused on analysing the determinants of positive mental health in whole populations. The existing evidence on the factors that enhance mental health is derived mainly from intervention studies and extrapolations from community epidemiological studies of psychiatric morbidity (Barry & Friedli, 2008). Keyes (2007) articulates this situation as the 'roadmap to health is through illness'. The paucity of research on positive mental health limits our understanding of the determinants of mental health across populations and also limits our capacity to monitor the full impact of policies and practices which seek to promote mental health and well-being. The scope of epidemiological studies and national health surveys needs to be expanded to include indicators of positive mental health so that we can achieve a greater understanding of the determinants of mental health and how they unfold across the lifespan.

The Eurobarometer 2002 (Lehtinen *et al*, 2005), which surveyed 10,878 people over the age of 14 in 11 European countries, employed the Energy and Vitality Index from the SF-36 questionnaire as a measure of positive mental health. This study reported that positive mental health was higher for men than for women, and that scores decreased with age, lower levels of family income, living on a pension, being widowed or separated, and residing in large cities. The lowest income quartile had the poorest mental health status in all countries/regions. A recent review of causative factors associated with subjective well-being (including primary analysis of the British Household Panel Survey) identified income (absolute and relative), health, employment, relationships and neighbourhood social contact as important factors, but noted the difficulty of establishing clear evidence of causality (Dolan *et al*, 2006).

The findings from the recent Survey of Lifestyle, Attitudes and Nutrition (SLÁN 2007) on the mental health and social well-being of 10,364 (62% response rate) Irish adults show that the majority of the adult population has a

reasonably high level of positive mental health, which compares favourably with reports from similar studies in other European countries (Barry *et al*, 2009). Employing the recommended mental health indicators for Europe developed by the STAKES Mindful project (Lavikainen *et al*, 2006), the results show evidence of a strong association between levels of positive mental health, gender and social and economic factors. In keeping with previous findings, men report higher levels of mental health than women, as do younger respondents in comparison with their older counterparts. Markers of social advantage, such as having higher income, higher education and being in paid employment, are all found to be strongly predictive of better mental health. Lower levels of loneliness and higher levels of social support emerge as being protective of positive mental health.

These findings have implications for promoting population mental health, since they clearly point to the need for policy-level interventions that address the social determinants of mental health as well as the more individual-level determinants. There is a tendency to view mental health as an attribute of the individual, to emphasise the importance of more proximal psychological factors, and in turn to underestimate the impact of the wider social and structural determinants. A job, an income and good education are all critical to positive mental health, as is having close supportive relationships. There is, therefore, a need for integrated, inter-sectoral policy initiatives, as many of the key determinants or drivers of mental health are outside the health arena.

Addressing the psychosocial determinants of mental health

Recognition of the psychosocial determinants of mental health has led to a growing emphasis on models of mental health promotion that seek to intervene at the level of strengthening individuals, strengthening communities and removing the structural barriers to mental health through initiatives to reduce poverty, discrimination and inequalities (Barry & Friedli, 2008; Herrman *et al*, 2005).

Individual level interventions

The psychosocial determinants of mental health at the individual level are addressed by interventions designed to promote cognitive and emotional resources such as self-esteem, identity, self-efficacy and resilience, and to enhance coping skills and behaviours that promote and protect mental health. Effective interventions include programmes that promote generic life skills and social competencies such as effective communication, cognitive style, problem-solving,

relationship and coping skills, and resilience, self-esteem and sense of control or efficacy (Tilford *et al*, 1997; Lister-Sharp *et al*, 1999; Barry & Jenkins, 2007). These skills are relevant across the lifespan, and may be particularly so during periods of transition.

The foundations for good mental health lie in the perinatal period and early childhood. Interventions that promote and enhance early attachment, warm and affectionate parenting, a secure and safe home, and informal sources of community support have been shown to lead to positive long-lasting outcomes, including reduced accident rates, teenage pregnancy, substance misuse, child abuse, juvenile crime, mental health problems and maternal health (Ciliska *et al*, 1999; Elkan *et al*, 2000; Kendrick *et al*, 2000; Barlow *et al*, 2001; Tennant *et al*, 2007b; Kendrick *et al*, 2007).

