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Jennifer Larson

Eastern Illinois University

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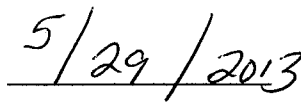
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**An Assessment of Adolescents' Knowledge of
Suicide Warning Signs in their Peers**

BY

Jennifer Larson

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Specialist in School Psychology


IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

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An Assessment of Adolescents' Knowledge of Suicide Warning Signs in Peers

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Acknowledgements

I extend my sincerest thanks to Dr. Assege HaileMariam, Dr. Ronan Bernas, and Ms. Marjorie Hanft for supporting this study and taking the time to provide much needed guidance. Additionally, I would like to thank my wonderful family and friends for always being there for me and providing me with encouragement. I could not have completed this study without all of you!

Abstract

The present study examined the knowledge adolescents have about suicide warning signs. Participants included 188 students (79% female and 21% male), 18 to 20 years old, from a Midwestern University. Participants anonymously completed an online survey. Results indicated that adolescents did not show knowledge of suicide warning signs. They also did not correctly identify suicide risk levels in three scenarios. Furthermore, direct exposure to suicide was not related to adolescents' knowledge of suicide warning signs or risk factors; however, adolescents who looked up information about suicide online were better at identifying suicide warning signs. Finally, those who had a family or friend express thoughts of suicide had decreased suicidal ideation. Results, limitations, and implications of the study and future research directions are discussed.

An Assessment of Adolescents' Knowledge of Suicide Warning Signs in their Peers

The present study evaluated the knowledge of suicidal warning signs that adolescents are able to identify in their peers. Specifically, this study examined how accurate adolescents were in identifying suicide warning signs and the misconceptions they may have about suicide warning signs, their ability to identify suicide risk levels within scenarios, the relationship between indirect and direct knowledge and adolescents ability to identify warning signs, and who adolescents talk with if they have suicidal ideation. Current research indicates that in the United States suicide is the third leading cause of death in adolescents (Pirruccello, 2010). In 2009, Eaton and colleagues reported that the third leading cause of death for adolescents and young adults ages 10-24 was suicide, 12% (Center for Disease Control and Prevention-CDC, 2009). In the same report, Eaton et al. also presented the results of the Youth Risk Behavior Surveillance Survey, which monitors health-behaviors of youth in several areas. Regarding suicidality, 13.8% of students in 9th to 12th grades reported that they “seriously considered attempting suicide”, while 10.9% “made a suicide plan”, 6.3% “attempted suicide”, and 1.9 % suicide attempts were treated by a doctor or a nurse. Given this picture of suicidal ideation, attempt, and rate of completion, assessing knowledge of suicide warning signs among the youth is critical and because they spend more time together, than they do with their own parents, peers can be the first ones to witness the warning signs of suicide.

Furthermore, the impact of adolescent suicide seems to be great on peers and families alike. The literature shows that adolescents who had a friend who had committed suicide had increased chance of developing a Major Depressive Disorder a

month after the incident occurred (Bridge et al., 2003), they had suicidal thoughts after a year, and they were at a higher risk for suicide attempt (Bearman & Moody, 2004). For parents, the distress is so great that most did not believe that it would ever be possible to return to a “normal” life compared to before the suicidal incident of their child (Lindqvist, Johansson, & Karlsson, 2008). Although studies of this nature are rare because of the sensitive nature of the topic, in research conducted in Sweden, Lindqvist and colleagues (2008) found that of the parents interviewed, not one had experienced a full day without thoughts of their deceased child and some had even thought of committing suicide themselves. All of the families interviewed admitted being plagued with their own feelings of guilt and shame (Lindqvist et al., 2008). Although it is unlikely that adolescent suicide can be eradicated, studies like this attempt to prevent suicide not only to minimize human suffering, but also to minimize the loss of human potential to society.

Definition of Terms

The current study was concerned with youth knowledge of suicide warning signs including suicidal ideation (thinking about forming an idea or imagining suicide), plan (identified means and steps for committing suicide), and suicide (the act of deliberately killing oneself) (Gould et al., 1998; World Health Organization –WHO, 2000). The American Psychological Association (APA) defines suicide as “the act of killing yourself, most often as a result of depression or other mental illness,” while, the Center for Disease Control defines suicide as “the act of taking one’s own life.” Suicide seems to be commonly defined as the act of intentionally killing oneself, which is also used in this study. Suicidal ideation and suicidal thoughts are used interchangeably in this study.

Adolescence is defined as the transition between childhood and adulthood by the U.S. Department of Health and Human Services (2013). The U.S. Department of Health and Human services breaks down adolescence into stages: early, middle, and late (adapted from the American Academy of Children and Adolescent Psychiatry: Facts for Families, 2010). Late adolescence encompasses individuals ages 19 to 24. During this period, adolescents show an increased concern for others, place high importance on peer relationships, and an increased emotional stability. This study used adolescents ages 18 to 20 with the assumption that they have not been removed too long from the high school experience. Furthermore, the terms youth and adolescents are exchangeable in this study, and they represent individuals between the ages of 18 and 20 years old.

Unfortunately, suicide warning signs are not easy to define, because suicide warning signs are poorly defined constructs and research has been slow in distinguishing warning signs from suicide risk factors (Rudd et al, 2006). There are complex questions yet to be answered; for example, how do warning signs and risk factors for suicide differ, are warning signs for suicide attempts different from suicide completion, and can risk factors serve as warning signs?

Some researchers have suggested that suicide warning signs indicate immediate risk of suicide, while suicide risk factors (discussed below) are long-term in nature (e.g., maladaptive behaviors and mental illnesses, such as substance abuse, purposelessness, anxiety, feelings of being trapped, hopelessness, withdrawal, anger, recklessness, and mood changes) which has no utility for assessing acute suicide risk (Hendin, Maltzberger, Lipschitz, Haas, & Kyle, 2001; Joiner, Rhee, Rudd, & Jobes, 1999). Table 1 below

compares the suicide warning signs with suicide risk factors according to The American Association of Suicidology (2007).

The American Association of Suicidology (ASS, 2007) lists acute suicide-warning signs as the individual threatening, talking, looking for ways to kill or hurt herself or himself, or talking or writing about death, suicide, and dying when these topics are not normal for the individual. The American Psychological Association (APA) has a similar list of suicide warning signs in adolescents including talking about dying, recent loss, change in personality, change in behavior, change in sleep patterns, change in eating habits, fear of losing control, low self-esteem, and no hope for the future (APA, 2011). An extensive list of suicide warning signs and suicide risk factors is provided in Table 1.

Because adolescents do not have the experience or the sophistication to recognize the relationship among longstanding problems (e.g., family dysfunction or mental illness that precede acute suicide) and suicide, for this study, suicide warning signs were understood to pose more of an acute and detectable heightened risk for suicide, including verbalization of killing oneself, planning to carry it out, and attempting suicide. Given that the researchers do not conclusively agree on what suicide warnings are or are not, it is safe to assume that adolescents, in this study, would not have the knowledge to predict suicide either.

Misconceptions

There are many myths and misconceptions about suicide and suicide warning signs. One common myth is that suicide occurs without any warning signs from the individual. It has been found that there are significant risk factors and warning signs that indicate an individual may be contemplating suicide, which include sadness, mood

changes, substance use, risk taking behaviors, talking about committing suicide, making a plan, and giving away possessions (Horowitz, 2009). Also, many individuals believe that discussing suicide with adolescents may put the idea in their head. On the contrary, research shows that not asking adolescents about suicide can prove to be more dangerous (Horowitz, 2009). Furthermore, results from the Sources of Strength program, which had peers spread the message about suicide to other adolescents, indicated that talking to students about suicide did not increase the students' suicidal ideation (Wyman et al., 2010).

Another common myth is that if an adolescent has attempted suicide in the past, he or she will not try again. Suicide attempt proves to actually be a very strong predictor of future attempts (Horowitz, 2009). Many individuals also believe that once a person has decided to die there is nothing that can be done to stop him or her, which is a myth, because there are many interventions and prevention programs that have shown to be effective in decreasing suicidality in adolescents. Finally, there is a mistaken belief that only professionals are able to identify suicide warning signs. To the contrary, any individual can detect suicide warning signs especially if she or he is given the appropriate information to be able to detect these warning signs. People fail to recognize the warning signs because they lack knowledge of suicide warning signs and, therefore, they are not sure why a child is exhibiting personality and behavior changes (Horowitz, 2009).

Prevalence

Two prominent organizations collect data on suicide: The World Health Organization collects data from countries around the world and, the Center for Disease Control and Prevention collects data from the 50 United States and the District of

Columbia. The CDC collects suicide related information through the Youth Risk Surveillance Survey and the most recent survey, 2009, issued results in 2010. The data for WHO were from 2005.

