A Case Study of Multimethod Evaluation of Complex School Mental Health Promotion and Prevention: The MindMatters Evaluation Suite

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There are a number of challenges and debates surrounding the implementation of mental health interventions in schools. These include recognising the complexity of influencing factors and the interdependency of key components; the critical importance of monitoring school-based implementation in particular contexts; employing multimethod evaluation designs that can capture the complexity; and judging success using mental health and educational outcomes. These factors are shaped by both mental health and educational research. The prevention paradox focusing on the whole population ‘prevents’ more illness than targeting programs to specific individuals, and is exemplified in school mental health promotion that utilises an ecological or whole school approach. MindMatters, an innovative Australian mental health promotion and prevention program, illustrates the challenges in this new field of endeavour. Its design and implementation are consistent with recommended effective practice, a comprehensive program that targets multiple health outcomes in the context of a coordinated whole school approach (Jané-Lopis, Barry, Hosman, & Patel, 2005). MindMatters moves beyond the sole focus on the curriculum to acknowledge the key roles of teacher professional development and whole school change within a strengths-based approach. As recommended by Jané-Lopis et al. (2005) measures of key school mental health outcomes are being used, ranging from absenteeism and drop-out rates to the development of social skills and academic achievement. The MindMatters evaluation suite of five separate yet interrelated evaluation studies illustrates some of the complexity involved.
There is a complex interaction of factors that have an impact on implementing mental health interventions in schools. These factors are shaped by both mental health research and educational research. In addition to this complexity, mental health and education disciplinary boundaries can have contradictory views about what form interventions should take and about the design of evaluation that can provide evidence of success. Mixed in with these issues are debates about the focus: mental health promotion and/or prevention of mental illnesses. The imperative of the prevention paradox — the benefits to individuals being small but with a large effect for populations (Scanlon, 2002) — is exemplified in school mental health promotion that utilises an ecological or whole school approach. That is, focusing on the whole population ‘prevents’ more illness than targeting programs to specific individuals. MindMatters is an innovative Australian mental health promotion and prevention program disseminated nationally since 2001, to all schools with a secondary enrolment. It illustrates the challenges and debates in this new field of endeavour. Its design and implementation are consistent with recommended effective practice. It is a comprehensive program that targets multiple health outcomes in the context of a coordinated whole school approach (Jané-Lopis, Barry, Hosman, & Patel, 2005). In its evaluation designs and whole school approach to mental health promotion it has broken new ground conceptually and in practice. It moves beyond the sole focus on the curriculum to acknowledge the key roles of teacher professional development and whole school change within a strengths-based approach. As recommended by Jané-Lopis et al. (2005) key school mental health outcomes are being measured ranging from absenteeism and drop-out rates to the development of social skills and academic achievement.

A number of themes underpin the descriptions in this article that exemplify challenges and debates encountered. These include:

- recognising the complexity of influencing factors and the interdependency of key components
- the critical importance of monitoring school-based implementation in particular contexts
- employing multimethod evaluation designs that can capture the complexity of factors
- ethical challenges in large-scale national school evaluation studies
- the politics of national implementation in schools
- judging success using mental health and educational outcomes.

This article will articulate these challenges and debates through a description of the MindMatters evaluation suite, which consists of five separate yet interrelated evaluation studies:

- the 4-year National Implementation study of MindMatters
- a study of students with high support needs (HSN) within a MindMatters school environment
• a National Survey of Health and Wellbeing promotion, policies and practices in secondary schools
• a Classroom Study of Understanding Mental Illness (UMI) curriculum
• a study of Families Matter, a mental health program for parents and caregivers.

A linked evaluation auspiced by Australian Division of General Practice is exploring the relationships developed between MindMatters Plus schools and general practitioners and Divisions of General Practice.

The MindMatters Evaluation Suite
The various evaluation studies use different but complementary and connected designs and techniques.

The National Implementation Study of MindMatters
This study has been conducted over 4 years by the Hunter Institute for Mental Health. It involves three analytical tools used with the 16 case study schools selected at random across Australia from a list of schools who had sent staff for the professional development training. The evaluation is monitoring how they undertake a whole school approach for mental health promotion using MindMatters materials. This evaluation is a time series cohort study with data collected on three occasions over a 4-year time frame. Student level outcomes have been assessed using in-school controls. Data on two measures, resilience and help-seeking has been collected from all grades in the secondary school at baseline and then on two additional occasions. Changes in scores are compared with baseline data for comparable unexposed students. Evaluation reports are available on the MindMatters web site (http://cms.curriculum.edu.au/mindmatters/).