Socio-economic circumstances and a culture that supports meeting children's emotional needs are also significant in enhancing the well-being of children and families. High-quality, early childhood interventions have been shown to lead to improved mental health, especially for children from vulnerable families, and to improved personal and social functioning, with consequent economic benefits (Schweinhart & Weikart, 1997; Elkan *et al*, 2000; Kendrick *et al*, 2000; Schweinhart *et al*, 2005; Karoly *et al*, 1998, 2005). Interventions in the following areas have the most significant impact on improving the mental health of children:

- home visiting programmes (Olds *et al*, 1997, 1998)
- high-quality pre-school education (Schweinhart & Weikart, 1997; Schweinhart *et al*, 2005)
- group parenting classes (Barlow & Parsons, 2003; Ferguson *et al*, 2005; Jané-Llopis *et al*, 2005; Moran *et al*, 2004).

Karoly and colleagues (2005) report favourable economic returns from such early years interventions, with significant cost-benefit ratios in improved health gains, especially for those most at risk, and reduced crime, welfare and health care costs. Friedli and Parsonage (2007) argue that the benefits from such interventions are so large relative to costs that the interventions are worthwhile even with limited effectiveness.

Community level interventions

Community-level determinants focus attention on social participation, social inclusion, civic engagement and the impact of the local environment. Interventions that address community determinants include improving people's sense of social belonging, strengthening community networks,

building social capital, improving neighbourhood environments and community safety, promoting self-help networks and community services which support mental health. Communities with high levels of social capital, for example trust, reciprocity, participation and cohesion, have important benefits for mental health (Morgan & Swann, 2004; Whiteford *et al*, 2005) and social support and social inclusion play a significant role in maintaining positive mental health (Lehtinen *et al*, 2005; Wilkinson & Marmot, 2003; Social Exclusion Unit, 2004). A culture of co-operation and tolerance, a sense of belonging and strong social relationships are protective of mental health (Moodie & Jenkins, 2005).

Environmental, physical and ecological effects are also significant (Chu *et al*, 2004; Brunner & Marmot, 1999). Neighbourhood disorder, mistrust and powerlessness have negative impacts on mental health, and serve to amplify a sense of hopelessness and alienation, which are risk factors for suicidal behaviour. Supportive social relationships and social engagement, on the other hand, serve to protect and enhance mental health and have an important role in maintaining resilience in the face of adversity. The extent to which positive social relationships can offset the effects of material deprivation, however, is unclear. Mohan *et al* (2004) and Morgan & Swann (2004) argue that social support and social participation may not mediate the effects of material deprivation. In a systematic review of the evidence on social capital and mental ill-health, De Silva *et al* (2005) concludes that, while there is strong support for an association at the individual level, there is less evidence in relation to childhood and ecological studies. Studies have identified deprived localities and communities that appear to be resilient in the face of adversity, but the findings show that, while the effects of economic disadvantage on health in resilient communities are lessened, they are not entirely removed (Friedli, 2009).

These findings highlight the need for greater exploration of the relative impact of material resources, social capital and psychosocial factors and how they interact to determine the mental health and well-being of populations and individuals. The relative influence of social support and material deprivation is likely to be a significant factor in explaining the differences in life outcomes, both for individuals and for communities, and is an important area for further investigation.

Structural level interventions

Addressing the structural determinants of mental health entails reducing structural barriers to mental health through initiatives to reduce poverty, discrimination and inequalities, and promoting access to education, meaningful employment

and housing, as well as services and support for those who are most vulnerable.

Poor mental health may be seen both to reflect socio-economic deprivation and to contribute to it (Social Exclusion Unit, 2004; Melzer *et al*, 2004; Rogers & Pilgrim, 2005). Poor mental health is consistently associated with unemployment, less education, low income or material standard of living, in addition to poor physical health and adverse life events (Melzer *et al*, 2004; Patel, 2005; Petticrew *et al*, 2005). The experience of racial harassment and perceptions of racial discrimination have also been found to contribute to poor mental health outcomes (Chakraborty & McKenzie, 2002; Aspinall & Jacobson, 2004).

Recent studies show that higher national levels of income inequality are linked to a higher prevalence of mental illness (Pickett *et al*, 2006). The experience of inequality is corrosive of good social relations and has a negative impact on people's mental health and their sense of emotional and social well-being. The Commission on the Social Determinants of Health (WHO, 2008) draws together a considerable body of research on the impact of daily living conditions on our health, and, in particular, the inequitable distribution of power, money and resources, which act as structural drivers of inequality. Friedli (2009) argues that mental health is directly and indirectly related at every level to human responses to inequalities, influencing people's sense of agency, self-esteem, efficacy and connectedness, and their ability to deal with chronic stress and adversity. The role of mental health in mediating the impact of inequality on health is under-researched and is worthy of further investigation.

The evidence suggests that higher levels of education, improved standards of living, freedom from discrimination, fewer adverse life events and good physical health enhance positive mental health. An integrated policy approach is required to address these structural factors and underlines the need for cross-sectoral policy implementation.