The World Health Organization reported that in 2005 suicide occurred 10 times per 100,000 individuals in the United States for adolescents aged 15-24 (WHO, 2005). As presented earlier, 13.8% of students in 9th to 12th grades reported that they “seriously considered attempting suicide”, while 10.9% “made a suicide plan”, 6.3% “attempted suicide”, and 1.9 % suicide attempts were treated by a doctor or a nurse (CDC, 2009). WHO and CDC reported differing prevalence rate of suicide in adolescents; which maybe a function of timing, i.e., WHO’s data were collected in 2005 and CDC’s in 2009. Overall, female respondents, regardless of ethnicity, reported higher rate of suicidal behaviors. According to the CDC, it appears that boys are more likely than girls to die from suicide, but girls report higher rates of suicidal ideation and attempted suicide. Rates of suicidal ideation, suicide plans, and attempt are summarized in Table 2.

It is also noteworthy that the rate of suicide in adolescents varies by geographic area. For instance, research focusing on Fort Apache Reservation in east-central Arizona in the United States has shown that among White Mountain Apache adolescents, between 2001 and 2006, 61% of suicides that occurred were among adolescents under the age of 25 (Mullany et al., 2009). Although WHO and the CDC report prevalence rate for suicide and suicide attempts, not all suicides are reported as suicide, or suicide attempts are reported because of the negative stigma associated with killing oneself (CDC, 2010). According to WHO (2000), students responding to self-report measures reported attempting suicide twice as often compared to those reported by psychiatrists. WHO

suggested that the identification of suicide can be difficult in adolescence because suicidal behavior is often classified as unintentional or accidental especially when it involves overdosing on illegal drugs, falls, and drowning. Given the potential for underreporting, the prevalence of suicide among adolescents is a serious concern.

The issues related to reaching consensus on what suicide warning signs are, misconceptions about suicidality, and issues related to establishing an accurate suicide rate in the youth population have been discussed. In the following, the factors that put adolescents at risk for suicide, psychological principles that explain suicide, and adolescents' knowledge of suicide warning signs and help-seeking skills are explored.

Suicide Risk Factors

As suggested above, risk factors for suicide are not considered crisis situations; rather they are enduring or long-term risks that apply to the whole population and they seem to be related to suicidal behaviors, such as childhood adversity (e.g., stressful life events and abuse and maltreatment), social disadvantages (e.g., low SES and education, poor parental relationship, and poor child-parent relationship), psychiatric problems (e.g., affective disorders, prior suicide attempts, parental psychopathology), access to lethal agents, and contagion, exposure to suicide (Gould, Greenberg, Velting, & Shaffer, 2003). In short, suicide risk factors arise due to the interaction of socio-cultural, developmental, psychological, and family-environmental factors.

Peer Interaction and Suicidality

One of the assumptions of this study was that because adolescents spend more time with their peers than their parents (Demo, 1992), they are more likely to witness problematic changes in their peers and also confide in each other, which suggests the

importance of educating adolescents about suicide. In an attempt to identify the first individuals to learn about suicidal ideation in adolescents, high school teachers were asked, in a survey, about who they believed would be the first individuals notified by a person considering suicide. Seventy three percent of respondents believed a friend would be the first person told. The same teachers reported that adolescents who were feeling overwhelmed were most likely to talk with friends (54%) followed by other alternatives, such as using drugs/alcohol (48%) and withdrawal (33%), indicating that students are very reliant on their peers (Westefeld, Kettmann, Lovmo, & Hey, 2007).

It appears that there is a high probability that suicidal students seek out peers to share their intentions with before their parents or teachers. Therefore, it seems important for adolescents to have the information they need not only about identifying suicide warning signs in their peers, but also help seeking behaviors. However, the literature is silent about adolescents' knowledge of suicide warning signs and what they actually do if they learn one of their peers is suicidal.

Because there is a knowledge gap regarding the role peers play in preventing suicide in adolescents, the potential for adolescents to prevent suicide in their peers is sometimes inferred from other areas that have research support. For example, the relationship among peer relationships, mental health, and academic achievement has been used to highlight the importance of peers in suicide prevention. Cui, Cheng, Xu, Chen, and Wang (2010) examined the link between peer relationships and suicide ideation and attempts in 8778 Chinese adolescents between the ages of 11 and 17. Results showed that adolescents who thought of peers as cruel and uncooperative had fewer friends, reported being bullied, and engaged in numerous physical fights were more likely to have

higher suicidal ideation. In addition, if the number of close friends increased, suicidal ideation decreased. It appears that negative peer interaction is related to suicide, while positive interaction can be a protective factor. Further demonstrating the role peers play in each other's development, adolescents who participated in a cooperative goal structure compared to a competitive or individualistic goal structure were shown to have more academic achievement (Roseth, Johnson, & Johnson, 2008). These authors described cooperative goal structures as when two individuals have goals that are so closely associated that there is a "positive correlation" between their goal acquisitions. Because of this interdependence, it is inferred that friends would be the first to know about their peers' suicidal ideation.

It is, therefore, assumed that adolescents have a reciprocal relationship with one another that is implicated in the development of their mental health including suicide, and that they can play a role in preventing suicide. Although, empirical studies that investigated the effectiveness of adolescents' ability to prevent suicide in their peers are nonexistent, Wyman et al. (2010) examined peer leader interventions for the prevention of suicide and suicidal ideation in high school students. Eighteen high schools were randomly assigned to immediate intervention or the wait-list control. The intervention was based on the Sources of Strength (SOS) program which includes three phases: School and community preparation, peer leader training, and school wide messaging. The school and community preparation included adult advisors for guiding the peer leaders in creating safe suicide prevention messages to share with classmates. The peer leader training included a four-hour training that covered the eight protective sources of strength skills to increase resources for students. The student body was also taught to engage

trusted adults with the issue of suicidal ideation. The last phase was school wide messaging which required students to engage with their trusted adults, encourage their friends to seek out their own trusted adults, and spread communication about the SOS program through media related networks, video or text messages, presentations, and public service announcements. To assess the effectiveness of this program, peer leaders completed a questionnaire addressing suicide perceptions and norms, social connectedness, and peer leader behaviors, while the students in the schools completed a questionnaire focusing on help for suicidal peers, reject codes of silence, help-seeking behavior from adults, and sources of strength coping. The researchers also asked students about their suicidal ideation within the past year to assess if the program had increased suicidal ideation in the students.

Results showed that the SOS program, i.e., talking about student suicidality, did not increase students' suicidal ideation. The trained peer leaders reported positive intervention impact after four months: They had highly optimistic expectations that adults at school would assist suicidal students, and they showed more rejection of the codes of silence, less maladaptive coping attitudes, increased help seeking behaviors from adults at school, and more support to peers including connecting distressed peers to adults. Overall, the odds of making a referral in the intervention group were 4.12 times greater compared to the schools that did not receive peer leader training (wait-list control). Regarding the student population at large, they reported positive increase in perceptions of adult help for suicidal peers and for norms for seeking help from adults. Further, students who reported suicidal ideation and who also had contact with peer leaders from

the program had even higher increased perceptions that adults would help students with suicidal ideation (Wyman et al., 2010).

In a recent study, investigating adolescents' knowledge of suicidality, Schwartz and colleagues (2010) conducted a focus group with 68 adolescents with ages ranging from 13 to 18. Results showed that participating adolescents thought suicidal ideation occurs due to stressors and a failing support system, and they either did not view suicide as a large problem or they did view it as a large problem, but not for their community or peers. Participants also reported that suicide attempts were often used to gain attention from those around the individual; and although extreme risk taking behaviors were not primarily seen as suicidal behaviors, they were seen as suicidal gestures. It is evident that adolescents in this study did not have accurate knowledge about suicide. Although suicide occurs in all groups of people and communities and suicide attempts are real or a cry for help, participants in this study thought that suicide could not happen to their peers or in their community and that suicide attempts serve as attention getting behavior. At the same time, these adolescents showed confidence in their ability to identify the behavior changes that may predict suicide in peers, such as losing interest, altering friends, retreating from social exchanges, and exhibiting disposition changes. However, because the study relied on self-report, whether or not these adolescents can actually identify suicide risk factors in their peers in real life is questionable.

Regarding preventing suicide attempts among peers, adolescents in this focus group reported that they were in a position to help their peers particularly if they were able to recognize the situation early. They also acknowledged that some individuals are better at hiding their symptoms and that makes it more difficult for them to identify and

prevent suicide attempts in their peers. It is interesting to note that even though these adolescents expressed confidence in their ability to recognize suicide warning signs in their peers, the majority of participants also indicated that they could benefit from training in identifying the risk factors as well as intervention strategies (Schwartz et al., 2010).

It should also be noted that young adults seem to have poor knowledge of suicide warning signs and misconceptions (Segal, 2000). Segal (2000) conducted research that investigated the knowledge and misconceptions young adults (ages 17-52) and older adults (ages 55-79) had about suicide using the Suicide Knowledge Quiz. Results showed that young adults seem to have better knowledge of suicide warning signs than older adults, but overall they still held many misconceptions about suicide (Segal, 2000). Overall, although self-report may pose problems, these results provide some evidence that peers can be effective agents of change during the adolescent years. This is a promising finding that requires further research.