A Study of Students With High Support Needs (HSN) Within a MindMatters School Environment
During 2002 MindMatters was extended, focusing on students with HSN. Seventeen schools have been involved in the pilot of MindMatters Plus, which aims to identify pathways of care in school communities, linking schools and doctors in general practice. The purpose of the MindMatters Plus initiative is prevention and early intervention for mental health problems, along with the trial of specific evidence-based programs. The Australian Institute for Primary Care at La Trobe University is conducting an evaluation using questionnaires, interviews and school-based data collection (such as student suspension rates). Expected outcomes include the identification of sustainable school-friendly models that allow schools to respond more effectively to students with additional needs in mental health.

This evaluation conducted by the Australian Council for Educational Research aims to survey a nationally representative sample of secondary schools concerning their policies and practices about health promotion and student wellbeing. Specific questions about knowledge and use of MindMatters and Families Matter are included.
The purpose of this evaluation is to gain a view of the wider context of school mental health promotion in Australia.

**A Classroom Study of Understanding Mental Illness Curriculum**

This evaluation study conducted by a team from Flinders University aims to identify the key features of teaching practices in the implementation of the MindMatters UMI curriculum materials; capture teacher and student perspectives about the module; identify links between students’ knowledge, attitudes and behavioural intentions; and assess teacher efficacy in implementing the UMI module. The evaluation methods include interviews, a teacher efficacy scale, a social distance scale for students and in-depth classroom observations.

**A Study of Families Matter, a Mental Health Program for Parents and Caregivers**

The Australian Council of State School Organisations and Australian Parents Council are joint managers of Families Matter, a national resource for family members and carers to work in partnership with schools to support the wellbeing of young people. The Families Matter initiative began as a pilot in 2003–2004 with the MindMatters Plus group of demonstration schools and since then has worked with about 250 schools. Parents and school staff attended training workshops before they initiated a Families Matter session within their community and school. The evaluation conducted by Saulwick Muller Social Research aims to determine both intended and unintended impacts of the initiative, including changes in school structures, policy and practice, that is, what schools ‘do’ with the Families Matter initiative; the nature of the changes in parent engagement with their school; and other findings related to the barriers and enablers to parent-school partnerships.

**Quality Evaluation Practice in School Mental Health Promotion**

Findings from community health promotion provide insight into the challenges of designing, implementing and evaluating complex interventions. Brown (1995) describes the particular challenges for comprehensive community initiatives:

- broad multiple goals dependent on continuing process of synergistic change
- programs that are purposively flexible and responsive to local needs and conditions
- the centrality of the principles of empowerment, partnerships and ownership
- longer term community changes that require longer time frames than narrowly defined approaches
- initiatives that produce impacts at different levels in different spheres
- capturing the individuality of specific community contexts.

All the above elements have been characteristics of the school community mental health promotion MindMatters from its pilot phase in 1998 till 2005. These elements include:

- involving the whole school community
• the interrelationship of components
• conceptual models based on health promotion and educational evidence
• quality professional development for school-based personnel
• guided, structured flexible process
• practical strategies for action at local level
• collaborative practices
• developing and enhancing leadership at various levels
• building on strengths and school priorities
• funding investment over an extended period of time
• evaluation frameworks that acknowledge complexity, with use of multi-methods to capture a range of outcomes
• sustainability mechanisms built into implementation.

Since the pilot and as a result of distillation of research on effective practice, setting specific evidence-based principles for school mental health promotion have been articulated:

• take a whole school approach
• use a social competence approach rather than focusing on specific problem behaviours, and employ interactive and participatory methodologies
• involve planned implementation over a number of years
• engage key partners
• build core competencies and capacities of participants
• use comprehensive evaluation strategies that employ evaluation logic models (Jané-Lopis & Barry, 2005, pp. 50–51).