Positive educational experiences and academic achievement can contribute significantly to the mental health and positive development of young people. Schools are a key setting for promoting emotional and social competence as well as academic learning (Weare, 2000; Rowling *et al*, 2002; Zins *et al*, 2004; Payton *et al*, 2008). Educational opportunities throughout life are associated with improved mental health outcomes, while low literacy is a risk factor for mental health problems such as depression (Feinstein *et al*, 2003; Chevalier & Feinstein, 2006). Promotion of emotional health and well-being is a core feature of the WHO's Health Promoting Schools initiative (WHO, 1998). There is good evidence that mental health promotion programmes in schools, especially those that adopt a whole-school approach, lead to

positive mental health, social and educational outcomes (Lister-Sharp *et al*, 1999; Wells *et al*, 2003; Tennant *et al*, 2007b). Programmes that incorporate cognitive skills training, peer-led and mentoring programmes, and early interventions to address emotional and behavioural problems produce long-term benefits for young people. They include improved emotional and social functioning, positive health behaviours and improved academic performance (Durlak & Wells, 1997; Lister-Sharp *et al*, 1999; Harden *et al*, 2001; Wells *et al*, 2001, 2003; Tennant *et al*, 2007b; Payton *et al*, 2008).

The workplace is a key environment that affects the mental health and well-being of working adults (WHO, 2000). Effective approaches to mental health promotion in the workplace address key influencing factors such as social support, enhanced job control, increased staff involvement, workload assessment, effort/reward balance, role clarity and policies to tackle bullying and harassment (Stansfeld *et al*, 1999; Van der Klink *et al*, 2001; Michie & Williams, 2003). A poor work environment, characterised by features such as high demand/low control and effort-reward imbalance, is one of the main factors explaining the higher prevalence of depressive symptoms among participants in lower employment grades (Stansfeld *et al*, 1999). Effective interventions in the workplace seek to bring about change at the organisational level as well as more individual-focused approaches (Giga *et al*, 2003; Bambra *et al*, 2007).

The mental health impact of unemployment is well-documented: a higher risk of suicide, higher levels of anxiety, depression, uncertainty about the future, anger, shame and loss of self-esteem (Breslin & Mustard, 2003; Dooley *et al*, 1994; Johansson & Sundquist, 1997; Blakely *et al*, 2003). Interventions to facilitate re-employment, particularly in good jobs, are one of the most effective ways of promoting the mental health of the unemployed (Vinokur *et al*, 2000; Vuori & Silvonon, 2005; Barry *et al*, 2006).

While the evidence base for mental health promotion is being strengthened, there is a need to generate evidence on the effectiveness of interventions that operate at the policy level in promoting positive mental health. Much of the existing evidence has focused on individual-level interventions and, as highlighted by Petticrew *et al* (2005), there is a paucity of evidence on the effectiveness of upstream policy interventions such as improved housing, welfare, education and employment in improving mental health. There are many plausible policy interventions which might be expected to affect mental health, directly or indirectly, for which evidence appears to be absent. However, Petticrew *et al* (2005) cautions that the 'absence of evidence' should not be mistaken for 'evidence of absence' and that plausible interventions such as improved housing can reasonably be

expected to generate mental health gains.

A systematic review by Thomson, Petticrew and Morrison (2001) found evidence of a pattern of improvements in mental health linked to improved housing. Petticrew *et al* (2005) makes the case that there is a clear potential for positive mental health to be promoted by non-health policies such as building of new roads, new houses or area-based regeneration, and that assessment of the 'spillover' effects of such policies will make an important contribution to the mental health evidence base. This requires the development of mental health impact assessment methods which will monitor the mental health impacts, both positive and negative, of public policies. The need to generate better evidence of the benefits, harms and costs of 'upstream' interventions, such as non-health sector policies and programmes, remains a critical area for development.

Conclusion

Positive mental health is a key asset and resource for population well-being and the long-term social and economic prosperity of society. Promoting mental health and well-being will deliver improved outcomes for the general population as well as for people with mental health problems. The existence of review-level evidence of the effectiveness of mental health promotion interventions further strengthens the case for action (WHO, 2004a, 2004b; Jané-Llopis *et al*, 2005; Keleher & Armstrong, 2005; Barry & Jenkins, 2007). The wider health and social benefits that will accrue from promoting positive mental health are evident in the evidence base.

Responsibility for promoting mental health extends across all government departments and encompasses a concern with the impact of economic and social policies on social values, population well-being and the quality of people's lives. The evidence suggests that policies focused on curing or preventing mental illness will not necessarily deliver improved mental health at population level.

