“Mind Yourself”
Investigating the Efficacy of a Brief Problem Solving Intervention among Adolescents

Final Report, October 2009
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Final Report

National Suicide Research Foundation
October 2009
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We would like to express our sincere thanks to the students, school staff and youth services who participated in this study.

This report was prepared by Dr Ella Arensman.
Introduction

Many factors have been associated with suicidal behaviour in young people. Some of these are external, such as the occurrence of stressful life events (e.g. interpersonal losses), or family factors (e.g. family history of suicidal behaviour) (Gould & Kramer, 2001).

A clear link has been demonstrated between adolescents experiencing depressive symptoms and an increased risk of suicidal behaviour (Evans et al, 2004; Thompson et al, 2005). In addition to this strong and direct relationship, increased anxiety and low self-esteem appear to be co-morbid with depression (Evans et al, 2004; Thompson et al, 2005). Unsurprisingly, symptoms of depression such as sleep problems (e.g. tiredness, nightmares and difficulties sleeping) and impaired self-esteem have shown to be associated with suicidal phenomena (Evans et al, 2004). There is a strong direct association between lowered self-esteem and suicidal behaviours (Evans et al, 2004).

Poor interpersonal problem-solving ability has also been reported to differentiate suicidal from non-suicidal adolescents, even after adjusting for depression (Gould et al, 2003; Gould & Kramer, 2001). Irish research has also associated suicidal and behaviours and problem-solving deficits (McAuliffe et al, 2003; McAuliffe et al, 2006). Further, in relation to problem solving, is Ellis’ (2001) description of suicidal patients having shown themselves to have a greater tendency to believe that their emotional problems are caused by external events. In addition to this, Reinecke and Didie (2005) describe the hypothesis that when faced with an external stressor, a suicidal individual is unable to generate solutions (i.e. helpless) and consequently, they become progressively overwhelmed and hopeless in the face of their problems.

The above evidence suggests that we need to think carefully about the role of helplessness as well as hopelessness when working to prevent suicidal behaviour in young people.

Other factors to take into consideration are alcohol, other drugs and sexual behaviour. Excessive alcohol use has been associated with suicidal behaviour and this association is probably direct (Evans et al, 2004). Incidents of deliberate self harm with suicidal intent increases with consumption of stronger alcohol (e.g. spirits). Drug taking has been associated with increased incidence of suicidal ideation and suicide attempts.

Given that individual factors discussed above have been shown to be associated with suicide and non-fatal suicidal behaviour, it would be reasonable to expect a suicide prevention programme to address these areas. There is some evidence to show that...
such an approach is useful in suicide prevention and may be more effective than a more direct, ‘suicide awareness’ style of programme (Harden et al, 2001; Patton & Burns, 1998; Gould et al, 2003; Gould & Kramer, 2001). It is important to note, however, that when suicide prevention programmes for young people are based solely on suicide awareness education, there is limited evidence for resultant prevention of suicide (Harden et al, 2001; Patton and Burns, 1998; Gould et al, 2003). Patton and Burns (1998) found that when suicide prevention is incorporated into a broader holistic life skills approach more consistent evidence of effect is shown but the efficacy of the suicide – specific element is uncertain (Gould et al, 2003).

Carr (2002) further supports this point of view, in his review of psychological prevention programmes for children and adolescents. When discussing suicide prevention, he recommended multi-systemic prevention programmes, which include school-based didactic instruction and discussion, bibliotherapy, and behavioural–coping skills for adolescents and other members of their social networks. In their review of suicide prevention strategies, Harden et al (2001) found that education combined with general coping skills training did have beneficial effects on suicidal potential and depression. Furthermore, they found that workshops on inner experiences and life difficulties reduced suicidal tendencies and increased coping, but did not reduce hopelessness. Skills training programmes emphasize the development of problem solving, coping, and cognitive skills, as suicidal adolescents appear to have deficits in these areas (Gould et al, 2003).

Prior to the Mind Yourself programme, a large school-based survey, the Lifestyle and Coping Survey, was conducted among 3,830 school going adolescents in the Counties Cork and Kerry (Sullivan et al, 2004; Morey et al, 2008). The study revealed a relatively high prevalence of deliberate self harm (9.1%) and relatively high levels of depressive (6.7%) and anxiety symptoms (9.2%).