Some of the challenges and key components have also been documented in work on schools that promote health, one of the conceptual frameworks for MindMatters (IUHPE, 2000). Within this ‘settings’ approach, as well as concern for developing personal competencies, there is ‘a desire to act in various ways on policies, reshape environments, build partnerships, bring about sustainable change through participation, and develop empowerment and ownership of change through the setting’ (Whitelaw et al., 2001, pp. 340–341). Denman (1999) integrated information from a number of studies, identifying the common elements of quality school interventions that promote health. These include an initial school-based review; a designated coordinator; a policy, plan and budget; management support; involvement of staff, parents and pupils; a contract with outside agencies to provide support; teacher awareness of the benefits; training and support; and alliances and partnerships to sustain action (Denman, 1999). Many of these elements are part of the MindMatters whole school intervention. Assessing their impact in practice needed
to be a focus for the evaluation because within the evaluation studies the critical issues include not only assessing what change occurred (efficacy) but documenting the planning and implementation (effectiveness; IUHPE, 2000). Where mental health researchers’ aims and ideologies shape the prevention evaluation rather than accommodating the real world of educational settings, well-documented efficacy might be achieved (Hosman & Engels, 1999), although with little prospect of achieving effectiveness in a wider dissemination.

The concern for assessing the effectiveness of interventions is a key feature shaping the evaluation designs in the MindMatters studies. Quality health promotion practice includes acknowledging the context, the participatory process, the multistrategic action and the dynamic cyclical process (Ritchie & Rowling, 1997), and occurs where the intervention process integrates and operationalises the program components (Rowling & Jeffreys, in press). The documentation of what occurred in practice provides evidence to identify Type III errors. That is, evaluators may incorrectly report that programs do not work when lack of effect was due to poor implementation.

Monitoring implementation is therefore an essential feature of quality mental health promotion evaluation. Durlak (1998) outlines four steps in studying implementation:

1. defining active program ingredients
2. developing an accurate and valid assessment system
3. monitoring implementation during program execution
4. relating implementation levels to outcomes.

In the MindMatters suite of evaluation some had a strong focus on documenting implementation (viz, Families Matter), others focused more on assessing reach and impact outcomes (National Survey), or curriculum implementation outcomes (the Classroom Study) and the longer term studies sought to link implementation and outcomes (viz, National Implementation study, and the study of students with HSN).

In general, evaluators aimed to assess both quality and impact — how well each part was conducted and with what outcomes. High quality implementation is more likely when core program components are defined in advance, either through the use of structured manuals, detailed intervention protocols or program logic, and then systematically monitored. Additionally, a focus on context in evaluation provides the opportunity for unravelling elements of optimal implementation conditions. This is essential information for accommodating the ‘readiness for change’ conditions in school settings and targeting implementation barriers. Strategies for school development need to ‘fit’ the ‘growth’ state of a particular school (Hopkins, Harris, & Jackson, 1997).

Characteristics of effective schools also identify the breadth of factors that could impact on implementation. These characteristics include involvement of teachers in decision-making; school ownership of improvement; giving students control over their learning environment; emphasising students’ rights and responsibilities and involvement in activities; monitoring progress at all levels; practical, quality staff development integral to school activities; and parental involvement (Reynolds & Teddlie, 2000). The systematic collection of data on implementation plays an essential role in advancing knowledge on quality practice for replication in real world settings.
Evaluation Designs for School Mental Health Promotion

Multifaceted interventions require comprehensive evaluation processes to document the wide range of activities and capture the breadth of implementation. The MindMatters program evaluation studies are aimed at knowledge creation in naturalistic settings, encouraging reflection and capacity-building within the school setting. A key component of MindMatters is the interrelationships of components. Therefore research designs were required that could document the synergy created during implementation. For example, assessing school readiness, and identifying where a history of innovation combined with the intervention/program meeting their identified needs results in early adoption and comprehensive implementation.

A framework that assists in understanding how the intervention process integrates and operationalises the program components is program logic (Duignan, 2004). It allows for the sequence of actions — project inputs, process evaluation impact and outcome evaluations — to be tracked prospectively. That is, intended outcomes are identified in the planning stage, and their ‘logic’ links documented as the program action provides implementation data. Analytical frameworks are needed to link the process with the impact and outcomes. Careful process monitoring provides for serendipitous events to be captured. These then augment the program logic model.

Focusing on Mental Health and Educational Outcomes

The health content of the MindMatters material had to be expressed in educational terms to enable a universal program like MindMatters to be taken up. It also needed to be sustainable in schools in terms of cost for national dissemination. The education audiences wanted confirmation of the links between mental health and educational gains for students. Health audiences were interested in the impact on students in short time frames and were often less impressed by gains in a school’s capacity or changes in school structures or relationships. Education audiences saw time as critical, in the sense of ensuring sufficient time is allowed for effective implementation. They also had an interest in real world sustainability that goes beyond concentrated support of the evaluation period.

