Young Adults' Suicide Related Knowledge and Attitudes: Implications for suicide awareness education.

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Abstract

This study investigated the effects of gender, personal experience with suicidal others and exposure to suicide awareness education upon suicide related knowledge and attitudes of 190 young adults and 52 older adults. Results showed that both the young and older adults indicated a substantial degree of personal experience with suicidal others, and despite displaying inadequate knowledge, possessed reasonable attitudes to adolescent suicide (e.g., need for education). Young adults' level of knowledge was found to vary as a function of gender (females displaying better knowledge than males), and having been exposed to school-based suicide curriculum. Differential gender effects also emerged in young adults' suicide-related attitudes with females indicating greater support for the inclusion of suicide education in schools. The implications of these findings for school-based suicide prevention efforts are discussed.
The Current Situation

Adolescent suicide has become an issue of increasing concern over the past twenty-five years within Australia and other western countries. Epidemiological studies have demonstrated a significant rise in suicidal behaviour among adolescents, to the extent that suicide is presently the second leading cause of death for the 15-19 year old age group (Berman & Jobes, 1995; Hazell, 1991) with the rate of completed suicide showing an increase of over 300% since the 1950s (Leane & Shute, 1998; Lewis & Lewis, 1996). Approximately 500 adolescents complete suicide each year (Cantor, 1995; Mallet & Swabey, 1997). These official statistics are considered to be an underestimate of the true incidence of suicidal behaviour due to the public stigma and cultural taboos associated with suicide, and related methodological flaws in the classification of cause of death (Garland & Zigler, 1993).

Suicide attempts are even more prevalent than completions, with estimates ranging between 50 to 200 attempts for every actual suicide (Orbach & Bar-Joseph, 1993; Steele & McLennan, 1995). Culp, Clyman and Culp (1995) surveyed a sample of high school students and found 6% had attempted suicide, while 33% had reported some degree of suicide ideation. Similar results have been obtained by Eskin (1992), indicating that suicidal behaviour is indeed highly prevalent within the adolescent population.

Suicide Prevention Efforts

Given the alarming increase in suicide reported behaviours, preventing youth suicide has become an issue of paramount importance in recent years (Leane & Shute, 1998) with the focus on primary prevention. In relation to suicide this may involve providing life skills training, improving social support, and educating adolescents about self-destructive urges and treatment options (Leenaars & Wenckstern, 1998).

In the USA, suicide prevention programs have been in operation since the late 1970s, primarily through the secondary school system (Berman & Jobes, 1995) with many states having introduced legislation requiring and supporting school-based suicide prevention programs (Sandoval, London & Rey, 1994). However, no such requirement regarding mandatory suicide curriculum in secondary schools currently exists within Australia (Cantor, 1995).
While youth suicide is a multifaceted societal problem and not a "school problem" exclusively, schools are the logical location to implement suicide prevention programs that include activities to educate, identify and intervene with potentially at-risk adolescents (Malley, Kush, & Bogo, 1994; Zenere & Lazarus, 1997). School personnel are regarded as particularly important with suicide prevention strategies as they have the greatest access to the adolescent population over the longest period of time. Hence, they are in a position to detect the warning signs of suicidal intention and provide initial assistance to distressed youth (Kalafat, 1990; Mallet & Swabey, 1997).

Perhaps the most fundamental justification for the inclusion of suicide awareness programs within secondary schools is the issue of peer confidants and the extent of adolescents' experience with suicidal peers. It has been extensively acknowledged that suicidal adolescents most often reveal their thoughts and feelings to fellow peers (Kalafat & Elias, 1994). In a psychological autopsy of adolescents who had completed suicide, Brent et al. (1992), reported that 41% communicated their intentions to do so to a friend/peer in the week preceding their deaths.

Given these findings it is imperative that adolescents are aware of the appropriate responses to suicidal individuals, however, research indicates this does not seem to be the case. Mishara (1982) reported that over 90% of an adolescent sample indicated having had contact with a fellow student who expressed suicidal feelings. Of this sample, 40% joked about the suicidal intent or ignored the suicidal peer, hence, demonstrating that a substantial proportion of adolescents appear to be unaware of the appropriate response to suicidal behaviour. Wellman and Wellman (1986) suggested that because suicide is a topic that frequently provokes anxiety, joking about the feared stimulus (suicide intent) is a method of coping with such feelings. Anxiety about suicide may be attributed to a lack of knowledge regarding the topic as well as assimilation of the traditional social taboo surrounding this issue.