The Mind Yourself brief problem-solving intervention programme was developed taking into account the elements of existing approaches towards suicide prevention among young people. Essential elements of the Mind Yourself Programme include:

- A holistic life-skills approach encompassing coping and problem-solving skills.
- A strengths-based approach, which focuses on hope, optimism and is solution-focused.
- A whole population approach to working with young people. This way, those who are more “at risk” but may never come into contact with services might be reached.
- A community based approach that will remember to consult young people on their needs.
- A firm grounding in strategies to enhance problem-solving skills and emphasise optimism and promote resilience among adolescents.
- The provision of information on resources and services available to young people.
- An empirical evaluation of the intervention programme so as to measure its effects on helplessness and hopelessness. Levels of depression, self-esteem, problem-solving strategies and coping methods might be looked at here.

Prior to the pilot-study in the HSE Southern Area, the Mind Yourself programme had been successfully piloted in schools and youth services in the HSE North Eastern Area (Gaffney et al, 2007).

**Aims and objectives**
The overall aim of the Mind Yourself pilot study was to investigate the feasibility and effectiveness a brief problem-solving intervention among adolescents in terms of improved coping and resilience for participants.

**Specific objectives**

i) To investigate if the proposed intervention will contribute to increased resilience (i.e. emotional intelligence), increased self esteem and improved problem-solving, comparing students in the intervention and control condition.

ii) To investigate if the proposed intervention will contribute to a reduction in symptoms of depression and self harm thoughts, comparing students in the intervention and control condition.

In addition, a number of other relevant objectives were achieved including the delivery of an extended Mind Yourself programme (6 weeks) to a group of vulnerable adolescents, positive mental health awareness sessions among adolescents in secondary schools, and mental health awareness programmes for teachers, guidance counsellors and parents.
Methodology

Design
The design of the study was a randomised pre and post between subjects group study, with an experimental and control group including adolescents aged 15-17 years. The groups were matched on three criteria: Age of student, gender and exclusively male or female school. The experimental group received the proposed intervention and the control group received the resource kit containing information and service listings relevant for adolescents during difficult times, but not the intervention. Validated measures were administered before and after the intervention for both the experimental and control group.

Participants
Participants were adolescents aged 15-17 who were approached through secondary schools in the HSE Southern Area over the period September 2006 until May 2009. Based on a power analysis, taking into account the main measures (EQ/Self esteem) and depression, between 73 and 219 students would need to be included in order to be 95% confident that a reduction of one in a mean score was not due to chance.

Procedure
The following procedure was applied:

- Schools invited to participate in the study were randomly selected, taking into consideration the geographical location of the school (Cork city, Cork and Kerry county) and whether a school is single-sex or co-educational.
- A letter was sent out to schools outlining the proposed intervention and pre and post measures that were necessary for research followed by meetings with the school management to introduce the study.
- Dates were arranged to visit the schools for the delivery of the Mind Yourself programme and the pre-post intervention survey (experimental group) and for the survey only (control group).
- The parents/carers of the young people due to take part in the programme received an information letter and a standard ‘opt out’ form. Unless the parent/carer signed and returned the opt out form, the young people participated in the survey and the Mind Yourself programme.
- The information letters and opt out forms were printed and put into stamped envelopes by the researcher. The schools were then asked to address the
envelopes and post them to the parents/carers of the young people at least one week prior to the first school visit.

**Baseline**

**Pre-Intervention Programme Questionnaires**

- The researcher and a facilitator would go out to the school to distribute the pre-intervention questionnaires in the classroom environment. Each participant was given an information letter introducing the project and a consent form. One of the facilitators would read through the information letter with the group. If they agreed with the content of the letter, the participants were asked to sign the form to give their consent to participate before continuing in the research.

- At this point, the participants would have the opportunity to ask any questions they may have about the research and or the Mind Yourself Programme.

