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Introduction

The literature on prevention and promotion in the school and other settings has seen a shift in recent years towards

A B S T R A C T

This paper reflects on the challenges associated with developing, implementing and evaluating a universal curriculum-based module promoting positive mental health for 15-18 year olds in Irish schools. The module consists of 13 classroom sessions over two years, and uses experiential learning techniques to address issues such as coping strategies and sources of support. The paper is structured around the implications of a conceptual model of implementation for school-based preventive interventions developed by Greenberg et al (2001b), covering three phases of programme implementation: pre-adoption - adapting principles of best practice to local circumstances, teacher training; delivery - school ethos, stakeholder involvement, measuring implementation, selecting appropriate outcome indicators, designing an activity-based evaluation workshop for students; and post-delivery - development of quality indicators for teachers to use on an ongoing basis, scaling-up issues.

an emphasis on implementation factors that can influence programme success (Dusenbury *et al*, 2003; Elias *et al*, 2003; Ringwalt *et al*, 2003; Zins *et al*, 2000; Chen, 1998; Dane & Schneider, 1998; Durlak, 1998; Scheirer *et al*, 1995). This is an important and timely development, as the growing number of high-quality evidence-based programmes that are now becoming available to schools present new challenges for dissemination and sustainability.

In 2001, a monograph was submitted to the Center for Mental Health Services in the USA, drawing together many of the issues in this area and proposing 'a conceptual model of implementation for school-based preventive interventions' (Greenberg *et al*, 2001b). The monograph concluded by drawing out the implications of the model for improving programme delivery at three different time points: pre-adoption, delivery and post-adoption.

This paper explores implementation issues that have arisen during each of these three phases of the Mind Out[1] project in Ireland, drawing on process evaluation with successive groups of teachers and students over a number of years, as well as the theoretical literature.

Background

Mind Out is a curriculum-based module developed in recent years for 15-18year olds in Irish schools. The programme aims to promote positive mental health for young people through an exploration of stress and coping, sources of support (family and friends as well as support services in the community), emotions (anger, conflict, rejection, depression), relationships, understandings of mental health and the importance of supporting others. The module runs

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[1] The Mind Out programme was originally developed under the working title Lifeskills MindMatters.

over two years and most of the thirteen sessions include an activity-based exercise followed by time for reflection and discussion.

The Solomon Four-Group Design (Solomon, 1949) was used to evaluate the module, with experimental groups randomised to intervention and one of two control conditions. Data were collected at three different time points and were analysed at the cluster level, using multi-level modelling techniques. The programme was implemented in 22 intervention schools by 33 teachers with approximately 650 students. The results of the evaluation study are reported in full elsewhere (Byrne *et al*, in press), together with a detailed description of the research design and methodologies used. Overall the evaluation demonstrated that Mind Out can have a number of positive effects on a range of student outcomes in a variety of school settings in the short term; 12-month follow-up data is pending. Effects included raised awareness of support services and intentions to seek help in more constructive ways for self and others, and greater compassion and understanding for the needs of a young person showing symptoms of depression. The remainder of this paper will focus on the evaluation of programme implementation and associated challenges.

Pre-adoption phase

Matching best practice with local circumstances

Involving programme participants in designing interventions is a fundamental principle of health promotion theory and practice (WHO, 1986) and is widely endorsed, not only for contributing to increased programme relevance but also for empowering participants (Nichols, 2002). The themes and issues identified by teachers and students during a series of consultation exercises informed the selection of appropriate materials for the Mind Out programme.

The consultation process was followed by a review of the international evidence for mental health promotion in schools. Consideration was also given to the national context for school-based health promotion in Ireland, which has undergone considerable change in recent years. The Mind Out project sought to develop a programme that would take account of local circumstances, while remaining faithful to the principles of effective school-based mental health promotion.

The literature review identified a number of characteristics that contribute to successful school-based interventions (Greenberg *et al*, 2001a; Lister-Sharp *et al*, 1999):

- social competence approach - multi-component programmes targeting multiple outcomes focusing on risk and protective factors rather than specific problem behaviours
- systems approach - changing institutions and environments as well as individuals using a range of co-ordinated strategies and programmes
- integrated and comprehensive training and support resources for teachers
- sustained intervention over multiple years
- support from school administration and principal
- sound theoretical basis for content, structure and implementation of the programme
- high-quality, systematic evaluation and monitoring.