Furthermore, peer confidants are unlikely to approach an adult for assistance in helping a suicidal peer. This reluctance may be due to growing autonomy from adults, the importance of keeping the confidences of peers and misgivings about adult helpers (Kalafat & Elias, 1992). Regardless of the reason, it is imperative that adolescents are educated to recognise potential warning signs indicating suicidal behaviour, and are
competent in accessing professional assistance for troubled peers. Peer confidants have the potential to play a fundamental role in preventing suicidal adolescents from progressing to completed suicide given the appropriate education (Kalafat & Elias, 1995).

**Obstacles to School-Based Suicide Prevention**

While the implementation of suicide awareness programs within schools appears to have an identifiable rationale, the reluctance of schools to address the issue of suicide cannot be ignored. A number of objections have been raised about the adoption of suicide awareness curriculum with concerns having been expressed about the accuracy of the information disseminated. Descriptive studies on adolescent suicide are still being undertaken, thus the warning signs and risk profiles of potential victims may not be based on accurate or representative findings (Shaffer, Garland, Vieland, Underwood, & Busner, 1991).

Another concern is that the programs tend to adopt a 'universalist' approach in that, they target an unselected group of adolescents, the majority of who are not at risk, instead of high-risk groups of adolescents (Shaffer et al., 1991). Research has suggested that only a minority of students hold views requiring intervention, and fewer still have any significant risk of suicidal behaviour, thus challenging the feasibility of primary prevention strategies (Hazell & King, 1996).

Some schools appear to be under the misapprehension that adolescents may be susceptible to imitative suicidal behaviour, thus concerns exist that an educational approach may inadvertently facilitate and stimulate the expression of suicidal intent in vulnerable students (Kalafat, 1990). However, there appears to be limited support for this contagion hypothesis, with research indicating that discussion actually appears to facilitate openness on the part of the suicidal person, leading to intervention (Brent et al., 1992; Leenaars & Wenckstern, 1990).

**Evaluations of School-Based Suicide Prevention**

Limited studies have been conducted to systematically evaluate the effectiveness of school-based suicide awareness education and those that have have yielded controversial findings in terms of improvements in students' attitudes towards and knowledge of adolescent suicide. Garland, Shaffer, and Whittle (1989) conducted a systematic evaluation of school-based suicide awareness programs and concluded that
prevention programs were ineffective, and may even have an unintended negative effect, especially on high-risk students. It was reported that youth with histories of prior suicide attempts endorsed more negative attitudes and beliefs about suicide and expressed increasingly negative responses to school wide suicide prevention programs than their peers who had never attempted suicide. In addition, males who were exposed to such programs were more likely to endorse suicide as a reasonable solution, in comparison to males not exposed to prevention programs.

Overholser, Evans, and Spirito (1989) discovered that males reported increased hopelessness and maladaptive coping following program exposure. These outcomes are particularly disturbing as they indicate that youth at the greatest risk of suicidal behaviour, that is males and previous attempters, are unlikely to be positively influenced by exposure to educational prevention programs (Eggert et al., 1995).

These findings, however, are inconsistent with the majority of evaluations conducted regarding the efficacy of suicide awareness programs within schools, which have reported beneficial outcomes in terms of suicide related knowledge and attitudes' of participants. Nelson (1987) and Ciffone (1993) reported that participants exposed to suicide awareness programs demonstrated significant gains in knowledge regarding youth suicide, prevention techniques and they developed a more helpful attitude towards suicidal peers at subsequent retesting. School-based suicide awareness programs appear to be highly regarded and positively evaluated by the students themselves with 80-90% of high school students wishing to learn about suicide in an educational context (Wodarski & Harris, 1987). Kalafat and Elias (1994), discovered that 64% of their sample indicated that having received suicide awareness education made it easier for them to deal with their friends problems. These findings support the notion of an educational approach to increasing students' self perceived competence in responding to suicidal behaviour in a fellow peer.