- The questionnaires were anonymous. However, it was necessary to note the names of the participants on a separate sheet in order to identify them for the post-intervention questionnaire or in order to identify adolescent with high risk of suicidal behaviour or related mental health problems. In combination with a school code, this number would give each participant a unique code. This alphanumeric code will be used to identify the individual throughout the research. Only the Principal Investigator and Research Officer had access to the key to these codes i.e. the names of the participants involved.

- Upon collection of the questionnaires, the participants were each given resource kits that comprise of general mental health information and a listing of local regional and national services.

- The experimental group participants were then given a brief talk to inform them of what they could expect when they were to participate in the Mind Yourself programme in future weeks.

- Alternatively, if the class were to be part of the control group, they were given an explanation as to what they were participating in and that they would be asked to complete a follow up questionnaire approximately one month later.

- The facilitators were available for ca. 30 minutes after the session for students who were interested in contacting the facilitators on an individual basis.
Within a maximum of 48 hours of leaving the schools, the questionnaires were examined for cases where an individual in obvious distress may have disclosed their identity by including their name on the questionnaire.

**Intervention: Mind Yourself Programme: Session 1**

- The researcher returned to the experimental group schools within 10 days of the first visit. Another facilitator accompanied the researcher in holding the first of the intervention programme’s two sessions.
- The session lasted approximately 90 minutes and young people participated in groups of 15 or less.
- Any group members who were not present to complete the pre-intervention questionnaire were asked to read the information sheet and complete the consent form before participating in the session.
- The content of this session comprised of:
  - The kinds of problems young people face and coping strategies.
  - Optimism and pessimism
  - Thoughts and feelings
  - Group work to illustrate the potentially positive effect of optimistic thought on our feelings
  - Crisis Situations – dealing with traumatic situations
  - Two topics were chosen for the next session.
- The researcher and co-facilitator were available for contact by the young people on an individual basis following the session.

**Intervention: Mind Yourself Programme: Session 2**

- The researcher and a co-facilitator returned to the experimental groups’ schools within ca. 10 days to hold the second session of the intervention.
- Preferably in the same groups as before, 15 or less young people took part in the second session.
- Any group members who were not present to complete the pre-intervention questionnaire and the first session were asked to read the information sheet and complete the consent form before participating in the session.
- The content of this session comprised of:
  - Identification of problems
  - Problem solving methods
  - Two topics as chosen by the group in session one.
Community involvement ideas
Evaluation sheet to be completed by participants.

- The researcher and co-facilitator were available for contact by the young people on an individual basis following the session.

**Follow-up**

*Follow-Up Questionnaire*

- The researcher and facilitator returned to the school to re-administer the questionnaires to the young people. For the experimental groups, this took place ca. 10 days following the second Mind Yourself session. For the control groups this took place ca. 1 month following the first visit.
- The participants were given the list that they entered their names on before the pre-intervention questionnaire and asked to tick a box to indicate that they were completing the follow-up questionnaire.
- In order for an experimental group participant to be included in the research, they would have to have completed the pre-intervention questionnaire and attended both sessions of the intervention programme.
- In order for a control group participant to be included in the research, they would have to have completed the pre-intervention questionnaire.

**Measures**

The baseline and follow-up questionnaires included the following variables and self-report measures:

- *Socio-demographic variables*: Age, gender and living situation.
- *Emotional resilience* was assessed using the Bar-On Emotional Quotient Inventory: Youth Version (BarOn EQ-i:YV) designed by Reuven Bar-On & James Parker (2000).
- *Self esteem* was assessed using the Self Concept Scale developed by Robson (1989).
- *Depressive symptoms* were assessed by the Depression Self Rating Scale developed by Birleson et al (1987).
- *Self harm thoughts* were assessed by 1 item of the Lifestyle and Coping Survey as part of the study: Child and Adolescent Self Harm in Europe (CASE, 2001).
- Problem solving was assessed by 8 items of the Lifestyle and Coping Survey as part of the study: Child and Adolescent Self Harm in Europe (CASE, 2001).
- Evaluation of the intervention programme: Questions covering more personalised feedback on the programme. This was only completed by the experimental group administered with the follow up questionnaires.