Research has shown that contagion is a real effect of suicide on those who are close to the original victim in geographical proximity. Johansson, Lindqvist, and Eriksson (2006) studied suicide clusters in Sweden and found that contagion was a real life issue. Evidence from this research produced two clusters and established that contagion was evident in these clusters. The individuals in the two clusters were close to each other geographically and in some cases knew each other personally. Further, research shows that local television news reports were associated with increased suicide deaths for individuals under age 25. Newspaper reports were also associated with an increase in suicide deaths among those under the age of 25, but also for those older than 44 years

old. This information shows that news reports are related to contagion and can affect clusters of individual's suicide deaths (Romer, Jamieson, & Jamieson, 2006). It is also important to note that for individuals ages 25 to 44 television news reports were associated with a positive effect on suicide deaths (Romer et al., 2006).

Media and Suicide

In addition, in recent years, the media seems to have played an influential role in adolescent suicide. Although research in this area is limited, Bondora and Goodwin (2005) reviewed the literature and found an increase in aggression and suicidal behaviors following media coverage of such events. Increases in suicidal behavior not only occur after media coverage of real stories, but also after fictional stories (i.e., fictitious movies and television shows portraying suicide). Interestingly, the researchers also found that adolescents have a more accepting attitude towards death and suicide than adults. In another study, Gould (2006) examined suicide in relation to media and discovered that adolescents who reported more frequent television exposure also reported more suicide attempts. This research suggests that nonfictional stories were more likely to influence suicide compared to fictional stories (Gould, 2006). The limited studies in this area support a relationship between the media and adolescent behaviors.

The media can also be a source of education. According to research conducted in Canada, individuals who come in contact with information through media show an increase in knowledge of suicide facts. This research was conducted in Quebec by surveying 20 to 40 year old males over the telephone during the annual suicide prevention week media marketing campaign (Daigle et al., 2006). Other media campaigns have been used to effectively provide information to the public, such as the

Compass Strategy, which was a campaign utilizing multimedia facets, a website, and telephone services to provide information to the public about mental health. Results showed that individuals became more aware of suicide risks and the perceived barriers in help-seeking behaviors, were more able to identify depression in themselves, and sought out help more often (Wright, McGorry, Harris, Jorm, & Pennell, 2006). The current limited research provides some evidence that it may be possible for individuals to gain information about suicide warning signs through the internet, television, or print media outlets.

The primary assumption of this study was that because adolescents are at the developmental stage where peer relationships are the primary concern of their experience, they seek to be around each other and share information. Thus, adolescents are in a position to see suicide warnings first, although they may not recognize the warning signs. What then explains this assumption? The well-known developmental theorists, Erik Erikson (1963) proposed the period of adolescence as being a time when the youth are maturing, rebelling, and preoccupied with who is around them and what they appear to be in the eyes of those around them. Their inner, intimate circle is growing into a wider circle that incorporates more significant people than their immediate family, and they put their trust into other individuals, such as peers. Erikson (1968) goes on to describe adolescents as helping each other through the discomfort that results from the search for identity by forming cliques and testing each other's capacity for loyalty. While seeking identity, the youth often reject their parents and other authority figures and seek peers to identify with at these times.

Erikson's theory supports the assumption of this study that adolescents are more likely to relate to their peers in a time of crisis, such as suicidality, rather than parents or other authority figures. It is, therefore, logical to assess adolescents' knowledge of suicide warning signs and help-seeking behaviors, and also arm them with the knowledge they need for identifying suicide warning signs in their peers.

Statement of Problem

In summary, suicide is the third leading cause of death in adolescents; each year, 12% of American youth kill themselves (CDS, 2009). This act is related to poor mental health outcomes for survivors, peers, and parents (Bearman & Moody, 2004; Lindqvist et al., 2008). Although the literature is conclusive that the period of adolescence is marked by the need for peer socialization and adolescents spend more time with their peers, the idea they may be the first ones to learn about suicidality in their peers seems novel. Thus far, research on adolescent suicide has failed to explore the adolescent's potential for detecting peer suicidality, i.e., examine the knowledge that youths have to identify suicide warning signs in their peers. The few research studies available are dated and show inconsistent outcomes. What is consistent is that adolescent suicide is related to negative outcomes for peers and parents, such as depression and suicidal ideation and attempt.

The present study was designed to examine a fairly underdeveloped area in suicide research. Overall, the present study asked: Can peers accurately identify suicide warning signs? Can they accurately identify suicide risk factors within a situational context? Would exposure to suicide directly or indirectly be related to the adolescent's ability to accurately identify warning signs? Five Hypotheses were made.

1. Participants would not be able to accurately identify suicide warning signs in adolescents.
2. Participants would not be able to accurately identify suicide risks in situational contexts, such as scenarios.

In Schwartz and colleagues' (2010) study, adolescents sent mixed messages when they reported confidence that they could identify suicide warnings, but at the same time they indicated that (1) they needed more education on the topic, and (2) they did not find that suicide was a relevant issue for their community, although suicide is a problem for all communities. In addition, because trained gatekeepers, such as teachers and counselors, struggled with identifying suicide warning signs in students (Westefeld et al., 2007; Peach & Reddick, 1991), it is reasonable to assume that adolescents would also have difficulty identifying suicide warning signs in their peers. In other words, if professionals, such as teachers and counselors lack knowledge about adolescent suicide warning signs, it can be assumed that adolescents are also uninformed about suicide warning signs and suicide risk factors in their peers. Thus, for hypotheses 1 and 2, it is predicted that adolescents would not demonstrate knowledge of suicide warning signs or correctly identify suicide risk factors, respectively.

3. Participants who had experienced direct exposure to suicide, e.g., suicidal ideation, attempt, or completion by a friend or family member would be more accurate in identifying suicide warning signs and risk factors than participants who had no exposure to suicide.

Adolescents who have experienced a family member's or friend's suicide attempts or suicide completion may become aware of suicide warning signs and risk factors because of the proximity of the exposure or their awareness of the event. Based on incidental learning, although an individual may not have the intent to learn about a specific area, an unexpected

event increases the individual's reportable knowledge in that area. Runger and Frensch (2008) found that when they interrupted an individual's learning with an unexpected event, that individuals reported sequence knowledge increased. It appears that an unexpected event can alter knowledge because of the experience.

4. Education about suicide through indirect means, such as the internet, television, or classes would increase participants' ability to identify warning signs in peers.

Research shows that the media can be effectively used to provide information about suicide (Wyman et al., 2010; Wright et al., 2006; Daigle et al., 2006). The media and other technology are powerful means for transmitting information to adolescents, such as TV shows, the internet, and non-fiction news outlets. These sources have shown to be instructive by informing young adults about how other individuals have committed suicide (Bondora & Goodwin, 2005; Gould, 2006). Such information seems to have a contagion effect as it is related to increases in suicidal ideation in adolescents.

5. Adolescents who considered suicide would more likely confide in peers than parents or other trusted adults.

Westefeld et al. (2007) asked high school teachers about whom adolescents confide in first in a time of need; majority (73%) believed that a peer would be the one. Because socialization is important to adolescents, it is not surprising that they confide in each other.

Methods

Participants

Participants were 188 students, 79% female and 21% male, from introductory psychology classes at a comprehensive Midwestern University. The age range of participants was between 18 and 20 years old. The sample was predominantly

Caucasian/White, 62%, and 29% were African Americans followed by 4% Hispanic or Latino. Asian, American Indian and Not Hispanic or Latino made up of .5% each, and 3% identified themselves as Other (These percentages do not add to 100% because of rounding to the nearest integer).

Materials

Perspective on Suicide Questionnaire: The author developed the Perspective on Suicide Questionnaire based on four sources. The 64-item questionnaire was designed to assess adolescents' knowledge about suicide and consists of four sections addressing different concerns: suicide risk factors, warning signs and misconceptions, experience with suicide, situational contexts, and demographic information.

Items regarding suicide risk factors and warning signs (25 questions) were adapted from the Adolescent Suicide Behaviour Questionnaire (ASBQ) (Scouller & Smith, 2002). Sample items included facts about suicide warning signs as well as false statements (e.g., "Adolescents who talk about suicide won't commit suicide."). Questions adapted from the ASBQ were originally Likert scale questions. Sixteen questions regarding misconceptions and facts about suicide were adapted from Segal (2000), such as, "Discussing suicide with a suicidal friend may cause that person to end his or her life." Although these items were originally true and false questions, for consistency they were converted into a Likert Scale for this study. In other words, the 41 items (25 from ASBQ and 16 from Segal) are on a Likert scale, from "Strongly Disagree" to "Strongly Agree." Low scores denote a low knowledge of suicide warning signs while high scores denote high knowledge of suicide warning signs. Likert scale items are scored 1 to 6, with 1 being incorrect and 6 being correct. It is important to note that only a rating of 6 was considered correct for this study.

The 41 items were designed to assess adolescents' knowledge of suicide warning signs and misconceptions.

Regarding adolescents' experience with suicide, 16 items were adapted from previous research that examined university students' experience and belief about suicide (King, Vidourek, & Strader, 2008). These items directly asked whether the individual had experienced a friend or peer who talked about, attempted or committed suicide as well as if the participant had contemplated suicide in the past. This section also assessed if the adolescent had received information about suicide through the media or classes. Participants choose "Yes" or "No" response. These items are scored dichotomously 1 for "Yes" and 2 for "No". This section answered whether or not direct exposure to suicide or suicide information through the media and classes increases an adolescent's ability to accurately identify suicide warning signs in peers.