The Present Study

The present study aims to establish young adults' baseline levels of knowledge and attitudes to suicide and to determine if these vary as a function of gender, personal experience with suicidal behaviour in others, and/or exposure to suicide awareness education. The following five hypotheses are to be addressed by the present study:
1. Adolescents would display an inadequate level of knowledge of youth suicide issues, however, females would be more informed than males.
2. Adolescents would possess reasonable attitudes towards suicide with females endorsing more accepting and positive attitudes than males.
3. A substantial proportion of adolescents would indicate having had some exposure to suicidal behaviour in others.
4. A minority of the adolescent who had received suicide awareness education during high school would display significantly higher baseline knowledge and more appropriate attitudes than those young adults who had not received suicide education.
5. The comparison group of older adults would display significantly less knowledge of and less accepting attitudes towards suicide than the young adult sample.

Method

Participants
A total of 190, 17-21 year olds (47 males, 143 females, M = 18.53, SD = 1.19) and 52 adults aged 40-50 years (17 males, 35 females, M = 45.08, SD = 3.07) participated in this study.

Materials
A questionnaire was specifically designed for this study to collect information on: suicide knowledge, attitudes towards suicide, personal experience with suicide, and suicide awareness in schools.

Suicide Knowledge Test. This scale consisted of 18 statements designed to assess participants' knowledge of adolescent suicide and was adapted from Spirito et al. (1988). Responses were made by indicating if each statement was either true, false or undecided.

Attitudes Towards Suicide. This questionnaire consisted of 37 statements assessing attitudes, beliefs and feelings about suicide. Responses (excluding item # 35) were made using a 5-point Likert format (1=strongly agree to 5 = strongly disagree). The items comprising this questionnaire were adapted from previously validated research (e.g., Eskin, 1992; Spirito et al., 1988).

Personal Experience with Suicide was designed to ascertain the extent of participants' exposure to suicide and suicidal behaviour. Information was also obtained
on helping behaviours relevant to coping with others' suicidal urges, suggested assistance, or help given a suicidal friend. Participants responded by circling the appropriate response or by writing their response in the space provided. This questionnaire was informed from previous research by Kalafat and Elias (1992).

**Suicide Awareness in Schools.** This section of the questionnaire was designed to ascertain the proportion of participants having received suicide awareness education at secondary school. An additional question required students to indicate how important they believed it was for high schools students to be exposed to a suicide awareness curriculum. Responses to this item were made on a 5-point Likert scale ranging from very important to very unimportant.

**Procedure.**

Participants were required to complete the questionnaire in one sitting, either during a pre-arranged testing session or by taking the questionnaire away, completing it and returning it at a later time.

**Results**

1. **Knowledge Regarding Suicide**

   Preliminary analysis of the data on this test indicated that young adults participants were quite uninformed about adolescent suicide with participants scoring an average of 58.25% correct (SD = 15.11). A 3-way between-subjects analysis of variance (ANOVA) was conducted to determine if participants' baseline knowledge regarding adolescent suicide varied as a function of gender, personal experience with suicidal others, or exposure to suicide awareness education. While no significant three-way or two way interactions were found, significant main effects were found for gender [F(1,187)=4.40, p<.037] and exposure to suicide awareness education at school [ F(1, 187)=7.47, p<0.007]. Females (M = 59.24% correct, SD =14) displayed significantly greater knowledge about suicide than males (M = 55.28% correct, SD = 15.59) and participants who had received suicide awareness education at school obtained significantly higher scores on the knowledge test (M=60.47% correct, SD =14.72) than those participants who had not been exposed to a suicide curriculum (M=52.50% correct, SD = 16.22)
An examination of the responses of the older comparison group indicated that participants displayed inadequate knowledge levels in relation to adolescent suicide with a mean score of 62.00% correct, \(SD=19.55\) on the Suicide Knowledge Test. A one way between-groups ANOVA revealed no significant differences between young adults and older adults on their knowledge of adolescent suicide, \(F(1, 237)=2.16, p > .05\). Similarly, a two-way between subjects ANOVA was conducted to determine if older adults' knowledge of suicide varied as a function of gender or personal experience with suicidal others. No two-way interaction effect or main effects for gender, \(F(1, 50)=2.31, p > .05.\), or for personal experience, \(F(1,50)=2.16, p > .05.\) was found.

2. Attitudes Towards Suicide

A factor analysis via principal components with orthogonal rotation was conducted on the 36 Likert items of the Attitudes Towards Suicide questionnaire (completed by the young adults group) and a three factor solution was suggested accounting for 37.3% of the variance. The first factor was labelled "Support for Suicide Education and Discussion" and investigates attitudes towards talking openly about adolescent suicide and supporting school-based suicide awareness education programs. The second factor was labelled as "Acceptance/Normality" and investigates attitudes regarding how acceptable and normal adolescent suicide is and whether or not it is acceptable to intervene. The third factor was labelled "Helping Capability" and examines attitudes and self-confidence in identifying and assisting adolescents displaying suicidal intent. Table 1 presents the items and associated loadings for each of the three factors.