**Ethical approval**
Ethical approval for the Mind Yourself study was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals.

**Statistical analysis**
The data were entered in Excel and data analyses were performed using SPSS. Continuous data were analysed using t-tests, mean differences and 95% confidence intervals in order to examine differences by demographic characteristics. A general linear model for repeated measurements was used in order to compare changes between baseline and follow-up.
Feasibility and effectiveness of the Mind Yourself Programme

Results

Response

Based on random selection, 6 secondary schools were invited to participate in the Mind Yourself Programme. All schools agreed to be involved, 4 of which were co-educational, 1 comprising boys only and 1 school comprising girls only. Of the 414 students approached, 12 students (2.9%) were opted out by their parents and 1 student (0.2%) decided not to participate. Nine questionnaires (2.1%) were not seriously filled out and were therefore excluded. The final sample comprised 392 participants of which 141 had completed the Mind Yourself programme and 251 were in the control schools. The overall response rate at follow-up was 85.2%, with a slightly lower response in the Mind Yourself intervention group (81.5%) compared to 87.2% in the control condition.

Socio-demographic characteristics

The majority of the participants were girls (58.2%, N=228) versus 41.8% (N=164) boys. The majority of adolescents involved were aged 15 (50.3%) and 16 (45.5%). In terms of living situation, most adolescents (86.2%) lived with both parents, followed by 12.4% who lived with one parent.

Problem-Solving

A comparison was made between adolescents who had received the Mind Yourself programme versus those in the control schools with regard to changes in problem-solving strategies (Table 1). In the final analysis, the responses as to whether a problem solving strategy was used ‘sometimes’ or ‘often’ were combined. Comparing baseline and follow-up, significant positive changes were observed on 2 of the 8 problem solving strategies for the Mind Yourself intervention group, whereas no significant positive changes were observed among those in the control schools. At follow-up, a significantly higher proportion of adolescents who had received the Mind Yourself programme indicated that they would talk to someone and try not to think about what is worrying them when they would be worried or upset. Overall, the rate of change between baseline and follow-up outcomes was greater among adolescents in the Mind Yourself intervention group compared to those in the control schools.
Remarkably, adolescents in the control schools indicated slightly more frequently having an alcoholic drink at the time of follow-up.

Table 1  Problem-solving strategies reported by adolescents involved in the Mind Yourself (MY) programme and control schools at baseline and follow-up

<table>
<thead>
<tr>
<th>Problem-Solving Strategy</th>
<th>MY Baseline</th>
<th>MY Follow-up</th>
<th>Control Baseline</th>
<th>Control Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Talk to someone</td>
<td>77.3</td>
<td>91.5*</td>
<td>80.9</td>
<td>83.0</td>
</tr>
<tr>
<td>Blame myself for getting into the mess</td>
<td>87.2</td>
<td>81.7</td>
<td>82.8</td>
<td>80.7</td>
</tr>
<tr>
<td>Get angry</td>
<td>93.6</td>
<td>88.7</td>
<td>87.6</td>
<td>85.7</td>
</tr>
<tr>
<td>Stay in my room</td>
<td>69.0</td>
<td>72.1</td>
<td>65.9</td>
<td>64.9</td>
</tr>
<tr>
<td>Think about how I have dealt with similar situations</td>
<td>83.1</td>
<td>89.4</td>
<td>85.2</td>
<td>82.1</td>
</tr>
<tr>
<td>Have an alcoholic drink</td>
<td>21.4</td>
<td>17.0</td>
<td>26.1</td>
<td>33.8</td>
</tr>
<tr>
<td>Try not to think about what is worrying me</td>
<td>78.2</td>
<td>91.3*</td>
<td>77.0</td>
<td>71.9</td>
</tr>
<tr>
<td>Try to sort things out</td>
<td>97.1</td>
<td>100.0</td>
<td>98.9</td>
<td>98.2</td>
</tr>
<tr>
<td><strong>Total N</strong></td>
<td><strong>141</strong></td>
<td><strong>115</strong></td>
<td><strong>251</strong></td>
<td><strong>219</strong></td>
</tr>
</tbody>
</table>

* p < .05

*Emotional resilience*

Based on the outcomes of the Bar-On Emotional Quotient Inventory, adolescents who had received the Mind Yourself Programme were compared to those in the control schools on the level of emotional resilience at baseline and follow-up (Table 2). Even though for both male and female adolescents, emotional resilience had increased following participation in the Mind Yourself programme, this effect was only significant for the male adolescents. In line with the outcomes in relation to problem-solving, the rate of change between baseline and follow-up was greater among
adolescents who had received the Mind Yourself programme compared to those who had not.