In Ireland the development of the Mind Out materials has taken place against the backdrop of major developments in school-based health promotion in recent years.

'Social, personal and health education' (SPHE) is due to be introduced as a mandatory curriculum subject for 15-18 year olds from September 2004, and has been part of the core curriculum for younger students only since 1999. Before this, Ireland joined the European Network of Health Promoting Schools (Lahiff, 2000) but participation of schools is fragmented. Although the evidence suggests that adopting a systems-wide approach for mental health promotion is most effective, the structures are not yet established in the Irish education system to support such a venture. Given this context, the Mind Out project focused instead on developing a classroom-based programme that would meet the need for high-quality, curriculum-based resources for teachers to implement the new SPHE curriculum with 15-18 year olds. This was seen as a necessary first step in the evolution of a whole-school approach to mental health promotion in Irish schools.

In selecting the content for the Mind Out programme, a number of existing resources were assessed with a view to compiling a balanced selection of items which would complement each other while matching the needs expressed by students and teachers. Two programmes in particular were drawn upon: MindMatters, a widely-used mental health promotion resource for Australian secondary schools (Commonwealth Department of Health and Aged Care, 2000), and the Lifeskills materials (McAuley, 1996; 1997), a series of generic health education manuals developed for the Irish context which have been positively evaluated (Nic Gabhainn & Kelleher, 1995).

The availability of clearly structured and comprehensive resource materials to programme implementors is known to increase quality of implementation (Price *et al*,

1989). Following consultation and review, a structured stand-alone teacher's manual was compiled, containing all 13 sessions of the Mind Out programme to facilitate successful programme implementation.

Teacher training

Training teachers before they deliver a programme is essential to programme integrity (Payton *et al*, 2000). A number of studies have found that the degree of training received is associated with both better programme fidelity (WHO, 1997) and better outcomes (Fors & Doster, 1985). In addition, mental and emotional health is a particularly difficult and sensitive area that many teachers feel unprepared to deal with in the classroom; in the Mind Out study only 37% of schools agreed that 'teachers feel well equipped to educate students about mental health and mental illness' in response to a school ethos questionnaire.

Teachers from randomly-selected intervention schools who volunteered to teach Mind Out were required to attend a one-day training and induction session in one of four regional centres, designed to equip them to deliver the programme effectively and with confidence. Ongoing telephone support and consultation were also offered to intervention teachers for the duration of the evaluation study, to deal with any unforeseen challenges that arose. As an additional resource, a six-page introductory section to the teacher's manual included important guidelines such as 'dealing with difficult situations in the classroom', 'conditions for success' and 'the role of the teacher'.

Delivery phase

Institutional support and school ethos

The degree of principal and administrative support for a school-based programme can have a critical influence on its success or failure (Ringwalt *et al*, 2003). A supportive school principal can be an encouraging force in building and keeping teachers' motivation and interest, as well as facilitating their attendance at training sessions. On a more practical level, prevention and promotion programmes can involve new intervention approaches that sometimes necessitate structural changes, such as reducing class sizes or increasing class times, often at the discretion of the school principal. Because of the sensitive nature of mental health and the challenges of teaching SPHE with older adolescents, principals have a key role in identifying and supporting their most experienced teachers to teach programmes like Mind Out.

Finally, principals are ultimately responsible for fostering a school climate that nourishes positive mental health. The social environment of a school is known to influence mental health outcomes in young people (Rutter *et al*, 1979; Wells *et al*, 2001). In order to monitor this effect in the Mind Out study, a 53-item school ethos questionnaire was completed by one member of staff in each school (n=48). Questionnaire items were drawn mainly from School Matters: Mapping and Managing Mental Health in Schools, a component of the Australian resource pack MindMatters (Commonwealth Department of Health and Aged Care 2000), and explored:

- policies
- curriculum
- ethos and environment
- community partnerships and services
- support staff
- perceived barriers to mental health education.

Findings included the following.

- The most common barriers to implementing mental health education in schools were thought to be lack of teacher training (87.5%) and an overcrowded curriculum (81.3%).
- 58.7% of schools encourage teachers to attend professional development programmes about mental health and youth suicide, but only 37% of schools reported that teachers feel well-equipped to educate students about mental health and mental illness.
- Two-thirds of schools felt there were inadequate support services and mental health services to meet students' mental and social needs, while about the same number reported that teachers and parents were not provided with information about local services and their accessibility for counselling and referral.
- Staff members experiencing personal or work-related stress would be well supported in 73.3% of schools, although only 42.9% of schools had a policy on staff health and welfare and only 41.3% of respondents thought that staff members actually seek help when feeling over-committed or stressed.