The third section, situational contexts, consisted of three small vignettes, which participants were asked to rank in order of severity of suicide risk, and the vignettes were adapted from Debski et al. (2007). The three scenarios presented three different degrees of suicide warning, which included high risk, moderate risk, and low risk for suicide attempt. These scenarios indicated participants' ability to identify suicide warning signs in situational context.

Finally, the Perspective on Suicide Questionnaire was based on the literature and some items were also adapted from published questionnaires with permission. As a result, its psychometric properties are unknown, which may be a limitation.

Procedure

Participants were recruited and screened through SONA, an Internet based study pool made up of students enrolled in introductory psychology classes. These students are required to participate in a research experience for credit. These students complete a screening questionnaire that provides researchers with information, such as the gender of the individual, age, year in school, and other demographic information. Once the students are enrolled in the online program, they can begin to sign up for studies that fit their interest and schedules.

Researchers must create a research opportunity on the website. The researcher is able to choose the individuals suited for a particular study, e.g., gender or ethnicity. Once the researcher posts a description of the research, the criteria for participation, and the schedule and the location for conducting the research in the database, participants can sign up for the available time slots.

In this study, the questionnaire was administered online, and participants were given the option to continue with the study if they agreed with the informed consent or quit. The informed consent form highlighted the purpose of the study as well as any risks that may occur while or after completing the research study. Further, the consent form explained the confidential and voluntary nature of the study. Students that chose to continue, were given consent to complete the questionnaire. Once the students chose to continue, they were asked to complete a short survey about suicide warning signs. The survey took students about 15-20 minutes to complete and was administered online. At the end, participating students received a debriefing statement; because thinking about suicide might have caused distress in

some individuals. The debriefing addressed this potential and also provided contact information for a counseling center.

Design and Data Analysis

This was a descriptive and correlational study that examined adolescents' ability to identify suicide warning signs in their peers. To answer the research questions, an examination of means was conducted to determine the knowledge adolescents' poses about suicide warning signs. A one-way analysis of variance (ANOVA) was completed to examine gender and age differences in knowledge of suicide warning signs. Furthermore, an independent sample t-test was conducted to examine if adolescents who experienced suicide were better able to identify suicide-warning signs compared to peers who had no experience with suicide. A chi-square test of independent means was also conducted to examine the relationship between exposure to expressed suicidal **thoughts, or attempted suicide, or completed suicide** and one's ability to identify correctly suicide risk level in scenarios, and gender and age differences. The dependent variable of the study was adolescents' ability to identify warning signs in their peers. The independent variable was the direct or indirect experience or exposure that adolescents have had with suicide in the past or have come in contact with suicide through the internet, media outlets, or classes.

Results

Overall, in terms of suicidal ideation and attempt, 11% of the participants reported that they had attempted suicide and 21% reported experiencing suicidal ideation.

Hypothesis 1: Participants would not be able to accurately identify suicide warning signs in adolescents.

For the first hypothesis, the number of correct answers identified by all participants was calculated. There were a total of 41 questions on the knowledge section of the questionnaire, that is, suicide warning signs. Participants' correct responses ranged from a low of zero correct to a high of 25 correct (possible total correct was 41). About ten percent (9.6%) of participants did not answer any of the items correctly, while 2.1% of the sample correctly answered almost 50% of the items. Overall, the mean correct response for all participants was 6.04. The mean for all responses on all items was 3.9 (between Agree, 3 and Somewhat Disagree, 4). An independent samples t-test was completed to assess participants knowledge of suicide warning signs, and there were no differences between females ($M = 5.82, SD = 5.23$) and males ($M = 6.90, SD = 4.88$), $t(186) = -1.16, p = .25$. A one-way analysis of variance (ANOVA) was completed which indicated no differences among 18 ($M = 6.62, SD = 5.50$), 19 ($M = 6.05, SD = 5.37$), or 20 ($M = 5.19, SD = 4.15$) years old participants regarding their knowledge of suicide warning signs, $F(2, 185) = 26.24, p = .38$. It appears gender and age does not seem to be related to the knowledge one has about suicide warning signs.

Hypothesis 2: Participants would not be able to accurately identify suicide risks in situational contexts, such as scenarios.

Overall, 38.3% of the sample correctly identified scenario one as the highest risk for suicide. The overall sample had 38.3% of participants correctly identify scenario two as the least at-risk for suicide. Lastly, scenario three was a moderate risk for suicide. Overall, 38.8% of the sample correctly identified scenario three as moderately at risk for suicide. The percentage of participants, by age and gender, who correctly identified the risk level for the three scenarios, is presented in Table 3. A chi-square test of independent means was

conducted, at an alpha level of .05, to examine the relationship between gender and the ability to identify the risk levels in all three scenarios. Results indicated there was no relationship between gender and identification of risk in Scenario 1, $\chi^2 = (1, N = 188) = .12, p = .73$, Cramer's $V = .03$ and Scenario 3, $\chi^2 = (1, N = 188) = .10, p = .75$, Cramer's $V = .02$. However, there was a significant relationship between gender and correct identification of Scenario 2 as low risk, $\chi^2 = (1, N = 188) = 11.25, p < .00$, Cramer's $V = .25$ with 62% of men and 32% of women correctly identified Scenario 2 as the lowest risk scenario.

A chi-square of independent means was conducted, at an alpha level of .05, to examine the relationship between age and the ability to correctly identify the risk levels of the scenarios. Results indicated that there was no relationship between age and risk level identification of Scenario 1, $\chi^2 = (1, N = 188) = .266, p = .26$, Cramer's $V = .12$; Scenario 2, $\chi^2 = (1, N = 188) = .08, p = .96$, Cramer's $V = .02$; and Scenario 3, $\chi^2 = (1, N = 188) = .07, p = .97$, Cramer's $V = .02$. In general, gender and age do not seem to be related to the ability for identifying risk factors in a given scenario, however, men seem to be better at identifying the low risk situation compared to women.

Hypothesis 3: Participants who had experienced direct exposure to suicide, e.g., suicidal ideation, attempt, or completion by a friend or family member would be more accurate in identifying suicide warning signs and risk factors than participants who had no exposure to suicide.

A chi-square test of independent means was conducted, at an alpha level of .05, to examine the relationship between adolescents who have a family member or friend who expressed suicidal **thoughts, or attempted suicide, or completed suicide** and their ability to identify correctly risk level of Scenarios 1, 2, and 3. Results indicated that there was no

relationship between exposure to family or friend suicidal thoughts and one's ability to correctly identify the risk level of Scenario 1, $\chi^2 = (1, N = 188) = .73, p = .39$, Cramer's $V = .06$; Scenario 2, $\chi^2 = (1, N = 188) = 1.55, p = .21$, Cramer's $V = .09$; and Scenario 3, $\chi^2 = (1, N = 188) = .49, p = .48$, Cramer's $V = .05$.

There was also no relationship between adolescents who had a family member or friend who **attempted** suicide and their ability to identify correctly the risk level of Scenario 1, $\chi^2 = (1, N = 188) = .034, p = .85$, Cramer's $V = .01$; Scenario 2, $\chi^2 = (1, N = 188) = 1.92, p = .17$, Cramer's $V = .10$; and Scenario 3, $\chi^2 = (1, N = 188) = .111, p = .74$, Cramer's $V = .02$. Moreover, no relationship was found between adolescents who had a family member or friend **complete** suicide and their ability to identify correctly risk level of Scenario 1, $\chi^2 = (1, N = 188) = .63, p = .43$, Cramer's $V = .06$; Scenario 2, $\chi^2 = (1, N = 188) = .23, p = .63$, Cramer's $V = .04$; and Scenario 3, $\chi^2 = (1, N = 188) = .002, p = .96$, Cramer's $V = .003$. Overall, direct exposure to a family member's or friend's expressed suicidal thoughts, suicide attempt, or completed suicide was not related to an individual's ability to correctly identify suicide risk in particular scenarios.

When comparing the number of questions correct per participant and their direct exposure to suicide, the data suggested that individuals who had a family member or friend express suicidal thoughts ($M = 6.30, SD = 5.48$) were not better at correctly identifying suicide warning signs compared to peers who had not experienced exposure to suicide ($M = 5.80, SD = 4.87$), $t(186) = .65, p = .26$ (one-tailed). Furthermore, those who had a family member or friend attempt suicide ($M = 6.26, SD = 5.27$) were also not better at correctly identifying warning signs compared to peers who had not had a friend or family member attempt suicide ($M = 5.82, SD = 5.07$), $t(186) = .59, p = .28$ (one-tailed). Lastly,

participants' exposure to a family member's or friend's completed suicide ($M = 6.61$, $SD = 5.55$) was not related to their ability to correctly identify warning signs compared to adolescents who did not experience a completed suicide of a family member or friend ($M = 5.75$, $SD = 4.95$), $t(186) = 1.08$, $p = .14$ (one-tailed). Data are also presented in Table 4.

Overall, exposure to suicide ideation, attempt or completion was not associated to an individual's ability to correctly identify suicide warning signs

Hypothesis 4: Education about suicide through indirect means, such as the internet, television, or classes would increase an individual's ability to identify suicide warning signs in peers.