Table 1: Factor Analysis of the Attitudes Towards Suicide Questionnaire

<table>
<thead>
<tr>
<th>Item</th>
<th>Support for education</th>
<th>Normality/ Acceptance</th>
<th>Helping Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>The issue of suicide should be discussed among friends</td>
<td>0.439</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talking about suicide may help prevent a person from committing suicide</td>
<td>0.432</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The problem of youth suicide is very serious</td>
<td>0.495</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People don't have enough knowledge about suicide</td>
<td>0.562</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The subject of suicide should be addressed in the high school classroom 0.757
Suicide awareness education is very important in school communities 0.859
Every individual in a school community needs to be knowledgeable about suicide 0.845
All schools should have a suicide awareness program for senior high school students 0.812
Talking about suicide in schools will lead to increased attempts by students 0.532
Talking about suicide in schools will prevent some students attempting suicide 0.434
A person has the right to kill him/herself 0.417
Suicide can be a solution to some problems 0.601
Almost everyone at some point thinks about suicide 0.475
If someone wants to commit suicide it's their business and we shouldn't interfere 0.676
Suicide usually occurs without warning 0.356
It's none of my business if a friend says he/She wants to kill themselves or attempts to 0.515
If a suicidal friend asked me not to tell anyone I would keep that promise 0.387
If someone is talking about suicide I would ignore/joke about it 0.498
It would be helpful to a suicidal friend if I tried to cheer him/her up 0.516
It would be helpful to a suicidal friend if I Distracted him/her 0.431
I am very confident that I could identify if my friend was suicidal 0.749
I am very confident that I would be able to help a suicidal friend 0.782

An average score on each factor was calculated for all participants. Means and standard deviations of the factor scores on the three attitudinal constructs are displayed in Table 2. Findings suggest that young adults: 1. Strongly support the implementation of suicide education within schools as a method of preventing youth suicide. 2. Agree that suicide is not a normal, nor an acceptable behaviour, and intervention should be encouraged. 3. Were undecided about their capabilities to help an individual displaying suicide behaviour.
Table 2: Means and Standard Deviations for Scores on the Three Attitudinal Factors for the Young Adult Sample

<table>
<thead>
<tr>
<th>Attitudinal Variable</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>support for the discussion and implementation of suicide education in schools(^a)</td>
<td>1.61</td>
<td>0.47</td>
</tr>
<tr>
<td>suicide as an acceptable/normal behaviour(^b)</td>
<td>3.92</td>
<td>0.48</td>
</tr>
<tr>
<td>perceived helping capability(^c)</td>
<td>3.06</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Note. \(^a\) scores ranged from 1 (greater support) to 5 (less support), \(^b\) scores ranged from 1 (suicide is normal/acceptable) to 5 (suicide is not normal/acceptable), \(^c\) scores ranged from 1 (confident in helping) to 5 (not at all confident in helping).

Analyses on the attitude scale were conducted using a three-way multivariate analysis of variance (MANOVA), with the three attitudinal factors (Support for Suicide Education, Acceptance/Normality of suicide, and Helping Capability) entered as dependent variables, and gender, personal experience, and exposure to education entered as the factors. The means and standard deviations on the three attitudinal factors and the dependent variables are presented in Table 3.

Table 3: Cell Sample Sizes, Means, and Standard Deviations for MANOVA on the Attitudinal factors and Dependent Variables

<table>
<thead>
<tr>
<th>Gender</th>
<th>Pers. Exp.</th>
<th>Education</th>
<th>n</th>
<th>&quot;Support&quot; M SD</th>
<th>&quot;Acceptance&quot; M SD</th>
<th>&quot;Helping&quot; M SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Yes</td>
<td>Yes</td>
<td>17</td>
<td>1.81 0.74</td>
<td>3.93 0.55</td>
<td>2.96 0.70</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>18</td>
<td>1.66 0.40</td>
<td>3.70 0.74</td>
<td>2.94 0.47</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>7</td>
<td>1.56 0.47</td>
<td>3.54 0.36</td>
<td>2.64 0.76</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>5</td>
<td>1.86 0.53</td>
<td>3.93 0.47</td>
<td>3.20 0.57</td>
</tr>
<tr>
<td>Female</td>
<td>Yes</td>
<td>Yes</td>
<td>48</td>
<td>1.53 0.36</td>
<td>4.00 0.41</td>
<td>3.06 0.69</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>56</td>
<td>1.65 0.51</td>
<td>4.00 0.45</td>
<td>3.09 0.73</td>
</tr>
</tbody>
</table>
No  Yes  12  1.39  0.29  3.74  0.45  3.31  0.80
No  26  1.59  0.37  3.95  0.35  3.12  0.65

