Chapter 1

THE PROBLEM

Introduction

Adolescent suicide is a national epidemic. It is currently the third leading cause of death among youth ages 15 to 24 and the fourth leading cause of death among children ages 10 to 14. Although about 700,000 young Americans seek medical attention after a suicide attempt, it is estimated that 2 million adolescents and young adults attempt suicide each year (Suicide Reference Library, 2004). Research reveals that there are approximately two girls and one boy in a typical high school classroom who have attempted suicide in the past year (King, Price, Telljohann, & Wahl, 1999). According to the National Center for Health Statistics, youth suicide accounts for more deaths in the United States than all natural causes, including cancer, AIDS, birth defects, stroke, pneumonia, influenza, and chronic lung disease (Lazear, Roggenbaum, & Blase, 2003).

This researcher is exposed to adolescent suicide because of her work as a Crisis Counselor at a bi-county mental health facility in the Psychiatric Emergency Services (PES) department. As a Crisis Counselor, one of her duties is to assess whether a client meets criteria for involuntary psychiatric hospitalization. Criteria for hospitalization is “danger to self” (suicidal), “danger to others” (homicidal), or “gravely disabled” (unable to provide for one’s own basic needs for food, clothing, and shelter) due to a mental illness. On average, PES Crisis Counselors see approximately 28 minors, children under the age of 18, each month. That is insufferably almost one child per day. Approximately
half of those children meet criteria for involuntary psychiatric hospitalization and are consequently hospitalized. Almost all of the children hospitalized meet criteria because they are deemed to be a danger to themselves, or suicidal, as opposed to meeting criteria for danger to others or grave disability.

One child attempting suicide or one child completing suicide is cause for additional research and education for school personnel, parents, friends, family, caregivers and anyone with an opportunity to recognize warning signs and risk factors, identify at-risk students, and know who to contact for interventions. Knowledge is crucial in confronting the problem of adolescent suicide. With this information and education, we can come closer to the goal of a child or adolescent never attempting or completing suicide again.

This study will focus on high school teachers and it will research their level of knowledge of adolescent suicide awareness, prevention, and intervention.

**Background of the Problem**

Suicide is a serious public health problem. In the United States, suicide is currently the eleventh leading cause of death (Substance Abuse & Mental Health Services Administration [SAMHSA], 2008). Suicide takes the lives of more than 30,000 individuals each year. Every day, more than 80 Americans commit suicide, which is about one suicide every eighteen minutes (U. S. Department of Health and Human Services [USDHHS], 2008).

Suicide is the third leading cause of death among adolescents, second only to vehicle accidents and homicide (National Adolescent Health Information Center [NAHIC], 2006). Among 15 to 19 year olds, suicide is the second leading cause of death.
Since 1960, the overall rate of adolescent suicide has more than doubled, with the greatest increase being noted in individuals between 15 and 19, which is the high school student’s age group. Although the overall suicide rates for the general population have remained stable since the 1950’s, the suicide rate for adolescents has nearly tripled (SAMHSA, 2008). Today, approximately five thousand adolescents commit suicide each year in the United States (National Health Center for Health Statistics [NHCHS], 2001). More adolescents die from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia and influenza, and chronic lung disease, combined (SAMHSA, 2008).

Suicidal activity among young people has been on the rise. The exponential increase in suicide completions for adolescents is alarming, but the increase in suicide attempts is inconceivable. Studies indicate that at least one-half of all adolescents have seriously considered suicide at some point before they graduate from high school (Johnson, 1999). Research in 2005 concluded that almost 9% of high school students have attempted suicide in the past year (American Foundation for Suicide Prevention [AFSP], 2008). In the United States, approximately 40 percent of high school students have contemplated suicide by the time they graduate (Mitchell, 2000).

While there is no way to reliably figure the exact ratio of attempted suicides to completed suicides, the National Institute of Mental Health indicates that at least 25 suicides are attempted for each one that is completed. That means that for every teen suicide, there are likely at least 25 suicide attempts made (CDCP, 2008). Some epidemiologists and suicidologists believe the figures for completed suicides would even
be higher if the circumstances surrounding accidental deaths (e.g., vehicular deaths) were examined more thoroughly (Kirk, 1993).