A test of independent means was conducted on the following: Participants who received information about suicide from *high school* education, *college* education, a *class* in suicide, watching a *television* show, *physicians*, discussion with *parents*, and research on the *internet* and the total *number of correct suicide warning signs* they identified. Results were as follows (also presented in Table 5):

- Participants who received *high school education* on suicide ($M = 5.99$, $SD = 4.93$) were not better at identifying suicide warning signs compared to those who did not have high school education about suicide ($M = 6.15$, $SD = 5.71$), $t(186) = -.19$, $p = .42$ (one-tailed).
- Participants who received *college education* on suicide ($M = 5.57$, $SD = 5.41$) were not better at identifying suicide warning signs compared to peers who had not received education in college about suicide ($M = 6.29$, $SD = 5.04$), $t(186) = -.91$, $p = .18$ (one-tailed).

- Adolescents who took a *class* which focused on suicide ($M = 6.60, SD = 4.38$) were not better at identifying suicide warning signs compared to peers who did not take a class focused on suicide ($M = 6.01, SD = 5.21$), $t(186) = .35, p = .36$ (one-tailed).
- Those who watched a *TV* show which focused on suicide ($M = 5.68, SD = 4.96$) were not better at identifying suicide warning signs compared to peers who did not see a TV show about suicide ($M = 6.96, SD = 5.59$), $t(186) = -1.54, p = .06$ (one-tailed).
- Participants who received information from a *physician* about suicide ($M = 6.50, SD = 5.03$) were not better at identifying correct warning signs compared to those who had not received information regarding suicide from a physician ($M = 5.94, SD = 5.20$), $t(186) = .57, p = .29$ (one-tailed).
- Adolescents who discussed suicide with their *parents* ($M = 6.00, SD = 5.32$) were not better at correctly identifying suicide warning signs compared to those who had not discussed suicide with their parents ($M = 6.06, SD = 5.12$), $t(186) = -.07, p = .47$ (one-tailed).
- Adolescents who researched suicide on the internet ($M = 6.99, SD = 5.16$) were better at correctly identifying suicide warning signs compared to those who had not looked up information regarding suicide on the internet ($M = 5.52, SD = 5.12$), $t(186) = 1.88, p = .03$ (one-tailed).

Overall, there was no relationship between the source of information participants were exposed to, such as classes in high school or college and parents or physician, and their ability to correctly identify suicide warning signs in their peers, except those who researched

suicide on the internet. Participants who chose to look up information on the internet regarding suicide were better at correctly identifying suicide warning signs in peers.

Hypothesis 5: Adolescents who considered suicide would more likely confide in peers than parents or other trusted adults.

A Fisher's Exact test of independent means was conducted on participants who considered suicide and in whom they confided; peers, parents, or another trusted adult. At an alpha level of .05, results indicate that regarding suicidal ideation, 72% of participants who had considered suicide did not talk to peers while 28% did talk with peers, $p < .001$; and 82% of adolescents who considered suicide did not talk with parents while 18% of adolescents did talk with their parents, $p = .02$. Lastly, 80% of adolescents who had considered suicide did not talk with a trusted adult while 21% did talk with a trusted adult, $p = .01$. In this sample, participants who considered suicide did not often seek out peers, parents, or other trusted adults to confide in during their time of need.

Finally, the relationship between participants' direct exposure to suicide (ideation, attempt or completion of a family member or friend) and their own suicidal ideation and attempt were assessed. Direct exposure of a family or friend attempting suicide or completing the act of suicide was not related to participants' suicidal ideation (data are presented in Table 6). However, there was a relationship between exposure to a family member's or friend's expressed suicidal ideation and participants' suicidal ideation, $\chi^2 = (1, N = 188) = 6.57, p = .01, \text{Cramer's } V = .19$. Furthermore, 29% of adolescents who had a family member or friend who expressed suicidal thoughts considered suicide themselves. As Table 6 shows, exposure to suicide attempt and completion was not related to participants'

own suicidal ideation. However, over 15% of participants who were exposed to a family or friend's suicidal thoughts attempted suicide themselves (Data are presented in Table 7).

Discussion

The primary purpose of this study was to evaluate the knowledge adolescents have regarding suicide warning signs, and to determine if exposure to suicide (direct or indirect) is related to their knowledge of suicide warning signs and their ability to recognize risk levels in scenarios. It was alarming to realize that almost 21% of participants reported they had experienced suicidal ideation, which exceeds the National rate, 13.8%, reported by the Center for Disease Control (CDC, 2009). The suicide attempt was almost double, 11.2% for the current sample, compared to 6.3% reported by the CDC. There was no gender difference in attempted suicide. This is inconsistent with the current literature and reports from the CDC that indicate that women engage in more suicidal ideation and suicide attempt than men. Although it is not clear why this difference emerged, there were trends that were consistent with the literature as well. Although not statistically significant, more female participants in this study reported that they engaged in suicidal ideation (5.9% women vs. 2.7% men) and also attempted suicide (11.4% women vs. 10.3% men)

It was also hypothesized that adolescents would not be able to accurately identify suicide warning signs in their peers (hypothesis 1) and suicide risk factors in scenarios (hypothesis 2). These hypotheses were supported; it appears that although participants answered some questions correctly, the majority of the sample was unable to identify 50% or more of the correct responses. Adolescents' lack of knowledge about suicide is concerning. In terms of gender and age, there does not appear to be a large gap

in knowledge, both female and male participants of all ages had difficulty correctly identifying suicide warning signs.

Regarding hypothesis 2, less than 40% of participants chose the correct risk level for a given scenario. It may be logical to assume that if one does not have knowledge of suicide warning signs, it may be difficult to recognize suicide risk levels.

In general, even trained professionals seem to have a difficult time identifying suicide warning signs (Westefeld et al., 2007; Peach & Reddick, 1991). It is not surprising then that young participants (18 to 20 years old) in the current study did not do any better. Although there were no age or gender differences in the ability to identify suicide warning signs, there was a difference between men and women in identifying suicide risk for scenario two. A fewer percentage of women identified scenario two as low risk for suicide than men. It is possible that women were sensitive to all three scenarios, while men were more discriminating.

For the third hypothesis, direct exposure to a family member's or friend's expressed suicidal thoughts, suicide attempt, or completed suicide did not seem to increase an individual's ability to correctly identify suicide risk level in a given scenario. There was no difference between those exposed to suicide and those who were not. Therefore, the hypothesis was not supported. Although research has not yet focused on adolescents' knowledge of suicide warning signs and their ability for recognizing it in their peers, research with adults, teachers, counselors, and counseling students, has indicated that adults are not skilled in identifying suicide warning signs (Siyez & Bas, 2009; Scouller & Smith, 2002). In addition to not having knowledge of suicide warning signs, it is also assumed that adolescents have similar difficulties as the adults in

identifying the signs in their peers. Furthermore, it is likely that parents may be uncomfortable with the topic or lack knowledge of suicide warning signs and, therefore, avoid discussing the topic with their children, which in turn limits the children's knowledge of suicide.

It was expected that a relationship between education about suicide through indirect means, such as the internet, television, or classes, or discussion with parents or physicians, and the ability to identify suicide warning signs in peers would emerge (hypothesis 4). This hypothesis was partially supported. Participants who researched suicide on the internet were better at correctly identifying suicide warning signs in peers. However, other means of education, such as classes at high school or college and talking with doctors or parents was not related to participants' knowledge of suicide warning signs. Research indicates that adolescents reported the internet as their primary source for health information. In one study, focus groups made up of adolescents chose to seek information on the internet and found the information to be salient with variable credibility (Gray, Klein, Noyce, Sesselberg, & Cantrill, 2005). It also appears that adolescents are often embarrassed to ask or talk with their doctors about important health information (Ackard & Neumark-Sztainer, 2001).

Given the anonymity the internet provides, it is possible that adolescents are more likely to seek out information on the internet regarding sensitive health topics. This implies that the internet is a strong source of information for adolescents and a key way to reach this age group with prevention and intervention programs. Rideout (2001) found that 90% of adolescents had gone online in the past. Of the 90% adolescents who had been online, 75% had used the internet once to seek out health information while 23%

had used the internet to find information regarding depression or mental illness. These findings support the importance of the internet for the adolescent population. It is, however, important to note that not all information that is found on the internet is accurate. For example, research shows that during a systematic study, less than a quarter of the information found through a search engine was relevant content (Berland et al., 2001). Berland and colleagues (2001) also found that of the online health information that was in English, 55% were incomplete or inaccurate. Therefore, it is important that adolescents are educated to be critical consumers of information; and more research is conducted to investigate how to effectively use the internet to convey important and accurate information to adolescents.

Furthermore, it was assumed that adolescents who considered suicide would more likely confide in peers than parents or other trusted adults (hypothesis 5). This hypothesis was not supported. It appears that adolescents who consider suicide do not often seek out peers, parents, or other trusted adults to confide in during their time of need. Unfortunately, adolescents who do not seek out peers, parents, or other trusted adults seem to cope with their feelings in maladaptive ways. Galaiif, Sussman, Chou, and Wills (2003) studied protective factors for depression in adolescents, and they found that adolescents who perceived stress and sought social support decreased the use of anger coping, depression, and drug use. In other words, without the support of parents, peers, and other trusted adults, adolescents may engage in maladaptive and unhealthy behaviors, such as suicidal ideation and suicide attempts.