Note. "support" = Factor 1, with low scores indicating greater support for suicide education, "acceptance" = Factor 2, with low scores indicating suicide is seen as normal/acceptable, "helping" = Factor 3, with low scores indicating greater confidence in helping suicidal person.

While the multivariate three-way interaction was not significant, the MANOVA revealed a significant multivariate two-way interaction effect for personal experience by exposure to education, Wilks $F(3,179) = 2.66, p < 0.05$, with this effect explaining 4.26% of the variance in attitude scores. This suggests that the effect of exposure to education on attitudes towards suicide is different at different levels of personal experience. Subsequent univariate analyses revealed a significant interactive effect for attitudes towards the normality and acceptance of suicide, $F(1, 181)=5.21, p<0.024$. Follow-up simple main effects analyses indicated that for people with personal experience of suicide, exposure to education had no effect but the opposite was true for people without personal experience of suicide. This group recorded significantly lower scores on attitude towards the normality/acceptance of suicide. Interestingly, participants without personal experience, but with suicide education perceived suicide to be a slightly more acceptable and normal behaviour and were less likely to believe that people should intervene compared to those participants without education (see Table 4). This interaction effect is graphically depicted in Figure 1.
Figure 1. Two-way Interaction Effect Between Personal Experience and Exposure to Education on Attitudes Towards the Normality and Acceptance of Suicide.

Table 4: Means, Standard Deviations and Significance Tests for the Education by Personal Experience Interaction, on Attitude Towards Acceptance/Normality of Suicide

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without personal experience</td>
<td></td>
<td></td>
<td>F( 1,49)=6.31, p&lt;0.015</td>
</tr>
<tr>
<td>with education</td>
<td>3.66</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td>without education</td>
<td>3.95</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>With personal experience</td>
<td></td>
<td></td>
<td>F(1,138)=0.539,n.s</td>
</tr>
<tr>
<td>With education</td>
<td>3.98</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>Without education</td>
<td>3.92</td>
<td>0.54</td>
<td></td>
</tr>
</tbody>
</table>

Note. These results only pertain to the 17-21 year old sample. Means refer to the average factor score on the Acceptance/Normality of suicide factor, with a possible range of 1 (suicide normal/acceptable) to 5 (suicide isn't normal/acceptable).

No significant main effects in relation to support for suicide education attitudes or helping capability attitudes were found to contribute to the multivariate interaction effect.
between personal experience and education. Results obtained for the univariate analyses of the two-way interaction between education and personal experience are displayed in Table 5.

Table 5: ANOVA on the Attitudinal Variables for the Personal Experience by Education Interaction

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>F</th>
<th>ETA squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes supporting education and discussion of suicide</td>
<td>2.27</td>
<td>0.012</td>
</tr>
<tr>
<td>Attitudes towards acceptance/normality of suicide</td>
<td>5.21*</td>
<td>0.028</td>
</tr>
<tr>
<td>Attitudes towards helping capability</td>
<td>0.42</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Note. Results based on the 17-21 year old sample
* p < 0.05. df 1/181

The MANOVA also revealed a significant multivariate effect for gender, Wilks $F(3, 179) = 2.71$, $p < 0.046$, with this effect explaining 4.35% of the variance in attitude scores. Subsequent univariate analyses revealed that this effect was only significant for attitudes regarding support for education and discussion of suicide in schools, $F(1, 181) = 3.93$, $p < 0.049$. Further analysis of the group means indicated that females ($M = 1.58$, $SD = 0.43$) appeared to support suicide education in schools to a greater extent than males ($M = 1.72$, $SD = 0.56$).