The increasing interest in positive mental health and well-being needs to be accompanied by investment in research on the determinants of positive mental health across the lifecourse, as distinct from studies on the determinants of mental disorders. To capitalise fully on the potential of mental health promotion, our 'roadmap to mental health' needs to be driven off a clear understanding of the nature of positive mental health and the factors that determine its maintenance and promotion across population groups and settings. Indicators of mental health must be included as standard measures in national health surveys, and the relative importance of material and psychosocial

factors in determining mental health explored.

In addressing the current and future challenges of increasing globalisation, economic crises, shifting epidemiological and demographic profiles, changing family and work structures, mental health promotion has a key role to play in empowering individuals and communities to shape positively the future direction and quality of their lives and to enhance their well-being. Mobilising a public demand for a greater policy focus on people's well-being and mental health will be an important driver for change. To achieve this positive well-being focus, broad engagement across society will be needed in re-orienting our public policies and services towards promotion of health and population well-being. This engagement will include implementing policies that will create a mentally healthy society, with consequent health, economic and social benefits for all.

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References

- Antonovsky A (1993) The structure and properties of the Sense of Coherence scale. *Social Science and Medicine* **36** (6) 725–33.
- Aspinall PJ & Jacobson B (2004) *Ethnic Disparities in Health and Health Care: A focused review of the evidence and selected examples of good practice*. London, UK: London Health Observatory.
- Bambra C, Egan M, Thomas S, Petticrew M & Whitehead M (2007) The psychosocial and health effects of workplace reorganisation: a systematic review of task restructuring interventions. *Journal of Epidemiology and Community Health* **61** 1028–37.
- Barlow J, Coren E & Stewart-Brown S (2001) *Systematic Review of the Effectiveness of Parenting Programmes in Improving Maternal Psychosocial Health*. Oxford, UK: Health Services Research Unit, University of Oxford.
- Barlow J & Parsons J (2003) Group-based parent training programmes for improving emotional and behavioural adjustment in 0–3 year old children. *Cochrane Database of Systematic Reviews* 2003 **2**.
- Barry MM (2001) Promoting positive mental health: theoretical frameworks for practice. *International Journal of Mental Health Promotion* **3** (1) 25–34.