Because contagion is an issue in suicide incidents, the relationship between participants' direct exposure to suicide (ideation, attempt, or completion of a family

member or friend) and their individual suicidal ideation and attempt was assessed. Although there was no relationship between direct exposure to suicide attempt of a friend or a family member and participants' own suicide attempt, participants who experienced direct exposure to a friend's or family member's suicidal ideation reported engaging in less suicidal behavior. This is not consistent with the literature that suggested that adolescents who had friends that engaged in suicidal behavior also had increased suicidal behavior (Prinstein, Boergers, & Spirito, 2001). Bearman and Moody (2004) also found that having a friend express suicidal ideation increased both boys and girls risk for suicidal ideation themselves. It is possible that such a close encounter with a suicide attempt or ideation of a friend or a family member may scare some adolescents from engaging in suicidal behavior themselves because of the negative outcome suicidality has not only on the individual, but also on people who care for him or her. In vicarious learning, people learn to copy a behavior or learn to avoid a similar behavior, particularly if the behavior of the model is punished (Bandura, 1977). The reaction of loved ones, e.g., expressed feelings of hurt, disappointment, anger, shame, guilt, and overall distress (Lindqvist et al., 2008) can possibly be considered punishment for some, inhibiting contagion. Future research may want to explore the possible role vicarious learning may play in deterring contagion.

Limitations

Although results of this study have meaningful implications as discussed later, a few limitations related to data pool, gender, and diversity exist. First, data were collected using students from a Midwestern university who were enrolled in introductory psychology classes. These students were required to complete research participation

credits, and they might have completed the survey for that purpose, but without fidelity. Secondly, the sample was homogeneous; gender, ethnic diversity, geographic representations were not realized, thus limiting generalization. Finally, a self-report survey, which is open to bias, was used to collect data.

Implications and Future Research

In the future, researchers may want to focus on how best to educate adolescents about suicide warning signs and risk factors, because the majority of participants in this study did not correctly identify suicide warning signs or risk factors. This is particularly important given that participants in the current study used the internet more than any other sources, including parents and peers, to get information about suicide. Given the accessibility and anonymity of the internet that adolescents may find attractive, more research needs to be done to assess how best to utilize the internet for educating adolescents. In addition, research in adolescents' help seeking behavior is important. Although, help seeking behavior, such as talking to parents when under stress, is known to be helpful to adolescents, what deters them from doing so is unknown. Also, limited research (e.g., Wyman et al., 2010) indicates that training adolescents to spread messages related to seeking help from adults was positive for other adolescents. Therefore, future research may want to replicate such studies to examine strategies for encouraging peers to increase communication with other peers and adults.

References

- Ackard, D.M. & Neumark-Sztainer, D. (2001). Health care information sources for adolescents: age and gender differences on use, concerns, and needs. *Journal of Adolescent Health, 29*, 170-176.
- American Academy of Child and Adolescent Psychiatry (2010). Facts for Families retrieved from
<http://www.aacap.org/cs/root/facts_for_families/facts_for_families>
- American Psychological Association (2011). Teen suicide is preventable, retrieved from < <http://www.apa.org/research/action/suicide.aspx>>
- Bandura, A. (1977) Social Learning Theory. New Jersey: Prentice Hall.
- Bearman, P.S. & Moody, J. (2004). Suicide and friendship among American adolescents, *American Journal of Public Health, 94*, 89-95.
- Beautrais, A.L., Joyce, P.R., & Mulder, R.T. (1996). Risk factors for serious suicide attempts among youths aged 13 through 24 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1174-1182.
- Berland, G.K., Elliot, M.N., Morales, L.S., Algazy, J.I., Kravitz, R.L., Broder, M.S., Kanouse, D.E., Munoz, J.A., Puyol, J.A., Lara, M. Watkins, K.E., Yang, H., & McGlynn, E.A. (2001). Health information on the internet: accessibility, quality, and readability in English and Spanish. *Journal of the American Medical Association, 285*, 2612-2621.
- Bertera, E.M. (2007). The role of positive and negative social exchanges between adolescents, their peers and family as predictors of suicide ideation. *Child Adolescent Social Work Journal, 24*, 523-538

- Bondora, J.T. & Goodwin, J.L. (2005). The impact of suicidal content in popular media on the attitudes and behaviors of adolescents. *Praxis, 5*, 1-8.
- Bilgin, M., Cenkseven, F., & Satar, S. (2007). An analysis of parent-female adolescent relationships in female adolescent suicides. *Crisis, 28*, 190-197.
- Brent, D.A, Perper, J., Mortiz, G., Allman, C., Liotus, L., Schweers, J., Roth, C., Balach, L., & Canobbio, R. (1993). Bereavement or depression? The impact of the loss of a friend to suicide. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 1189-1197.
- Bridge, J.A., Day, N.L., Day, R., Richardson, G.A., Birmaher, B., Brent, D.A. (2003). Major depressive disorder in adolescents exposed to a friend's suicide, *Journal of American Academy of Child & Adolescent Psychiatry, 42*, 1294-1300.
- Cui, S., Cheng, Y., Xu, Z., Chen, D., & Wang, Y.(2010). Peer relationships and suicide ideation and attempts among Chinese adolescents. *Child: Care, Health, and Development, 37*, 692-702.
- Daigle, M., Beausoleil, L., Brisoux, J., Raymond, S., Charbonneau, L., & Desaulniers, J. (2006). Reaching suicidal people with media campaigns: new challenges for a new century. *Crisis, 27*, 172-180.
- Debski, J., Spadafore, C.D., Jacob, S., Poole, D.A., & Hixson, M.D. (2007). Suicide intervention: training, roles, and knowledge of school psychologists. *Psychology in the Schools, 44*, 157-170.
- Demo, D.H. (1992). Parent-child relations: assessing recent changes. *Journal of Marriage and Family, 54*, 104-117.
- Department of Health and Human Services (2013). What is Adolescence? retrieved from

<http://www.hhs.gov/opa/familylife/tech_assistance/etraining/adolescent_brain/Overview/what_is_adolescence/#2>

- Eaton, D.K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., Harris, W.A., Lowry, R., McMans, T., Chyen, D., Lim, C., Whittle, L., Brener, N.D., & Wechsler, H. (2010). Youth risk behavior surveillance- united states-2009. *Morbidity and Mortality Weekly Report, 5*, 1-145.
- Elliot, G.C., Colangelo, M.F., & Gelles, R.J. (2005). Mattering and suicide ideation: establishing and elaborating a relationship. *American Sociological Association, 68*, 223-238.
- Erikson, E.H. (1963). *Childhood and society*. New York, NY: W.W. Norton & Company.
- Erikson, E.H. (1968). *Identity: Youth and crisis*. New York, NY: W.W. Norton & Company.
- Freedenthal, S. & Bresln, L. (2010). High school teachers' experiences with suicidal students: a descriptive study. *Journal of Loss and Trauma, 15*, 83-92.
- Galaif, E.R., Sussman, S., Chou, C., & Wills, T.A. (2003). Longitudinal relations among depression, stress, and coping in high risk youth. *Journal of Youth and Adolescence, 32*, 243-258.
- Gray, N.J., Klein, J.D., Noyce, P.R., Sesselberg, T.S., & Cantrill, J.A. (2005). Health information-seeking behaviour in adolescence: the place of the internet. *Social Science and Medicine, 60*, 1467-1478.
- Gould, M.S. (2006). Suicide and the media. *Annals of the New York Academy of Sciences, 932*, 200-224.
- Gould, M.S., King, R., Greenwald, S., Fisher, P., Schwab-Stone, M., Kramer, R., et al.

- (1998). Psychopathology associated with suicidal ideation and attempts among children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 915–923.
- Gould M. S., Greenberg T, Velting D. M., and Shaffer D. (2003). Youth suicide risk and preventive interventions: a review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 386-405.
- Hair, E.C., Moore, K.A., Hadley, A.M., Kaye, K., Day, R.D., & Orthner, D.K. (2009). Parent marital quality and the parent-adolescent relationship: effects on adolescent young adult health outcomes. *Marriage & Family Review*, 45, 218-248.
- Hendin, H., Maltzberger, J. T., Lipschitz, A., Haas, A. P., & Kyle, J. (2001). Recognizing and responding to a suicide crisis. *Suicide and Life-Threatening Behavior*, 31, 115-128
- Horowitz, K. (2009). Dispelling the myths surrounding teen suicide. *The Brown University Child and Adolescent Behavior Letter*, 25, 1-7.
- Johansson, L., Lindqvist, P., & Eriksson, A. (2006). Teenage suicide cluster formation and contagion: implications for primary care. *BMC Family Practice*, 32, 2-5.
- Joiner, Thomas E., Jr.; Walker, Rheeda L.; Rudd, M. David; Jobes, David A. (1999). Scientizing and routinizing the assessment of suicidality in outpatient practice. *Professional Psychology: Research and Practice*, 30, 447-453.
- Keller, D.P., Schut, L.J.A., Pddy, R.W., Williams, L., Stephens, R.L., McKeon, R., & Lubell, K. (2009). Tennessee lives count: statewide gatekeeper training for youth suicide prevention. *Professional Psychology: Research and Practice*, 40, 126-133.