A two-way between-subjects MANOVA was conducted on the older comparison group to determine if similar effects on the attitudinal variables were operating. MANOVA did not reveal any significant two-way multivariate interaction effects, $F(3, 46) = 1.53$, $p > 0.05$ or any main multivariate effects on gender, $F(3, 46) = 2.44$, $p > 0.05$, extent of personal experience with suicidal others, $F(3, 46) = 0.61$, $p > 0.05$ and exposure to suicide curriculum, $F(3, 46) = 2.44$, $p > 0.05$.

3. Personal Experience. A large proportion of young adults indicated having had some experience with suicide, with 73.5% of the sample having known someone who had attempted or completed suicide. This level of personal experience did not differ for males.
and females. Further analysis of specific suicidal behaviour revealed that over half the sample indicated having had someone (usually a friend) talk to them about suicidal urges, particularly females, and 62.4% of the sample reported having known someone (friend or acquaintance) who had attempted suicide.

Approximately half of the sample indicated having known someone (acquaintance) who had completed suicide. No differential gender effects were detected. Descriptive data also suggested that more females than males had asked a friend about their suicidal ideation and recommended that a friend seek assistance for suicidal urges. Similarly, more females than males reported being concerned that a friend may have suicidal tendencies, and indicated that they had tried to help a suicidal friend (see Table 6).

Table 6: Percentages of Young Adults' having Personal Experience with Suicidal Behaviour in Others

<table>
<thead>
<tr>
<th>suicidal exposure</th>
<th>Gender</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean %</td>
<td>Male</td>
</tr>
<tr>
<td>Someone talked to you about suicide</td>
<td>57.7</td>
<td>46.8</td>
</tr>
<tr>
<td>someone attempted suicide</td>
<td>62.4</td>
<td>61.7</td>
</tr>
<tr>
<td>someone completed suicide</td>
<td>51.9</td>
<td>57.4</td>
</tr>
<tr>
<td>asked a friend about suicidal intent</td>
<td>22.8</td>
<td>10.6</td>
</tr>
<tr>
<td>recommend friend get assistance for urges concerned that a friend has suicidal urges</td>
<td>28.6</td>
<td>12.8</td>
</tr>
<tr>
<td>tried to help a suicidal friend</td>
<td>60.8</td>
<td>46.8</td>
</tr>
<tr>
<td></td>
<td>47.6</td>
<td>34.8</td>
</tr>
</tbody>
</table>

Note. All data refer to percentages (%) of participants indicating personal experience with specific types of suicidal behaviour displayed by others. An overall sample mean is reported in addition to separate gender means.
In the older comparison group, 80.8% reported having known someone attempt or complete suicide (females = 82.9%, males = 76.5%). Half of this sample indicated having known someone (friend or acquaintance) talk to them about suicide, 61.5% reported having known someone attempt suicide, and 71.2% indicated having known someone who had completed suicide. Personal experience with the above behaviours did not differ for male or female participants.

4. Suicide Awareness Education. Results indicated that 44.4% of the 17-21 year old sample had received suicide education at school (males 51.1%, females 42.0%). Furthermore, 44.4% (males) and 38.1% (females) indicated that their suicide education was incorporated into a human development subject, and 40.3% reported that the program lasted less than 2 hours in duration. Most participants indicating exposure to suicide education, received it between the ages of 16-18 years, and over half, 22.4%, were taken by a teacher with only 6.9% taken by a school counsellor and 12.2% by an outside expert.

Of those who had participated in a suicide awareness curriculum, 23.3% of participants found it slightly to very interesting compared to 9% who found it slightly to very boring. More males (36.2%) than females (20.4%) reported finding the program slightly to very informative (24.4%), and more males (27.7%) than females (15.5%), also reported that they found the suicide awareness curriculum slightly to very helpful. In relation to the outcome of the suicide education, 18.1% (of 44.4%) of participants reported feeling more confident in dealing with suicidal friends, however 26.6% said that they did not feel confident. Gender differences appeared to emerge here as more males (28.3%) than females (14.8%), reported increased confidence, suggesting greater gains for males from exposure to suicide awareness curriculum. All participants were also required to indicate how important they perceived suicide awareness education in schools to be. Results found that 81.5% of participants believed it to be very important and 11.6% thought it to be slightly important.
Discussion

The present study examined the effect of gender, personal experience with suicidal others, and exposure to suicide awareness education, on the knowledge and attitudes' of young and older adults. Five hypotheses were tested relating to suicide knowledge, attitudes to suicide, experience with suicidal others, exposure to suicide education, and age (as represented by the older group) would affect suicide knowledge and attitudes.