Changing the overall ethos of Irish schools to promote positive mental health more comprehensively will require a fundamental shift in thinking at institutional level. To the extent that such a change involves every member of staff in a school community (and not just those directly involved

with delivering health education in the classroom), this has important implications for pre-service teacher training courses, which currently offer SPHE only on an elective basis to a small number of teachers.

Involving stakeholders

The importance of inter-sectoral collaboration for the success of health promotion interventions is widely acknowledged (Gillies, 1998). This approach recognises that health is influenced by multiple factors and seeks to bring about positive change by taking account of the broader social, economic and environmental determinants of health.

For school-based programmes this calls for partnership between the health and education sectors, as well as between the school and its local community (Goffin, 2003; Denman *et al*, 2002).

In Ireland the SPHE Support Service is the agency responsible for the implementation of the new SPHE curriculum. The service comprises a national office and ten regional support teams. Each team is a two-person partnership between a health promotion officer from the local health board and a regional development officer from the Department of Education. The Mind Out project has benefited from the active participation of health promotion personnel from the local health boards involved, as well as the explicit support of the SPHE Support Service.

The voluntary and statutory mental health support services have also been enlisted as active partners in the project through the 'visitor session'. A representative of the local services is invited to meet with students in the context of the module, to discuss their own work and that of other service providers and to promote positive, help-seeking behaviour. Guidelines for delivering this session and background information for 'visitors' on Mind Out are included in the programme.

Schools are encouraged to inform and involve parents when the Mind Out programme is being delivered. Guidelines on organising an information evening for parents of participating students have been developed, as well as a leaflet containing information about the programme and the role parents can play in supporting young people.

Measuring implementation

'The degree to which teachers and other program providers implement programs **as intended by the program developers**' (Dusenbury *et al*, 2003 p240) is variously referred to as implementation quality, treatment integrity or programme fidelity/adherence (Domitrovich & Greenberg,

2000). It can be influenced by a wide range of factors, including characteristics of the implementation system and characteristics of the intervention setting and the programme implementors (Chen, 1998).

In the evaluation of Mind Out, classification of intervention classrooms as 'high fidelity' or 'low fidelity' was guided by seven criteria described by Greenberg *et al*, (2001b):

- timing (frequency and duration of sessions)
- dosage (number of sessions delivered)
- quality (in-depth or surface delivery)
- absenteeism (<25% of students missed 4+ classes or were not sure)
- student responsiveness (<25% found the programme boring)
- teacher commitment/engagement
- teacher experience of health education methodologies.

Assessments of these criteria were based on a range of sources, including:

- short weekly written reports from teachers
- post-intervention group review sessions
- individual interviews with teachers
- facilitator observations at teacher training sessions
- post-intervention written questionnaires from students.

No independent observation of programme delivery in the classroom was possible in this study. Each intervention classroom was assigned a score of either 1 (high) or 0 (low) for each of the seven criteria, leading to a total fidelity score for each classroom of between 0 and 7 (see *Table 1*, below).

Classrooms scoring 5 or more were deemed to have a high level of overall fidelity to the process of programme implementation and a separate analysis was conducted on these groups (n=15 or 55.5%).

TABLE 1 *Totality Fidelity Scores Based on Seven Criteria*	
Total fidelity score	**% of classrooms (n=27)**
7	22.2
6 } *cut-off point for 'high fidelity': 55.5%*	
5	7.4
4	7.4
3	22.2
2	11.1
1	3.7
0	0

The seven criteria are broken down separately in **Table 2**, below, according to the percentage of classrooms that were given a rating of 1 (high) for each.

TABLE 2 *Percentage of Classrooms rated 'High' in Aspects of Implementation Fidelity*	
	% rated 1 (high) (n=27)
Timing (frequency and duration of sessions)	74.1
Dosage (number of sessions delivered)	55.5
Quality of delivery (surface or in-depth)	66.7
Absenteeism (>25% missed 4+ classes)	66.7
Student responsiveness (<25% found it boring)	63.0
Teacher commitment/engagement	74.1
Teacher experience	70.4
Overall fidelity	55.5

Implementation quality was lowest in the area of dosage (number of sessions delivered), only 55.5% of classrooms delivering at least eight of the ten sessions in full. Highest quality was achieved in 'frequency and duration of sessions' and 'teacher commitment and engagement' at 74.1%.