Table 2  Emotional resilience among adolescents involved in the Mind Yourself (MY) programme versus those in the control schools at baseline and follow-up by gender.

<table>
<thead>
<tr>
<th>Emotional Quotient Inventory</th>
<th>MY Baseline Mean (SD)</th>
<th>MY Follow-up Mean (SD)</th>
<th>Control Baseline Mean (SD)</th>
<th>Control Follow-up Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total EQ score females</td>
<td>102.3 (16.9)</td>
<td>105.6 (16.2)</td>
<td>101.8 (17.3)</td>
<td>102.5 (17.0)</td>
</tr>
<tr>
<td>Total EQ score males</td>
<td>94.5 (17.6)</td>
<td>99.2 (17.3)*</td>
<td>95.1 (17.6)</td>
<td>96.5 (17.7)</td>
</tr>
<tr>
<td>Total N</td>
<td>141</td>
<td>115</td>
<td>251</td>
<td>219</td>
</tr>
</tbody>
</table>

* p <.05

Self esteem

Changes in levels of self esteem did not significantly differentiate adolescents who participated in the Mind Yourself Programme from those in the control schools (Table 3). Overall, slightly lower levels of self esteem were observed among boys at baseline in both conditions, and a relatively large increase in self esteem was found among boys who participated in the Mind Yourself programme.

Table 3  Self esteem among adolescents involved in the Mind Yourself (MY) programme versus those in the control schools at baseline and follow-up by gender

<table>
<thead>
<tr>
<th>Robson Self Concept scale (SE)</th>
<th>MY Baseline Mean (SD)</th>
<th>MY Follow-up Mean (SD)</th>
<th>Control Baseline Mean (SD)</th>
<th>Control Follow-up Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total SE score females</td>
<td>16.4 (3.4)</td>
<td>16.6 (3.5)</td>
<td>16.2 (3.4)</td>
<td>16.5 (3.5)</td>
</tr>
<tr>
<td>Total SE score males</td>
<td>16.0 (3.5)</td>
<td>16.9 (3.0)</td>
<td>15.8 (3.8)</td>
<td>16.2 (3.4)</td>
</tr>
<tr>
<td>Total N</td>
<td>141</td>
<td>115</td>
<td>251</td>
<td>219</td>
</tr>
</tbody>
</table>
Depressive symptoms

The outcomes on the Birleson Depression Self-Rating Scale (DSRS) did not reveal any significant differences between baseline and follow-up for both adolescents who had received the Mind Yourself Programme and those in the control schools (Table 4). However, it is worthwhile to note that at baseline, boys showed slightly higher depression scores than girls in both conditions, and that the greatest reduction was observed in boys who had received the Mind Yourself programme.

**Table 4** Depressive symptoms among adolescents involved in the Mind Yourself (MY) programme versus those in the control schools at baseline and follow-up by gender

<table>
<thead>
<tr>
<th>Birleson Depression Self-Rating Scale (DSRS)</th>
<th>MY Baseline Mean (SD)</th>
<th>MY Follow-up Mean (SD)</th>
<th>Control Baseline Mean (SD)</th>
<th>Control Follow-up Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total DSRS score females</td>
<td>8.4 (4.6)</td>
<td>8.2 (4.6)</td>
<td>8.6 (4.5)</td>
<td>8.8 (4.6)</td>
</tr>
<tr>
<td>Total DSRS score males</td>
<td>8.9 (4.7)</td>
<td>8.1 (4.9)</td>
<td>8.8 (4.6)</td>
<td>9.2 (4.3)</td>
</tr>
<tr>
<td>Total N</td>
<td>141</td>
<td>115</td>
<td>251</td>
<td>219</td>
</tr>
</tbody>
</table>