Suicide Related Knowledge

It was hypothesised that young adults in general would display an inadequate level of knowledge in relation to adolescent suicide, as assessed by the Suicide Knowledge Test. Results supported this hypothesis as participants' average score on the test was approximately 58%, which is slightly better than chance level. This result is consistent with the literature that has reported that adolescents, in general, possess inaccurate information regarding adolescent suicide (Eskin, 1992; Leane & Shute, 1998).

Previous investigations have also indicated that females display better knowledge about adolescent suicide compared to their male peers (Eskin, 1992; Overholser et al., 1990). Results obtained in the present study support this hypothesis. These results have implications for the development and implementation of school-based suicide awareness programs with a specific gender focus.

The present study also hypothesised, that young adults who had been exposed to school-based suicide awareness education, would display greater levels of knowledge, compared with those respondents who had not been exposed to suicide awareness education. Results supported this hypothesis with participants who had received suicide awareness education scoring significantly higher overall knowledge scores on the Suicide Knowledge Test, than participants who had not been exposed to suicide awareness education. This is consistent with Spirito et al. (1988), who demonstrated this effect using a pre-post test design and Ciffone (1993) who reported a significant correlation between educational exposure and increased knowledge levels. The present study further contributes to the existing body of literature in support of the efficacy of suicide awareness education in schools as a means of increasing student's knowledge of adolescent suicide to assist in prevention.
A sample of older adults was included in the present study because they may not only have extensive contact with young people, but they are often responsible for policy initiatives in this area. Because suicide does not appear to affect older adults to the same degree as young adults, it was proposed that the older sample would display poorer knowledge levels than the younger sample. However, this hypothesis was not supported. Results indicated that while the older group did possess low knowledge levels, they did not significantly differ from those obtained by the younger sample. Furthermore, older adults' knowledge did not vary as a function of gender or personal experience. The fact that this sample demonstrated somewhat inadequate and inaccurate suicide related knowledge indicates the need for suicide awareness programs in schools to also target adults such as teachers, parents and administrators.

**Suicide Related Attitudes**

On the basis of past research it was hypothesised that young adults would hold reasonable attitudes on adolescent suicide (Eskin, 1995; Garland et al., 1989). Results obtained supported this hypothesis. Participants indicated strong support for the open discussion and the implementation of suicide awareness education in schools, and they did not perceive suicide to be a normal, nor an acceptable behaviour, believing that one should intervene with a suicidal peer.

It was also expected that a gender difference would emerge with females displaying more positive and accepting attitudes towards adolescent suicide than males. This hypothesis was partially supported with more females than males strongly supporting the idea of open discussion and implementation of suicide education in schools. This finding is somewhat consistent with previous research that indicates that females endorse more positive and accepting attitudes towards suicide.

**Personal Experience with Suicidal Others**

It was hypothesised that a large proportion of the young adults sampled would report some level of personal experience with suicidal behaviour in others. Results supported this hypothesis as almost three quarters of the sample indicated having known someone who had attempted or completed suicide. This result is also consistent with previous research that has reported that between 34% and 90% of students are exposed to suicidal behaviour in peers while in high school (Nelson, 1987).
It was also expected that more females than males would indicate having had personal experience with suicidal others. However, the results did not support this differential gender effect. Although no significant gender effects were obtained in relation to the general definition of "personal experience" (i.e., having known someone who attempted or completed suicide), findings obtained regarding personal/interactive experience with specific suicidal behaviours in others did suggest gender differences. More females than males indicated that they had someone talk to them about suicidal urges, had asked a friend about their suicidal ideation, had recommended that a friend seek assistance for their suicidal urges, had been concerned about a suicidal friend, and had tried to help a suicidal friend. Hence, while significant gender effects were not detected in relation to the impersonal interaction of "knowing" someone who exhibited suicidal behaviour, when specific personal/interactive relationships with suicidal others were examined, females appeared to have been exposed to suicidal behaviour to a greater extent than males.