Selecting appropriate outcome measures

The selection of appropriate outcome measures is critical to evaluation studies, but is often a very difficult process. Mental health promotion programmes can have multiple outcome dimensions (Greenberg *et al*, 2001a), and there is a paucity of valid and reliable measures that are sensitive to improvements in **positive** mental health in the general population (Wells *et al*, 2001). In addition, programme success can be influenced not only by the actual content of the programme but also by a range of intermediate implementation factors that are sometimes hard to measure.

The use of multiple research methodologies can help to address some of these challenges, and there is a general consensus in the literature that methodological triangulation greatly increases the validity of evaluation research (Stewart-Brown, 2002). Accordingly, the evaluation of the Mind Out programme had five principal components, using a combination of qualitative and quantitative methods:

■ written questionnaires for students
■ activity-based evaluation workshops for students
■ weekly written process questionnaires for teachers
■ post-intervention group review session for teachers
■ school ethos questionnaire.

While a written questionnaire can be a valuable instrument for gathering responses, it may not always be the most appropriate tool for accessing certain types of information with certain groups. Questionnaires can have limitations in probing sensitive areas such as mental and emotional health, and the exam-like format of a written questionnaire may be intimidating to some young people (Weare, 2000). This method was therefore coupled with activity-based evaluation workshops, designed to be an interactive and participative experience for the young people involved. The workshops were piloted in 2001 (Buckingham, 2001) and a revised protocol was implemented in April/May 2002 (Fahy, 2002). Each workshop consisted of five principal activities:

■ energiser
■ brainstorming in small 'buzz' groups, each group discussing five pre-set questions and feeding back verbally to the larger group
■ peer interviewing: students pairing off and acting as reporters/interviewees in turn, using a tape recorder and a list of questions; responses later transcribed anonymously
■ graffiti sticker sheet, where students vote on their top three recommendations for improving the programme by placing colour-coded stickers on wall charts
■ written evaluation of the workshop process.

The key issues explored were:

■ overall attitude towards the programme
■ positive and negative aspects of the programme
■ nature of perceived benefits of the programme
■ changes in teacher-pupil relationships
■ translation of learning beyond the classroom into everyday life
■ perceived age-appropriateness of the programme
■ perceived gender differential in experience of the programme
■ recommendations for improving the programme
■ opinion of the evaluation workshop format.

The value of engaging young people as 'active partners in research' rather than treating them as 'passive objects' is multifaceted (Alderson, 2001). For example, young people may feel more comfortable talking to their peers than to a teacher or another adult. Peer-group methodologies can therefore have the dual advantage of allowing greater access to young people through their peers and increasing

the reliability of their responses (Morrow, 1999). Correspondingly, this leads to an inevitable increase in validity and insight into the views and experiences of young people themselves (Matysik, 1999). In addition, participatory methods can bring intrinsic benefits in their own right, such as empowerment, raised confidence and improved social skills (Douglas *et al*, 2000).

Feedback from these workshops demonstrated that this was an effective method of eliciting the views of young people in a way that was highly enjoyable and acceptable to them. The workshops allowed for maximum participation and articulation by students of their opinions in a naturalistic way (Byrne & Barry, 2003).

Assessing attitudes of students and teachers towards the programme

Overall, Mind Out was well-received by both teachers and pupils. Of the thirty-three teachers in the evaluation study, twenty-five returned one or more regular weekly written reports and eighteen were involved in reviewing the module at post-intervention, either by individual interview or by attending a group review session.

All teachers agreed that ten sessions was a good length for the first year of the programme, and that it was targeted at the right level for 15-16 year olds. For example:

'It is a vulnerable time in their lives and I think that's a very good time to pitch the programme.'

The Teacher's Manual was judged to be user-friendly.

'I found it very well laid-out and very easy to follow, very clear, it went through the materials that you needed at the beginning, very helpful really.'

The balance of activity-based exercises with discussion-type activities was praised and benefits to the teacher-pupil relationship were noted as well as overall benefits to students.

'They'll often come and see me about private matters and want to talk to me privately, because I think they hadn't seen me in that role before.'

'It makes you stop and think and appreciate where they're coming from and listen to their suggestions. It allows you to empower your students.'