- Barry MM (2007a) Building capacity for effective implementation of mental health promotion. Guest editorial. *Australian e-Journal for the Advancement of Mental Health (AeJAMH)* **6** (2) 1–9.
- Barry MM (2007b) Generic principles of effective mental health promotion. *International Journal of Mental Health Promotion* **9** (2) 4–16 .
- Barry MM & Friedli L (2008) The influence of social, demographic and physical factors on positive mental health in children, adults and older people. *Foresight Mental Capital and Wellbeing Project. State-of-Science Review: SR-B3*. London, UK: Government Office of Science and Innovation.
- Barry MM & Jenkins R (2007) *Implementing Mental Health Promotion*. Oxford, UK: Churchill Livingstone, Elsevier.
- Barry MM, van Lente E, Molcho M *et al* (2009) *SLÁN 2007: Survey of Lifestyle, Attitudes and Nutrition in Ireland: Mental Health and Social Well-being Report*. Department of Health and Children. Dublin, Ireland: The Stationery Office. www.slan07.ie/publications.htm.
- Barry MM, Patel V, Jané-Llopis E, Raeburn J & Mittlemark M (2007) Strengthening the evidence base for mental health promotion. In: DC McQueen & CM Jones (Eds) *Global Perspectives on Health Promotion*. New York, USA: Springer.
- Barry MM, Reynolds C, Sheridan A & Egerton R (2006) Implementation of the Jobs programme in Ireland. *Journal of Public Mental Health* **5** (4) 10–25.
- Blakely T, Collings S & Atkinson J (2003) Unemployment and suicide. Evidence for a causal association? *Journal of Epidemiology and Community Health* **57** 594–600.
- Braunholtz S, Davidson S, Myant K, Ipsos MORI and O'Connor R (2007) *Well? What do You Think? (2006): The third national Scottish survey of public attitudes to mental health, mental well-being and mental health problems*. Edinburgh, UK: Social Research, Scottish Executive.
- Breslin FC & Mustard CA (2003) Unemployment and mental health: examining age as a moderator in a population-based survey. *Scandinavian Journal of Work, Environment and Health* **29** (1) 5–14.
- Brunner E & Marmot M (1999) Social organisation, stress and health. In: M Marmot & RG Wilkinson (Eds) *The Social Determinants of Health*. Oxford, UK: Oxford University Press.
- Carlisle S (2007, accessed April 2009) *Series of Papers on Cultural Influences on Mental Health and Well-being in Scotland*. www.wellscotland.info/publications/consultations4.html.
- Chakraborty A & McKenzie K (2002) Does racism cause mental illness? *British Journal of Psychiatry* **180** 475–77.
- Chevalier A & Feinstein L (2006) *Sheepskin or Prozac: The Causal Effect of Education on Mental Health*. London, UK: Centre for Economics of Education.
- Chu A, Thorne A & Guite H (2004) The impact on mental well-being of the urban and physical environment: an assessment of the evidence. *Journal of Mental Health Promotion* **3** (2) 17–32.
- Ciliska D, Mastrilli P, Ploeg J *et al* (2001) *The Effectiveness of Home Visiting as a Delivery Strategy for Public Health Nursing Interventions to Clients in the Prenatal and Postnatal Period: A Systematic Review*. Hamilton, ON, USA: Effective Public Health Practice Project (EPHPP).
- De Silva MJ, McKenzie K, Harpham T & Huttly S (2005) Social capital and mental illness: a systematic review. *Journal of Epidemiology and Community Health* **59** 619–27.
- Dolan P, Peasgood T & White M (2006) *Review of Research on the Influences on Personal Well-being and Application to Policy Making*. London, UK: DEFRA (Department of the Environment, Food and Rural Affairs).
- Dooley D, Catalano R & Wilson G (1994) Depression and unemployment – panel findings from the Epidemiologic Catchment Area Study. *American Journal of Community Psychology* **22** (6) 745–65.
- Durlak JA & Wells AM (1997) Primary prevention mental health programs for children and adolescents: a meta-analytic review. *American Journal of Community Psychology* **25** (2) 115–52.
- Eckersley R (2006) Is modern western culture a health hazard? *International Journal of Epidemiology* **35** 252–8.
- Elkan R, Kendrick D, Hewitt M, Robinson JJA *et al* (2000) The effectiveness of domiciliary health visiting: a systematic review of international studies and a selective review of the British literature. *Health Technology Assessment* **4** (13).
- European Commission (2005) *Green Paper: Improving the Mental Health of the Population. Towards a Strategy on Mental Health for the European Union*. Brussels, Belgium: European Commission.
- Feinstein L, Hammond C, Woods L, Preston J & Bynner J (2003) *The Contribution of Adult Learning to Health and Social Capital*. London, UK: Centre for the Wider Benefits of Learning.
- Fergusson D, Horwood J & Ridder E (2005) Show me the child at seven: the consequences of conduct problems in childhood for psychosocial functioning in adulthood. *Journal of Child Psychology and Psychiatry* **46** (8) 837–49.
- Foresight Project on Mental Capital and Wellbeing (2008) *Final Project Report*. London, UK: Government Office for Science.