In the context of practice-based evidence within education sector research, two forms of evidence are privileged by researchers, evidence-based practice and practice-based evidence (Rowling & Jeffreys, in press). The latter practice was particularly relevant for teachers in the MindMatters evaluation studies. Practice-based evidence denotes professionals both generating and using evidence (Eraut, 2004). Some educational researchers (e.g., Simons, Kushner, Jones, & James, 2003; Cordingley, 2004) prefer the term evidence-informed practice to more clearly denote the process that occurs in teachers’ work where school and classroom decisions are situational and based on ‘explicit knowledge derived from reflective scrutiny of evidence from research or from teacher’s own pupils’ (Cordingley, 2004, p. 79). This form of evidence was particularly important to gain in the intensive study of the classroom implementation of the UMI curriculum materials and the decision-making around pathways of care for HSN students in the MindMatters Plus evaluation.
In the context of practice-based evidence in schools, one group of researchers (Simons et al., 2003) argue that ‘situated generalisation’ reminds us of three factors that operate in the realm of evidence:

- Teachers need to interpret and reinterpret what evidence means for them in their classroom teaching.
- Presentation of evidence needs to remain closely connected to the situation in which it arose, not be abstracted from it.
- The collective interpretation and analysis of data by peers seems to act as a validity filter (Simons et al., 2003).

Teachers’ perceptions of the benefits and relevance of evidence are a crucial consideration in the development of mental health promotion and prevention programs. Their perceptions were an important source of data in a number of the MindMatters evaluation studies.

For many in the health sector the outcomes of immediate concern are measures of morbidity and mortality. However, measures of individual health outcomes may not provide essential insights into organisational changes that impact on health promotion implementation (Crosswaite, Currie, & Young, 1996). A health promotion outcomes framework (Nutbeam, 1998) exists that elaborates how a combination of health promotion actions results in health promotion outcomes and intermediate health outcomes including healthy environments and individual health outcomes. Many existing evaluation designs are not sensitive enough to detect these combinations and connections in school settings. Cognisance of the need to make these linkages from a program logic approach reinforced by the health promotion outcomes framework influenced the analytical methods that were employed in data analysis of the MindMatters Plus study.

The interaction of capacity-building components such as organisational change, resources, leadership, professional development and partnerships in a particular context is an essential quality of health promotion practice (New South Wales Health, 2001). However, in terms of evaluation, epistemological positions of evaluators/researchers may limit viewing building capacity, an intermediate outcome, as a focus for measurement and therefore limit consideration of this in implementation of interventions. Yet knowledge about this is crucial at this stage of development of the field of school mental health promotion.

Boundaries for the mental health sector are being stretched in the MindMatters evaluation suite. These involve a reorientation of the foci for evaluation, from a sole focus on risk factors and individuals, to capacity-building in school communities with a holistic multifaceted orientation and concern for reciprocity involved in research partnership. For the education sector the shifts involve reconceptualisation of partnerships with the mental health sector from implementing new programs developed by people outside schools to building capacity through school community involvement and ownership.
Challenges Encountered in the Evaluation of National Program Implementation

Planning for Sustainability

In trials of programs/interventions, monetary incentives are often provided to schools. This is not feasible if aiming for sustainability at minimal cost. That is, the evaluators of MindMatters implementation had to develop strategies that were respectful of schools, minimised disruption to school procedures, and maintained goodwill over an extended time period. This was particularly necessary where the initial evaluation agreements were extended for another year or two above what the school had originally agreed. Hazell, Vincent, Waring and Lewin (2002) articulated the problems encountered in collaborative practice in this school-based evaluation. In order to sustain the effort required by schools over a 4-year period and minimise evaluation fatigue, the evaluation process needed to be seen as a partnership in acquiring ‘mutually interesting data’ (Hazell et al., 2002, p. 26). To achieve this, the interests of the schools were accommodated by providing access to the baseline data and summative feedback to schools at particular stages. For many researchers this would be seen as inappropriate action as it would be seen as potentially influencing the outcome. But evaluators’ designs can accommodate this action and in doing so not only identify a valuable strategy that influences school change but also maintain and perhaps increase the commitment of the school to evaluation processes.