Pupils who participated in the programme were offered a

range of opportunities - through both the written questionnaires (n=521) and the activity-based evaluation workshops (n=82) - to express their views on various aspects of the programme. The reaction overall was positive. Participants in the activity workshops all agreed that the programme was appropriate for their age group and two thirds thought that boys and girls benefited equally from the programme. In response to the written questionnaires, most students reported a better understanding of mental health issues and had learned something new, while finding the programme interesting and not too long. *Table 3*, below, shows that girls tended to evaluate the programme more positively than boys.

TABLE 3 *General Attitudes Towards the Programme*			
	Total (%) n=518	Female (%) n=289	Male (%) n=229
Very/fairly interesting	61.7	69.2	52.0
Right length/too short	64.8	73.1	54.6
Better understanding of mental health	64.1	72.1	53.9
Learned a lot/something new	69.1	76.8	59.2

Students felt they had gained from the programme in a variety of ways – categorised and summarised in *Table 4*, below.

Sample responses included:

'I think I've gained… a way of sitting back, thinking of things rationally and trying to solve the problem and cause of stress'

'I never really had a lot of self-esteem or confidence but since the programme I have developed that and it has made me feel a better person'

TABLE 4 *'What do you Think you have Gained from the Programme, if Anything?'*			
	Total (%) n=412	Female (%) n=239	Male (%) n=173
Better able to cope with problems/emotions	23.1	26.8	17.9
Improved relations/attitudes to others	19.4	21.8	16.2
Improved attitude to life/self	17.2	20.9	12.1
Improved understanding of mental health/suicide	15.0	15.9	13.9
Better able to talk/access support	11.4	16.7	4.0
Better able to help others	10.2	12.1	7.5
Knowing others feel the same as me	2.7	3.8	1.2
Nothing	20.6	12.1	32.4
Miscellaneous gains	6.3	5.0	8.1

'I would have gained confidence in how to talk about my problems with friends and family'.

Post-delivery phase

Maintaining quality standards through ongoing evaluation

As part of the process of disseminating the module materials, the Mind Out project is also concerned with the development of quality indicators for teachers to use on an ongoing basis. Evaluation is the cornerstone of maintaining quality standards in health promotion (Stewart-Brown, 2002). With this in mind, a number of short evaluation tools have been developed which teachers can use to consult their students after completing the module. They are modelled on the activity-based workshops described above, providing teachers with a means of drawing out a natural, spontaneous reaction from students. The evaluation tools will give teachers an opportunity to learn how students feel about the module and to identify areas for programme improvement if required, as well as allowing students to feel valued as partners in the exercise and providing a sense of closure to the module for both teacher and students.

System-wide implementation or 'scaling-up' issues

As the Mind Out programme reaches the end of its development and evaluation stage, the foremost issue becomes the translation of this work into a widely-available and enduring resource for schools. Elias *et al* (2003) gives a comprehensive and detailed overview of the factors which influence successful mainstreaming or 'scaling up' of school-based programmes. Challenges to this process include:

- problematic structural features in school settings
- narrow 'programmes-and-packages' perspective rather than acknowledgement of the importance of context
- under-estimation of management, resource and organisation requirements
- overlooking of the relevant characteristics of the adults involved in school innovations.

Throughout the lifetime of the Mind Out project, partnerships with local health and education agencies have been nurtured and developed (see 'Involving stakeholders' section). As part of this process, the SPHE Support Service has been engaged as a mechanism for mainstreaming Mind Out into the new SPHE curriculum that comes into force later this year. This will make it easier for the programme to be sustained, disseminated and institutionalised as a permanent part of the curriculum in Irish schools. Training for teachers of the programme will be incorporated into ongoing professional development training for SPHE teachers nationally, and the programme will continue to be delivered in the context of a broader health education programme and an ever-more supportive educational ethos.

Conclusion

This paper was intended as a critical reflection on the challenges associated with implementing a new mental health promotion programme in the school setting. Implementation quality has earned a place high on the current agenda of researchers and practitioners of school-based interventions, and the issues raised here have potential relevance for similar projects in other countries. Key themes emerging from this study include adapting to local circumstances while remaining faithful to principles of best practice, the importance of teacher training for quality of programme implementation, the need to influence educational ethos at a national level for local impact and the value of engaging pre-existing agencies for programme dissemination and sustainability. More detailed research in this area will further elucidate the effect of variations in programme implementation, such as critical thresholds of dosage and quality, different methods of teacher training, teacher characteristics, delivery formats and programme support systems. 'The future is [still] exciting' (Durlak & Wells, 1997).

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