- Friedli L (2003) *Making it Effective: A Guide to Evidence Based Mental Health Promotion*. London, UK: mentality.
- Friedli L (2009) *Mental Health, Resilience and Inequalities*. Copenhagen, Denmark: WHO Regional Office for Europe.
- Friedli L & Parsonage M (2007) *Mental Health Promotion: Building an Economic Case*. Belfast, UK: Northern Ireland Association for Mental Health.
- Gable SL & Haidt J (2005) What (and why) is positive psychology? *Review of General Psychology* **9** (2) 103–10.
- Giga SI, Noblet AJ, Faragher B & Cooper CL (2003) The UK perspective: a review of research on organisational stress management interventions. *Australian Psychologist* **39** (20) 158–64.
- Goodwin JS (2000) Glass half full attitude promotes health in old age. *Journal of American Geriatrics Society* **48** 473–8.
- Harden A, Rees R, Shepherd J *et al* (2001) *Young People and Mental Health: A Systematic Review on Barriers and Facilitators*. England, UK: EPPI-Centre.
- Health Education Authority (1997) *Mental Health Promotion: A Quality Framework*. London, UK: Health Education Authority.
- Herrman HS, Saxena S & Moodie R (Eds) (2005) *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. A WHO Report in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva, Switzerland: World Health Organization.
- Hosman C & Jané-Llopis E (1999) Political challenges 2: mental health. In: *The Evidence of Health Promotion Effectiveness: Shaping Public Health in a New Europe*. A Report for the European Commission. International Union for Health Promotion and Education. Paris, France: Jouve Composition & Impression.
- Huppert FA (2005) Positive mental health in individuals and populations. In: F Huppert, N Bayliss & B Keverne (Eds) *The Science of Well-being*. Oxford, UK: Oxford University Press.
- Huppert FA & Whittington JE (2003) Evidence for the independence of positive and negative well-being: implications for quality of life assessment. *British Journal of Psychology* **8** 107–22.
- Jahoda M (1958) *Current Concepts of Positive Mental Health*. New York, USA: Basic Books.
- Jané-Llopis E & Barry MM (2005) What makes mental health promotion effective? *Promotion and Education* **suppl 2** 47–55.
- Jané-Llopis E, Barry M, Hosman C & Patel V (2005) Mental health promotion works: a review. In: E Jané-Llopis, MM Barry, C Hosman & V Patel (Eds) The evidence of mental health promotion effectiveness: strategies for action. *Promotion and Education* **suppl 2** 9–25.
- Johansson SE & Sundquist J (1997) Unemployment is an important risk factor for suicide in contemporary Sweden: an 11-year follow-up study of a cross-sectional sample of 37,789 people. *Public Health* **3** 41–5.
- Karoly LA, Greenwood PW, Everingham SS *et al* (1998) *Investing in Our Children: What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions*. California, USA: Rand Publications.
- Karoly LA, Kilburn MR & Cannon JS (2005) *Early Childhood Interventions: Proven results, Future Promise*. Santa Monica, CA, USA: Rand Corporation.
- Keleher H & Armstrong R (2005) *Evidence-based Mental Health Promotion Resource*. Melbourne, Australia: Department of Human Services.
- Kendrick D, Barlow J, Hampshire A, Polnay L & Stewart-Brown S (2007) Parenting interventions for the prevention of unintentional injuries in childhood. *Cochrane Database of Systematic Reviews* 2007 **4**. Art. No.: CD006020. DOI:10.1002/14651858.CD006020.pub2.
- Kendrick D, Elkan R, Hewitt M *et al* (2000) Does home visiting improve parenting and the quality of the home environment? A systematic review and meta analysis. *Archives of Disease in Childhood* **82** 443–51.
- Keyes CLM (2002) The mental health continuum: from languishing to flourishing in life. *Journal of Health and Social Research* **43** 207–22.
- Keyes CLM (2004) The nexus of cardiovascular disease and depression revisited: the complete mental health perspective and the moderating role of age and gender. *Aging and Mental Health* **8** 266–74.
- Keyes CLM (2005) Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology* **73** 539–48.
- Keyes CLM (2007) Promoting and protecting mental health as flourishing. *American Psychologist* **62** (2) 1–14.
- Kovess-Masfety M, Murray M & Gureje O (2005) Positive mental health. In: H Herrman, S Saxena & R Moodie (Eds) *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. A report of the World Health Organization, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and University of Melbourne. Geneva, Switzerland: WHO.
- Lavikainen J, Fryers T & Lehtinen V (Eds) (2006) *Improving Mental Health Information in Europe. Proposal of the MINDFUL Project*. Helsinki, Finland: STAKES.