Another interesting finding that emerged from the present study was that more than 60% of the young adult sample had been concerned that a friend may be suicidal, yet less than a third asked a friend directly about their intent or recommended that a friend seek professional assistance. Furthermore, almost half of the sample indicated that they had tried to help a suicidal friend. These results suggest that young adults, who may be concerned about a friend’s suicidal intent, rarely ask their friend directly about their urges or help them access professional help, rather they appear to be trying to help their fellow peers themselves. Previous research has reported that while peers are the first to detect suicidal intent, they appear to be unaware of the appropriate response and course of action to take (Kalafat & Elias, 1995). This result also has implications for education programs aimed at the prevention of adolescent suicide, such that specific information needs to be provided to students' regarding the appropriate response to peers' suicidal behaviour, and avenues should be clearly identified for obtaining professional assistance. 

**Exposure to Suicide Awareness Education**

It was proposed that only a small proportion of young adults would indicate having received suicide education while at high school. This hypothesis was supported as less than one half of the young adult sample reported having been directly exposed to a
suicide awareness curriculum. Further analysis of the data suggested that this education appeared to be somewhat limited in scope, with most participants indicating that their education was incorporated into a human development subject taught by a classroom teacher in upper high school, and lasting less than two hours.

The present study anticipated that those young adults exposed to education would display more reasonable and positive attitudes in relation to suicide compared to those young adults who had not received any education. This hypothesis was based upon previous research that concluded that suicide education was reliably associated with better and more positive attitudes (Ciffone, 1993; Spirito et al., 1988). However, results obtained in the present study failed to support this hypothesis, as have other studies (eg. Kalafat & Elias, 1994; Shaffer et al., 1991).

This unexpected finding may be due to the nature of the suicide curriculum participants received. Descriptive data and subjective evaluations of the suicide education programs by participants suggested that the curriculum was very short in duration and somewhat limited in content, presenting only specific factual information. As a result, it is unlikely that the program would have had any significant effect upon students' attitudes. This has implications for school based suicide prevention programs that should include an attitudinal component in addition to factual information. By fostering more reasonable and positive attitudes towards the issue of suicide, discussion, prevention and intervention may be facilitated.

An interesting result obtained by the present research was the interaction effect between personal experience and education, on attitudes towards the acceptance/normality of suicidal behaviour. It was found that for people indicating personal experience with suicidal others, exposure to education had no effect on attitudes towards the acceptance/normality of suicide. However, for people without personal experience, those participants who had received education, perceived suicide to be more acceptable and normal, and were less likely to believe in intervening with a suicidal peer than those participants who had not received education. This result may be due to the type of educational curriculum participants received. For those people without personal experience with suicide, education may represent their first exposure to the issue of suicide. Perhaps the curriculum was confusing or uninformative, thereby making the
student less likely to endorse intervention. The curriculum may have also represented suicidal ideation as a normal, acceptable and stereotypical response to adolescent stress. This finding has serious implications for school suicide awareness programs.

Education was not found to effect attitudes towards the normality/acceptance of suicide for those participants indicating personal experience with suicidal others. This may be attributed to the fact that people with previous experience may have already formed attitudes regarding the acceptance and normality of suicidal behaviour. Therefore, it seems unlikely that a short-term, limited content, suicide awareness program would have any significant effect on young peoples attitudes. It is recommended that future research continue to investigate and replicate this effect.

Implications

The present study yielded findings that have implications in relation to both future research and recommendations for the implementation of suicide awareness curriculum within schools. Controversial findings have been reported in the literature regarding the effectiveness of suicide education as a means of preventing adolescent suicide. Findings from the present study contribute to existing research indicating that exposure to suicide awareness curriculum may result in increased levels of knowledge about the issue of suicide. It is assumed that better knowledge of warning signs and risk factors in suicide may lead to increased identification of and intervention with at-risk adolescents, thereby aiding preventive efforts. Findings obtained in the present study in relation to the differential effects of gender, personal experience, and exposure to suicide awareness education, suggest a number of recommendations in relation to the design and implementation of suicide curriculum in an educational context. Males and females appear to possess differing levels of baseline knowledge, evaluate suicide prevention programs differently, and display slightly different attitudes in relation to youth suicide. As a result, educational programs aimed at suicide prevention may need to be delivered to males and females differently.

It is also suggested that school programs contain an attitudinal component as well as presenting factual information, as the endorsement of more positive attitudes regarding helping capability may facilitate increased identification and intervention efforts by adolescents. A final recommendation is that school suicide prevention efforts should also
target adults, aiming to increase the knowledge of parents and teachers regarding adolescent suicide, as well as the adolescents' themselves, in order to increase the chance of detecting and preventing suicidal behaviour in students.
References