- King, K.A., Vidourek, R.A., Strader, J.L. (2008). University students' perceived self efficacy in identifying suicidal warning signs and helping suicidal friends find campus intervention resources. *Suicide and Life-Threatening Behavior, 35*, 608-617.
- Lindqvist, P., Johansson, L., & Karlsson, U. (2008). In the aftermath of teenage suicide: a qualitative study of the psychosocial consequences for the surviving family members. *BMC Psychiatry, 8*, 1-7.
- Mullany, B., Barlow, A., Goklish, N., Larzelere-Hinton, F., Cwik, M., Craig, M., & Walkup, J.T. (2009). Toward understanding suicide among youths: Results from the white mountain apache tribally mandated surveillance system. *Research and Practice, 99*, 1840-1848.
- Peach, L. & Reddick, T. (1991). Counselors can make a difference in preventing adolescent suicide. *School Counselor, 39*, 107-110.
- Pirruccello, L.M. (2010). Preventing adolescent suicide: a community takes action, *Journal of Psychological Nursing, 48*, 34-41.
- Prinstein, M.J., Boergers, J., & Spirito, A. (2001). Adolescents' and their friends' health risk behavior: factors that alter or add to peer influence. *Journal of Pediatric Psychology, 26*, 287-298.
- Rideout, V. (2001). *Generation Rx.com: how young people use the internet for health information*. Menlo Park, CA: Kaiser Family Foundation.
- Romer, D., Jamieson, P.E., Jamieson, K.H. (2006). Are news reports of suicide contagious? A stringent test in six U.S. cities. *Journal of Communication, 56*, 253-270

- Roseth, C.J., Johnson, D.W., & Johnson, R.T. (2008). Promoting early adolescents' achievement and peer relationships: the effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin*, *134*, 223-246.
- Rudd, M. D., Berman, A. L., Joiner, T. E., Nock, M. K., Silverman, M. M., Mandrusiak, M., Van Orden, K. and Witte, T. (2006). Warning Signs for Suicide: Theory, Research, and Clinical Applications. *Suicide and Life-Threatening Behavior*, *36*, 255–262
- Runger, D. & Frensch, P.A. (2008). How incidental sequence learning create reportable knowledge: the role of unexpected events. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *34*, 1011-1026.
- Schwartz, K.A., Pyle, S.A., Dowd, M.D., & Sheehan, K. (2010). Attitudes and beliefs of adolescents and parents regarding adolescent suicide. *Pediatrics*, *125*, 221-227.
- Scouller, K.M., & Smith, D.I. (2002). Prevention of youth suicide: how well informed are the potential gatekeepers of adolescents in distress, *Suicide and Life-Threatening Behavior*, *32*, 67-79.
- Segal, D.L. (2000). Levels of knowledge about suicide facts and myths among younger and older adults. *Clinical Gerontologist*, *22*, 71-80.
- The American Association of Suicidology (2007). Youth suicidal behavior- fact sheet, retrieved from <www.suicidology.org>
- Tokuno, K.A. (1983). Friendship and transition in early adulthood. *The Journal of Genetic Psychology*, *143*, 207-216.
- Van Orden, K.A., Witte, T.K., Gordon, K.H., Bender, T.W., Joiner Jr., T.E. (2008).

Suicidal desire and the capability for suicide: tests of the interpersonal psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology, 76*, 72-83.

Westefeld, J.S., Kettmann, J.D.J., Lovmo, C. & Hey, C. (2007). High school suicide: knowledge and opinions of teachers. *Journal of Loss and Trauma, 12*, 31-42.

World Health Organization (2000). Preventing suicide: a resource for teachers and other school staff. Retrieved from: http://www.who.int/mental_health/prevention/en/

Wright, A., McGorry, P., Harris, M.G., Jorm, A.F., & Pennell, K. (2006). Development and evaluation of a youth mental health community awareness campaign- the compass strategy. *BMC Public Health, 6*, 215- 228.

Wyman, P.A., Brown, H., LoMurray, M., Schmeelk-Cone, K., Petrova, M., Yu, Q., Walsh, E., Tu, X., & Weng, W. (2010). An outcome evaluation of the sources of strength suicide prevention program delivered by adolescent peer leaders in high schools. *American Journal of Public Health, 100*, 1653- 1661.

Appendix A

Table 1

Suicide Warning Signs and Suicide Risk Factors

Suicide Warning Signs	Suicide Risk Factors
Ideation (expressed or communicated ideation such as, threatening to kill oneself or looking for ways to kill oneself)	Mental Illness
Increased Substance Abuse	Substance Abuse
Purposelessness (no reason for living)	Previous Suicide Attempts
Anxiety (unable to sleep)	Firearms in the household
Feeling trapped	Nonsuicidal self-injury
Hopelessness	Low self-esteem
Withdrawal (from family, friends, and society)	Exposure to friend's or family members suicidal behavior
Anger (rage uncontrolled anger, seeking revenge)	
Recklessness	
Dramatic Mood Changes	

Note: Obtained from The American Association of Suicidology.

Table 2

Rates of Suicidal Ideation, Plans, Attempts, and Completions: Nationwide vs. Current Sample

	Suicidal Ideation (National)	Suicidal Ideation (Present Study)	Attempted Suicide (National)	Attempted Suicide (Present Study)
Students	14%	21% (N=188)	6%	11% (N= 188)
Females	17%	6% (N= 149)	8%	11% (N=149)
White Females	16%	19% (N= 90)	7%	11% (N= 90)
Black Females	18%	21% (N=43)	10%	9% (N= 43)
Hispanic Females	20%	43% (N=7)	11%	14% (N= 7)
Males	11%	3% (N=39)	5%	10% (N= 39)
White Males	11%	22% (N=27)	4%	15% (N= 27)
Black Males	8%	17% (N=12)	5%	0% (N= 12)
Hispanic Males	11%	0% (N= 0)	5%	0% (N=0)

Note: Nationwide data were obtained from the Center for Disease Control Youth Risk Behavior Surveillance Survey 2009.

Table 3

Percentage of Participants who Correctly Identified the Scenario Risk Level

	Scenario 1 (High Risk)	Scenario 2 (Low Risk)	Scenario 3 (Medium Risk)
Females (N=149)	39%	32%	38%
Males (N= 39)	36%	62%	41%
18 year olds (N=63)	30%	40%	40%
19 year olds (N=82)	43%	38%	39%
20 year olds (N= 43)	42%	37%	37%

Table 4

t-test Results Comparing Direct Exposure to Suicide and Number of Questions Correct

Variable	Total Correct Mean (SD)	<i>t</i>
<i>Family/Friend Expressed Suicidal Thoughts</i>		
Yes	6.30 (5.48)	
No	5.80 (4.87)	.65
<i>Family/Friend Attempted Suicide</i>		
Yes	6.26 (5.27)	
No	5.82 (5.07)	.59
<i>Family/Friend Completed Suicide</i>		
Yes	6.61 (5.55)	
No	5.75 (4.95)	1.08

Note. * $p < .05$, ** $p < .01$

Table 5

t-test Results of Indirect Exposure to Suicide and Number of Questions Correct

Variable	Total Correct Mean (SD)	<i>t</i>
<i>High School Education</i>		
Yes	5.99 (4.93)	
No	6.15 (5.71)	-.19
<i>College Education</i>		
Yes	5.57 (5.41)	
No	6.29 (5.04)	-.91
<i>Took Class Focusing on Suicide</i>		
Yes	6.60 (4.38)	
No	6.01 (5.21)	.35
<i>Watched a TV Show Focusing on Suicide</i>		
Yes	5.68 (4.96)	
No	6.96 (5.59)	-1.54
<i>Asked a Physician about Suicide</i>		
Yes	6.50 (5.03)	
No	5.94 (5.20)	.57
<i>Discussed Suicide with Parents</i>		
Yes	6.00 (5.32)	
No	6.06 (5.12)	-.07
<i>Researched Suicide on the Internet</i>		
Yes	6.99 (5.16)	
No	5.52 (5.12)	1.88 *

Note. * $p < .05$, ** $p < .01$

Table 6

Results of the Pairwise Comparisons of Direct Exposure to Suicide and Participants' Suicidal Ideation

Comparison	Chi-square	<i>p</i>	Cramer's <i>V</i>
Family or Friend has expressed suicidal thoughts vs. Suicidal Ideation	6.57	.01*	.19
Family or Friend has attempted suicide vs. Suicidal Ideation	.06	.80	.02
Family or Friend has completed suicide vs. Suicidal Ideation	.07	.78	.02

Note. **p* < .05

Table 7

Results of the Pairwise Comparisons of Direct Exposure and Suicidal Attempts

Comparison	Chi-square	<i>p</i>	Cramer's <i>V</i>
Family or Friend has expressed suicidal thoughts vs. Suicide Attempt	3.16	.08	.13
Family or Friend has attempted suicide vs. Suicide Attempt	.03	.86	.01
Family or Friend has completed suicide vs. Suicide Attempt	1.94	.16	.10

Note. * $p < .05$

APPENDIX B

Perspective on Suicide

I. This section is designed to understand your perspective on suicide. Below you will find a series of items related to adolescent suicide. There is no right or wrong answer to any of the items, please check the response that most closely describes your perspective on adolescent suicide. For example, you will check 1 if you Strongly Disagree with an item, 2 for Somewhat Disagree, 3 for Disagree, 4 for Agree, 5 for Somewhat Agree, and 6 for Strongly Agree.