- Layard R (2005) *Happiness: Lessons from a New Science*. London, UK: Allen Lane.
- Lehtinen V, Sohlman B & Kovess-Masfety V (2005) Level of positive mental health in the European Union: results from the Eurobarometer 2002 survey. *Clinical Practice and Epidemiology in Mental Health* **1** (9).
- Lister-Sharp D, Chapman S, Stewart-Brown S & Sowden A (1999) *Health Promoting Schools and Health Promotion in Schools: Two Systematic Reviews*. London, UK. Health Technology Assessment No 22.
- Lyubomirsky S, King L & Diener E (2005) The benefits of frequent positive affect: does happiness lead to success? *Psychological Bulletin* **131** 803–5.
- Marks N & Shah H (2005) A well-being manifesto for a flourishing society. *Journal of Mental Health Promotion* **3** (4) 9–15.
- Marks N, Thompson S, Eckersley R, Jackson T & Kasser T (2006) *Sustainable Development and Well-being: Relationships, Challenges and Policy Implications. A Report by the Centre for Well-Being*. London, UK: NEF (the New Economics Foundation) for DEFRA (Department of the Environment, Food and Rural Affairs).
- Melzer D, Fryers T & Jenkins R (2004) *Social Inequalities and the Distribution of Common Mental Disorders*. Maudsley Monographs. Hove, UK: Psychology Press.
- Michie S & Williams S (2003) Reducing work-related psychological ill health and sickness absence: a systematic literature review. *Occupational and Environmental Medicine* **60** 3–9.
- Mohan J, Barnard S, Jones K & Twigg L (2004) Social capital, geography and health: developing and applying small-area indicators of social capital in the explanation of health inequalities. In: A Morgan & C Swann (Eds) *Social Capital for Health: Issues of Definition, Measurement and Links to Health*. London, UK: Health Development Agency.
- Moodie R & Jenkins R (2005) ‘I’m from the government and you want me to invest in mental health promotion. Well why should I?’. *Promotion and Education* **suppl 2** 37–41.
- Moran P, Ghate D & Van Der Merwe A (2004) *What Works in Parenting Support? A Review of the International Evidence*. London, UK: Home Office/Department for Education and Skills.
- Morgan A & Swann C (Eds) (2004) *Social Capital for Health: Issues of Definition, Measurement and Links to Health*. London, UK: Health Development Agency.
- Mrazek PJ & Haggerty RJ (Eds) (1994) *Reducing Risks for Mental Disorders: Frontiers for preventive intervention research*. Washington DC, USA: National Academy Press.
- New Economics Foundation (2003) *A Well-being Manifesto for a Flourishing Society*. London, UK: NEF.
- New Economics Foundation (2008) *National Accounts of Well-being: Bringing Real Wealth on the Balance Sheet*. London, UK: NEF.
- NIMHE – National Institute for Mental Health in England (2005) *Making it Possible: Improving Mental Health and Well-being in England*. London, UK: NIMHE.
- Olds DL, Eckenrode J, Henderson CR *et al* (1997) Long term effects of home visitation on maternal life course and child abuse and neglect: fifteen year follow up of a randomised trial. *Journal of American Medical Association* **278** (8) 637–43.
- Olds DL, Henderson CR, Kitzman H *et al* (1998) The promise of home visitation: results of two randomised trials. *Journal of Community Psychology* **26** (1) 5–21.
- Patel V (2005) Poverty, gender and mental health promotion in a global society. In: E Jané-Llopis, MM Barry, C Hosman & V Patel (Eds) *The evidence of mental health promotion effectiveness: strategies for action. Promotion and Education* **suppl 2** 26–9.
- Payton J, Weissberg RO, Durlak JA *et al* (2008) *The Positive Impact of Social and Emotional Learning for Kindergarten to Eight-grade Students: Findings from Three Scientific Reviews*. Chicago, IL, USA: Collaborative for Academic, Social and Emotional Learning.
- Petticrew M, Chisholm D, Thomson H & Jané-Llopis E (2005) Evidence: the way forward. In: H Herrman, S Saxena & R Moodie (Eds) *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. A WHO Report in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva, Switzerland: World Health Organization.
- Pickett KE, James OW & Wilkinson RG (2006) Income inequality and the prevalence of mental illness: a preliminary international analysis. *Journal of Epidemiology and Community Health* **60** 646–7.
- Prince M, Patel V, Saxena S *et al* (2007) No health without mental health. *Lancet* **370** 859–77.
- Rogers A & Pilgrim D (2005) *A Sociology of Mental Health and Illness*. Maidenhead, UK: Open University Press.
- Rowling L, Martin G & Walker L (2002) *Mental Health Promotion and Young People: Concepts and Practice*. Sydney, Australia: McGraw Hill.
- Ryff CD (1989) Happiness is everything or is it? Explorations on the meanings of psychological well-being. *Journal of Personality and Social Psychology* **57** (6) 1069–81.