Ethics Approvals

Australian state and territory school systems and sectors and university researcher ethics committees require separate ethics applications for national evaluation projects. One MindMatters evaluation team needed to obtain 27 ethics approvals to conduct their evaluation. The idea of one location ethics committee accepting a project by agreement, meaning that other similar locations will also operate with it, is not accepted in Australia. Long lead times for evaluations within education settings were necessary. Often this process was difficult to balance with funder delivery requirements and the critical need to start the evaluation at the beginning of a school year to ensure that maximum school participation. Starting later in a school year means less school time resources available and fewer parental consent returns.

Parental Consent

In Australia evaluation studies involving school children need active parental consent. This is an essential ethical requirement of most state educational systems and some Catholic sectors or dioceses. Passive consent, assuming parents agree with a research project after being informed about it, is not accepted. Signed forms from parents are necessary. This has meant that for the MindMatters evaluations and subsequent extension of time for some evaluations, resources needed to be put aside by both the evaluators and the schools. The evaluation schedule of gaining ethics and then gaining active parent consent has proved to quite lengthy, often consuming time and energy. It can mean that some schools — and often those with a significant level of disadvantage — may find it difficult to gain an answer from parents because materials are either not taken home or are ignored in busy lives. It has also meant that the evaluation teams needed to use the optimum time to undertake this — the beginning
of the year. It was a major task for cohort studies like the MindMatters implementation evaluation to get the consent forms returned from parents.

Some schools found gaining parental consent extremely difficult — either from an organisational point of view or from a commitment perspective. Schools were sometimes provided with small cash incentives for the task, but often this was easily matched and exceeded by the amount of time that they put in themselves. This process of active parental consent adds significantly to evaluation fatigue with schools and is only marginally improved by incentives — the classroom teacher who has to undertake the task of gaining consent must have an incentive or interest in the study that is meaningful for them.

Police checks required for those evaluators going into schools also added to the lead time necessary before data collection could begin.

Politics, Health, Schools, Implementation and Evaluation

Evaluation occurs in a political context. In the case of the MindMatters evaluation studies, apart from the debates in education and health research fields about evidence and research/evaluation designs, there is also the impact of a federal system with different powers and responsibilities at state and federal levels. The multiple ethics applications are one outcome of a states/federal system.

The implementation of the MindMatters suite of programs and their evaluation needs to be seen in this political context — having 1-year as opposed to 3-year funding makes a significant difference to the method of the implementation chosen, stability of staff within the project and the status of the project, and therefore needs state systems and sectors and schools to buy in. The indicators of an evaluation are affected by the time line available and these have to be reconsidered if an extension of time is given. The long-term funding of MindMatters within a changing political environment has resulted in changes in reporting requirements and contractual obligations often involving additional request for data and outputs. Fortunately, the Australian government has been committed to school-based mental health promotion and has acted on advice from the education systems and sectors and negotiated implementation methodology with the bodies auspicing MindMatters: the Australian Principals Associations Professional Development Council (APAPDC) and the Curriculum Corporation.

Evaluation Governance

The diversity and progressive growth in the evaluation studies being conducted from 2001–2005 meant that a governance structure was needed to monitor, support and integrate evaluation processes and findings. Evaluators and MindMatters staff worked together, linked by a small expert group. The contractual arrangements between the national funding body and APAPDC included the management of the evaluation, the use of a reference group, the development of briefs, tender process and contracts and the day-to-day management of those contracts to meet the lead contract obligation. This process was assisted by the expert subgroup. Collaboration was a feature of the evaluation studies teams — with each other and
with their school sites. This approach aimed to shift the evaluators’ roles from detachment to connectedness with the contexts, implementation processes and with each evaluation component. Where pertinent the evaluators provided feedback to participant schools. In this way the evaluation became part of the dynamics of the project, a design suited to naturalistic evaluation.

**Conclusion**

The challenges and debates highlighted within the MindMatters evaluation suite include:

- concentrating on outcomes and effectiveness (how MindMatters initiatives work, with whom, under what conditions), that is, using evaluation designs that document implementation as well as outcomes
- employing multimethod evaluation designs in naturalistic settings
- using evaluation designs and research findings from both health promotion and education sectors
- expanding the evidence base of both educational and health outcomes that support the development of school-based mental health promotion and prevention
- monitoring and documenting quality implementation to guide practitioners and decision-makers regarding the practical aspects of program adoption and replication.

The innovative approach used in the MindMatters evaluation studies is designed to capture the diversity of influences and outcomes, capitalising on the strengths and expertise of a range of evaluators, engaging stakeholders in the process and articulating the impact and outcome breadth and depth.

**References**