This researcher wants to know, “What more can be done to prevent adolescent suicide?” In pondering this question, ensuing questions develop, like, “How can the community participate in keeping our children from self harm?” and “Who has significant exposure to children when they are not with their parents?” The answers to these questions and related others keep coming back to the same answer: school organizations, specifically teachers. Adolescent suicide is on the rise and knowledge of warning signs and risk factors to help identify at-risk teens is vital in reducing the adolescent suicide rates.

Since schools are found in almost every community and teachers have regular contact with children and adolescents, they are the best choice to implement suicide prevention programs. Teachers are unable to act effectively in a crisis situation if they do not have the knowledge or skills to recognize risk factors and warning signs of adolescents at risk for suicide.

Statement of the Research Problem

There is a lack of adequate training for high school teachers about adolescent suicide awareness, prevention, and intervention. Many high schools do not have a crisis team in place or policy and procedure for a potentially suicidal student. There is not a comprehensive training for high school teachers that are collectively shared. High school teachers need specific education and skills in order to recognize a student at risk for suicide.
Purpose of the Study

The purpose of this study is to learn the depth and breadth of the knowledge of high school teachers about adolescent suicide. Because an overwhelming number of teens kill themselves every year, there is a need for additional and more comprehensive education for school personnel, especially high school teachers, about adolescent suicide awareness, prevention, and intervention. Teachers can play an important role in prevention of teenager suicide because they spend more time with students during the week than any other individual at the school. Children spend roughly nine months out of each year and approximately 30 hours per week at school during the school year.

This project will research what high school teachers know, and, more importantly, what they do not know, about adolescent suicide. It will research if teachers can recognize warning signs, have knowledge of risk factors, can identifying at-risk students, and know school policy and procedures for intervention.

Research Question

This study will research the following question: What is the level of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers?

Theoretical Framework

The theoretical foundation of this project capitalizes on the ecological systems theory. The ecological systems theory is a combination of two core theories, the ecological perspective, and the systems theory. The researcher will explain the
theoretical framework of the ecological systems theory followed by a description of how the theory applies to the research.

Ecological Systems Theory

The ecological systems theory merges two popular theories frequently used in social work and other professions, the ecological perspective, and the systems theory. The ecological perspective is an orientation that “emphasizes understanding people and their environment and the nature of their transactions” (Baker, 1999. p. 146). This theory also infers that individuals and their environments are in a state of continuous exchange, interaction, and reciprocal influence (Maguire, 2002). The systems theory involves the basic principle that systems interrelate with one another and “attempts to explain holistically the behavior of people and societies by identifying the interacting components of the system and the controls that keep these components (subsystems) stable and in a state of equilibrium” (Baker, p. 191). Individuals change their environment and individuals are also changed by environmental influences.

From these orientations, Urie Bronfenbrenner (1989), an acclaimed American psychologist, developed the ecological systems theory. Bronfenbrenner’s theory identifies four levels of the environment that influence the development of an individual. The four environmental levels are: 1) the microsystem, which includes the individual’s immediate environments, such as, family, school personnel, peer group, and neighborhood; 2) the mesosystem, which encompasses the interaction of two or more microsystems; 3) the exosystem, which involves external environmental settings and people that the individual may not directly interact with but may affect the individual;
and 4) the macrosystem, the largest and most remote set of people and places, for example, the larger socio-cultural context, national economy, and political culture.

**Application of Ecological Systems Theory to the Research**

Applying the ecological systems theory to adolescents at risk for suicide is important because it allows examination of an individual as a system who interacts with other systems. Additionally, the ecological systems theory provides insight as to how the human system connects with and affects the environment and how the environment also changes that system. The theory allows analysis of an individual adapting to its environment to achieve equilibrium and harmony and it also enables examination of how the environment disturbs an individual’s emotional stability and ability to utilize coping skills. When an adolescent’s homeostasis is unbalanced, that adolescent becomes at greater risk for suicide. The adolescent at risk for suicide can be studied using Bronfenbrenner’s (1989) four levels of the environment that influence the development of an individual, the microsystem, the mesosystem, the exosystem, and the macrosystem.