- Ryff C, Love G, Urry H *et al* (2006) Psychological well-being and ill-being: do they have distinct or mirrored biological correlates? *Psychotherapy and Psychosomatics* **75** 85–95.
- Ryff CD & Singer B (1996) Psychological well-being: meaning, measurement, and implications for psychotherapy research. *Psychotherapy and Psychosomatics* **65** 14–23.
- Schweinhart LJ, Montie J, Xiang Z *et al* (2005) Lifetime effects: the High/Scope Perry Preschool Study through age 40. *Monographs of the High/Scope Educational Research Foundation* **14**. Ypsilanti, Michigan, USA: High/Scope Press.
- Schweinhart LJ & Weikart DP (1997) The High/Scope Preschool curriculum comparison study through age 23. *Early Childhood Research Quarterly* **12** 117–43.
- Seligman MEP & Csikszentmihalyi M (2000) Positive psychology: an introduction. *American Psychologist* **55** (1) 5–14.
- Seligman MEP, Steen TA, Park N & Peterson C (2005) Positive psychology progress: empirical validation of interventions. *American Psychologist* **60** (5) 410–21.
- Social Exclusion Unit (2004) *Mental Health and Social Exclusion: Social Exclusion Unit Report*. London, UK: Office of the Deputy Prime Minister.
- Stansfeld SA, Fuhrer R, Shipley MJ & Marmot MG (1999) Work characteristics predict psychiatric disorder: prospective results from the Whitehall II study. *Occupational and Environmental Medicine* **15** 302–7.
- Stewart-Brown S (2005) Interpersonal relationships and the origins of mental health. *Journal of Public Mental Health* **4** (1) 24–9.
- Tennant R, Goens C, Barlow J, Day C & Stewart-Brown S (2007b) A systematic review of reviews of interventions to promote mental health and prevent mental health problems in children and young people. *Journal of Public Mental Health* **6** (1) 25–32.
- Tennant R, Hiller L, Fishwick R *et al* (2007a) The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes* **5** 63.
- Thomson H, Petticrew M & Morrison D (2001) Housing interventions and health – a systematic review. *British Medical Journal* **323** 187–90.
- Tilford S, Delaney F & Vogels M (1997) *Effectiveness of Mental Health Promotion Interventions: A Review*. London, UK: Health Education Authority.
- Van der Klink JL, Blonk RWB, Schene AH & Van der Klink FJH (2001) The benefits of interventions for work-related stress. *American Journal of Public Health* **91** (2) 270–6.
- Vinokur AD, Schul Y, Vuori J & Price RH (2000) Two years after a job loss: long-term impact of the JOBS program on reemployment and mental health. *Journal of Occupational Health Psychology* **5** (1) 32–47.
- Vuori J & Silvonen J (2005) The benefits of a preventive job search program on re-employment and mental health at two years follow-up. *Journal of Occupational and Organizational Psychology* **78** 43–52.
- Weare K (2000) *Promoting Mental, Emotional and Social Health: A Whole School Approach*. London, UK: Routledge.
- Wells J, Barlow J & Stewart-Brown S (2001) *A Systematic Review of Universal Approaches to Mental Health Promotion in Schools*. Oxford, UK: HSRU, University of Oxford.
- Wells J, Barlow J & Stewart-Brown S (2003) A systematic review of universal approaches to mental health promotion in schools. *Health Education* **103** (4) 197–220.
- Whiteford H, Cullen M & Baingana F (2005) Social capital and mental health. In: H Herrman, S Saxena & R Moodie (Eds) *Promoting Mental Health: Concepts, emerging evidence, practice*. A WHO Report in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva, Switzerland: World Health Organization.
- Wilkinson RG & Marmot M (2003) *Social Determinants of Health: The Solid Facts* (2nd edition). Copenhagen, Denmark: World Health Organization, Regional Office for Europe.
- World Health Organization (1986) *Ottawa Charter for Health Promotion*. Geneva, Switzerland: World Health Organization.
- World Health Organization (1998) *WHO's Global School Health Initiative: Health Promoting Schools*. Geneva, Switzerland: World Health Organization.
- World Health Organization (2000) *Mental Health and Work: Impact, Issues and Good Practices*. Harnois G & Gabriel P (Eds) A joint publication of the World Health Organization and the International Labour Organization. Geneva, Switzerland: World Health Organization.
- World Health Organization (2001) *Mental Health: New Understanding, New Hope. The World Health Report*. Geneva, Switzerland: World Health Organization.
- World Health Organization (2002) *Prevention and Promotion in Mental Health*. Geneva, Switzerland: World Health Organization.
- World Health Organization (2004a) *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. Summary Report. A report of the World Health Organization, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. Geneva, Switzerland: World Health Organization.

World Health Organization (2004b) *Prevention of Mental Disorders: Effective Interventions and Policy Options. Summary Report*. A report of the World Health Organization Department of Mental Health and Substance Abuse in collaboration with the Prevention Research Centre of the Universities of Nijmegen and Maastricht. Geneva, Switzerland: World Health Organization.

World Health Organization (2005a) *Mental Health Action Plan for Europe: Facing the Challenges, Building Solutions*. Geneva, Switzerland: World Health Organization.

World Health Organization (2005b) *The Bangkok Charter for Health Promotion in a Globalized World*. Geneva, Switzerland: World Health Organization.

WHO Commission on the Social Determinants of Health (2008) *Closing the Gap in a Generation: Health Equity*

through Action on the Social Determinants of Health. Final Report of the Commission on the Social Determinants of Health. Geneva, Switzerland: World Health Organization.

Zins JE, Weissberg RP, Wang MC *et al* (Eds) (2004) *Building Academic Success on Social and Emotional Learning: What Does the Research Say?* New York, USA: Teachers College Press.

Zubrick S & Kovess-Masfety M (2005) Indicators of mental health. In: H Herrman, S Saxena & R Moodie (Eds) *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. A report of the World Health Organization, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and University of Melbourne. Geneva, Switzerland: World Health Organization.