1. Adolescents who talk about suicide rarely commit suicide.

1 2 3 4 5 6

2. The tendency toward suicide is not genetically (i.e., biologically) inherited and passed on from one generation to another.

1 2 3 4 5 6

3. The suicidal adolescent neither wants to die nor is fully intent on dying.

1 2 3 4 5 6

4. If assessed by a psychiatrist, everyone who commits suicide would be diagnosed as depressed.

1 2 3 4 5 6

5. If you asked someone directly "Do you feel like killing yourself?" it will likely lead that person to make a suicide attempt.

1 2 3 4 5 6

6. A suicidal adolescent will always be suicidal and entertain thoughts of suicide.

1 2 3 4 5 6

7. Suicide rarely happens without warning.

1 2 3 4 5 6

8. An adolescent who commits suicide is mentally ill.

1 2 3 4 5 6

9. A time of high suicide risk in depression is at the time when an adolescent begins to improve.

1 2 3 4 5 6

10. Nothing can be done to stop people from making the attempt once they have made up their minds to kill themselves.

1 2 3 4 5 6

11. Those who attempt suicide do so only to manipulate others and attract attention to themselves.

1 2 3 4 5 6

12. Oppressive weather (e.g., rain) has been found to be very closely related to suicidal behavior.

1 2 3 4 5 6

13. Everyone who commits suicide is depressed.

1 2 3 4 5 6

14. Adolescents who threaten to kill themselves will not carry out the threat. Only the "silent type" will pull it off.

1 2 3 4 5 6

15. Most adolescents who commit suicide tell others of their intentions or leave clues beforehand.

1 2 3 4 5 6

16. Adolescents who attempt suicide and fail are not serious about ending their lives, they are just looking for sympathy.

1 2 3 4 5 6

17. A young person can be prompted to commit suicide by hearing about somebody else who has committed suicide?

1 2 3 4 5 6

18. Parental conflict is a common precipitant for attempt?

1 2 3 4 5 6

19. A significant personal loss (e.g., the death of a close friend) can trigger a young person to attempt suicide.

1 2 3 4 5 6

20. Family breakdown and conflict is common among adolescents who attempt or complete suicide.

1 2 3 4 5 6

21. Relationship break-ups are common in adolescence and therefore do not prompt a suicide.

1 2 3 4 5 6

22. Although giving away prized possessions is a warning sign for suicide, it is not a significant one?

1 2 3 4 5 6

23. Adolescents who talk about suicide won't commit suicide.

1 2 3 4 5 6

24. Sudden and extreme changes in eating or sleeping habits, losing or gaining weight, can warn of imminent suicide.

1 2 3 4 5 6

25. Many young people who commit suicide have seen a doctor in the three months prior to their suicide.

1 2 3 4 5 6

26. Most people who commit suicide have given warning of their intent.

1 2 3 4 5 6

27. Not all suicide threats or statements should be considered warning signs of high suicide risk.

1 2 3 4 5 6

28. Adolescents who are contemplating suicide usually tell their parents rather than their friends.

1 2 3 4 5 6

29. Adolescents confide in their friends first about their suicidal ideation, not their parents or teachers.

1 2 3 4 5 6

30. An improvement in mood of a friend who has threatened suicide means that the danger of suicide is over.

1 2 3 4 5 6

31. If you promise to keep a friend's suicide plans confidential, you should usually keep that promise.

1 2 3 4 5 6

32. Discussing suicide with a suicidal friend may cause that person to end their life.

1 2 3 4 5 6

33. Suicidal adolescents clearly want to die.

1 2 3 4 5 6

34. Adolescents who attempt suicide are more likely to come from families with a history of drug or alcohol abuse than are non-suicidal adolescents.

1 2 3 4 5 6

35. The majority of adolescents who commit suicide have a psychiatric disorder.

1 2 3 4 5 6

36. Lack of social support significantly increases the risk of an adolescent committing suicide.

1 2 3 4 5 6

37 Alcohol or drug abuse is a principle risk factor for adolescent suicide.

1 2 3 4 5 6

38 Young males are more likely to kill themselves than young females.

1 2 3 4 5 6

39 Most suicidal people are out of contact with reality.

1 2 3 4 5 6

40. The more hopeless adolescents feel, the more likely they are to commit suicide.

1 2 3 4 5 6

41. Suicide for adolescents has decreased in the past 10 years.

1 2 3 4 5 6

Additional Comments:

II. The following questions attempt to understand your personal experience (direct or indirect) with suicide. Again, there are no right or wrong answers please check the answer that best describes your experience:

- | | | |
|---|-----|----|
| 42. Did you receive any education in high school regarding suicide? | Yes | No |
| 43. Did you receive any education in college regarding suicide? | Yes | No |
| 44. Has a family member or friend ever expressed suicidal thoughts to you? | Yes | No |
| 45. Has a family member or friend ever attempted suicide? | Yes | No |
| 46. Has a family member or friend ever completed suicide? | Yes | No |
| 47. Have you ever seriously considered attempting suicide? | Yes | No |
| 48. If you answer yes to #47 above, did you talk to your peers about it? | Yes | No |
| 49. If you answer yes to #47 above, did you talk to your parents? | Yes | No |
| 50. If you answer yes to #47 above, did you talk to another trusted adult, e.g., a teacher? | Yes | No |
| 51. During the past 12 months, did you ever seriously consider attempting suicide? | Yes | No |

52. Have you ever attempted suicide? Yes No
53. Have you ever taken a class that has focused on suicide? Yes No
54. Have you ever looked up information about suicide anywhere on the internet? Yes No
55. Have you ever seen a TV show about suicide? Yes No
56. Has your doctor given you information about suicide warning signs? Yes No
57. Have your parents talked with you about suicide? Yes No

III. Please read the following three vignettes, and compare them in terms of the severity of risk for suicide. In the blank provided, put a "1" in front of the vignette (Sharon, John, or Frank) you feel suggests the highest risk for suicide. Then put a "2" next to the vignette you believe suggests the next highest level of risk, and a "3" next to the vignette you believe suggests the lowest risk of suicide.

58. _____ Sharon is a high school senior. Sharon's mother phones you to say she is worried about her daughter because Sharon is sad, withdrawn, and uncommunicative. Robert, her boyfriend of two years, recently broke up with her, and she did not get accepted into the college that was her first choice. When Sharon was in tenth grade, she ingested 20 aspirins. In comparison with the vignettes about John and Frank, how would you rank Sharon's risk for suicide (1, 2, or 3), with 1 indicating the highest level of risk of the three?
59. _____ John, a friend at school has marks on his wrists. Upon inquiry, he reveals he felt sad and lonely the previous day, and took a paper clip and made the marks. John denies suicidal ideation and intent. His grades are above average. In comparison with the vignettes about Sharon and Frank, how would you rank John's risk for suicide (1, 2, or 3), with 1 indicating the highest level of risk of the three?
60. _____ Frank, a 15-year-old. He appears nervous and upset. He tells you he has known that he is gay for a couple of years, but was afraid to tell his family. Several days ago, his parents asked him about "embarrassing rumors" they had heard, and he admitted to them that he is gay. His father told him that homosexuality is not normal, that it is wrong, that it is a sin, and that he must get help to "fix it," or he will be kicked out of the house. Frank says he wants to be accepted and loved for who he is, and has thought about killing himself. He has no suicide plan. In comparison with the vignettes about Sharon and John, how would you rank Frank's risk for suicide (1, 2, or 3), with 1 indicating the highest level of risk of the three?

IV. Demographic Information

Please tell us about yourself, check response ONLY ONE that applies to you:

61. I am currently: ___ 18 years old ___ 19 years old ___ 20 years old ___ 21 years old

62. I am ___ Male ___ Female

63. Year in school: ___ Freshman ___ Sophomore ___ Junior ___ Senior

64. Ethnicity:

- _____ White/Caucasian
- _____ American Indian or Alaska Native
- _____ Asian
- _____ Black or African American
- _____ Native Hawaiian or Other Pacific Islander
- _____ Hispanic or Latino
- _____ Not Hispanic or Latino
- _____ Other

We appreciate your contribution to knowledge. Thank you for your time.

Questionnaire adapted from: King, Vidourek, and Strader, 2008, the Adolescent Suicide Behaviour Questionnaire (ASBQ, Scouller and Smith, 2002), Segal (2000), and Debski et al. (2000).

Vignettes adapted from Kellner, 2001.