The first level, the microsystem, examines the adolescent in his immediate environment and includes how he feels within that environment. The individual and members of his immediate environment, family, school personnel, peer group, and neighbors, for example, are all microsystems. Examples of application of the microsystem to the research may be an adolescent that witnesses domestic violence at home causing insufficient sleep at night resulting in the student sleeping in class; or an adolescent who is bullied at school causing him to skip school in order to avoid injury and humiliation, subsequently producing failing grades.
The second level, the mesosystem, involves the interactions and interrelationships between two or more microsystems. Examples of applying the mesosystem to the research may include an adolescent who just broke up with her boyfriend resulting in her sudden withdrawal from social activities and interactions with other students. Alternatively, a teen’s stepfather that sexually abuses her while her mother denies acknowledgement of the abuse causing her to drink alcohol and use drugs to numb the pain.

The third level, the exosystem, explores people and settings that may indirectly affect an adolescent’s risk of suicide. For example, a parent could be fired from their job causing the family to become homeless resulting in the student to suddenly have a change in hygiene habits. Or that same student could uncharacteristically fail to complete homework assignments.

The fourth and final level, the macrosystem, studies the larger socio-cultural context. Examples of how this level can affect teenagers are the downward spiral of the national economy, government laws and regulations, cultural values, and war. The decline in the national economy may affect an adolescent’s family income, housing, ability to meet basic needs, and mood of its members. Government laws may incarcerate the adolescent or a family member. Cultural values can cause conflict between immigrant parents and first generation children, and war may cause the loss of a family member. Global circumstances that affect an adolescent’s homeostasis can cause that teen to become more at risk for suicide.
All of the examples of how Bronfenbrenner’s (1989) four levels of the environment that influence the development of an individual demonstrate an adolescent who has become at greater risk for suicide. By applying Bronfenbrenner’s ecological systems theory, a high school teacher can recognize warning signs and risk factors that put a student at risk for suicide.

Definition of Terms

The following terms are used throughout this project and are relevant to adolescent suicide awareness, prevention, and intervention:

**Suicide attempt** is “a non-fatal, self-inflicted destructive act with explicit or inferred intent to die” (Centers for Disease Control and Prevention [CDCP], 2008).

**Suicidal behavior** exists along a continuum from thinking about ending one’s life, to developing a plan, to a non-fatal suicidal attempt, to ending one’s life (CDCP, 2008).

**Suicidal gesture** is “any behavior or action that might be–or might have been, in the case of successful completion thereof–interpreted as indicating a person's desire or intent to commit suicide” (Merriam-Webster, 2005).

**Suicidal ideation** is the generation of suicidal thought; “thoughts of harming or killing oneself” (CDCP, 2008).

**Suicide** is “the act of killing one’s self purposely” (Merriam-Webster, 2005, p. 491).

**Teachers** are high school teachers.

Assumptions

Some of the assumptions that should be taken into consideration in this research include: (1) adolescent suicide is a national epidemic and it is on the rise; (2) teachers
need specific skills and information to accurately assess for suicidal potential and to intervene appropriately; (3) all high school teachers worked in two high schools in the same urban community; (4) teachers generally have more contact and interaction with students than any other school staff does; and (5) there is not a universally shared training for teachers about adolescent suicide.

Justification

Suicide is a serious public health problem. More than 32,000 Americans kill themselves and more than 395,000 people with self-inflicted injuries are treated in emergency rooms each year (CDCP, 2008). For youth between the ages of 10 and 24, suicide is the third leading cause of death and it is the second leading cause of death for high school age adolescents, age 15 to 19 (CDCP, 2008).

Adolescent suicide is a real problem in the United States causing thousands of deaths each year. Adolescent suicide is on the rise and knowledge of warning signs and risk factors to help identify at-risk teens is vital in reducing the adolescent suicide rate.