Self harm thoughts and help seeking behaviour

In response to the question: “Have you during the past month or the past year seriously thought about taking an overdose or trying to harm yourself but actually not done so?”, no significant differences were found at baseline and follow-up between adolescents who participated in the Mind Yourself programme and those in the control schools. However, among adolescents in the controls schools, a slightly higher proportion of students reported self harm thoughts at both baseline and follow-up. At baseline, 5.8% of adolescents in the control schools reported that they had self harm thoughts in the past month versus nobody in the intervention schools, and 11.6% of adolescents in the control schools reported self harm thoughts in the past year versus 8.7% in the intervention schools. At follow-up, 5.3% of adolescents in the control schools reported self harm thoughts in the past month versus nobody in the intervention schools, and 15.8% of adolescents in the control schools reported self harm thoughts in the past year versus 6.5% of those who participated in the Mind Yourself programme.

There were no significant differences between adolescents in the intervention and control condition in terms of the people or sources they had tried to get help from.
while they had self harm thoughts. The majority (51.7%) had not spoken to anybody in their environment, 39% had talked to friends and 9.3% had contact a health care professional.

**Feedback from students on the Mind Yourself Programme**

At the end of the Mind Yourself follow-up questionnaire, a number of qualitative questions were included to ask the students for their feedback on the programme. The vast majority of students indicated that they felt that Mind Yourself was a relevant programme, and specific feedback in relation to the following questions is summarised.

**“What do you think was useful?”**

- Trying to come up with solutions yourself
- Discussing different topics
- Discussing your thoughts and feelings
- Having the option to talk to someone
- Expressing yourself
- Looking at problems from different angles
- Learn how others solve their problems
- Talking about relationships
- The resource kit

**“Do you have any ideas as to how the sessions could be made better?”**

- Smaller groups
- Let the teenagers talk more about their feelings and problems
- Sessions should be made longer
- More sessions
- Make sure that we can discuss topics in more detail
Other activities

In addition to the Mind Yourself study, a number of other school related activities were conducted:

- Interactive positive mental health awareness sessions based on outcomes of the Lifestyle and Coping Survey were delivered among ca. 750 students in secondary schools in County Cork who also received a copy of the Report of the Life Style & Coping Survey and a Resource Kit.

- Awareness sessions on depression, suicidal behaviour and the Mind Yourself programme were presented to ca. 160 teachers and guidance counsellors in secondary schools in County Cork.

- Information sessions on depression, suicidal behaviour and the Mind Yourself programme were presented to ca. 65 parents of school going adolescents in County Cork.

- An extended Mind Yourself programme (6 weeks) was presented to a group of 12 vulnerable adolescents who were in contact with a youth service in County Cork.
**Recommendations**

1. Overall, the study findings support the feasibility of implementing the Mind Yourself programme in secondary schools in Ireland.

2. Based on the significant positive changes, in particular in terms of problem solving and emotional resilience as a result of the Mind Yourself programme, the study findings support wider implementation of this programme.

3. On other outcome criteria, such as self esteem, depressive symptoms and self harm thoughts, the Mind Yourself programme showed positive but non-significant changes, which may be due to the limited size of the intervention sample. Therefore, it would be recommended to conduct further research into these effects of the programme among a larger population of adolescents.

4. The outcomes of the current study are in line with the previously reported findings of the Mind Yourself programme in the HSE North Eastern Area, which further strengthens the evidence based approach of the Mind Yourself Programme and its relevance in the context of *Reach Out*, the National Strategy for Action on Suicide Prevention (2005-2014).

5. Considering the emphasis on the promotion of positive mental health and proactive problem-solving as key elements of the Mind Yourself programme, the evidence provided by this study is in line with objectives of international health promoting programmes for adolescents, such as Saving and Empowering Young Lives in Europe (SEYLE).

6. The study provided initial evidence for the feasibility and positive effects of an extended Mind Yourself programme for vulnerable adolescents. It is recommended to further investigate the efficacy of the Mind Yourself programme for this purpose.
References