In 1999, David Satcher, M.D., Ph.D., Assistant Secretary for Health and Surgeon General Office of Public Health and Science, revealed a plan to prevent suicide in the United States. The document, The Surgeon General’s Call to Action to Prevent Suicide, delineates fifteen strategies that can be utilized by individuals, communities, organizations, and policymakers, all areas in which social workers are involved. In his presentation speech, Surgeon General Satcher (1999) stated,

Suicide is a serious public health problem. Not only that, but it is reaching epidemic proportions in some groups… We must institute training about suicide
risk assessment, treatment, management and aftercare for all health, mental health, substance abuse and human service professionals – including clergy, teachers, correctional officers, and social workers (P. 4).

Social workers work in all of the areas of health, mental health, substance abuse, schools, jails and prisons, and in the human service professions mentioned above as well as many other positions that would have opportunities to help develop and implement effective training programs. For that reason, social workers are an important component in the process of preventing suicide in the United States.

The National Association of Social Workers’ (NASW) Code of Ethics (1999) preamble states that a primary mission of social workers is to “seek to promote the responsiveness of organizations, communities, and other social institutions to individuals’ needs and social problems.” Schools are an important part in an adolescent’s life. This project will seek to support this Code of Ethics by researching a major component of schools, the teachers, to study their knowledge of adolescent suicide. The results of this study may later be used to develop a training workshop for high school teachers on adolescent suicide awareness, prevention, and intervention. This research will also help raise questions for further study in this field.

Delimitations

The data gathered is limited to high school teachers in two high schools in the same community. Self-reported data may be biased, but this study is limited to the participants’ reports. The data is limited to the subject’s interpretation of the questions and statements on the questionnaire as well as relying on the participant’s honesty. There
is no way to guarantee the truthfulness of the participants, and therefore, the accuracy of the data. Adolescents who attempted suicide were not interviewed. Current training and education programs on adolescent suicide awareness and prevention were not researched.

Summary

Chapter one presented an introduction and background of the problem. Chapter one also included a statement of the problem, the purpose of the research, and the theoretical framework utilized in examining high school teacher’s knowledge of adolescent suicide. Chapter one concluded with a definition of terms used in the study, and a discussion about the assumptions, justifications, and delimitations of the project. Chapter two is a review of the relevant literature with sections covering the history of suicide in the United States, suicide among adolescents, risk factors, warning signs, and suicide among special youth populations. Chapter three describes the methodology of the study and chapter four examines and analyzes the data gathered in the study. Chapter five concludes with a summary of the findings, including recommendations and implications for social work practice and policy.
Chapter 2

REVIEW OF LITERATURE

Introduction

This literature review will be organized in the following five sections. The first section will provide a history of suicide in the United States and current statistical data. The second section will explore some of the major risk factors that increase an adolescent’s risk of suicide. The third section will examine warning signs that indicate higher risk of suicidal behaviors. The fourth section will be devoted to special youth populations who are at risk for suicide. The fifth and final section will address gaps in the literature.

History of Suicide in the United States

During the first half of the twentieth century, adolescent suicide rates were about half of the suicide rates for all age groups in the United States (Kirk, 1993). According to the Centers for Disease Control and Prevention (CDCP, 2008), in 1950, the overall suicide rates in the United States were 13.2 per 100,000 population and the suicide rates for youth ages 15 to 24 years of age were 4.5 per 100,000 population. From 1950, the rate for the overall population stayed steady. However, from 1950 to 1995, the rates of suicide for youth had more than doubled with the greatest increase being observed in the age group of high school age adolescents. For youth ages 15 to 19 years of age, the suicide rates nearly quadrupled (CDCP, 2008). In 1980, adolescent suicide rates surpassed the rates of the overall population (Kirk). From the mid-1960s to 2000, suicide among adolescents increased at a greater rate than any other age group.
Suicide occurs in all groups; it has no respect for individual status. No specific type of person commits suicide; suicide crosses all boundaries of race, socioeconomic classes, religion, culture, geographic locations, levels of intelligence and virtually every age group are found among its victims. For every completed suicide by an adolescent, there are an estimated 100 to 200 suicide attempts (American Association for Suicidology [AAS], 2006a; Westefeld, Jenks Kettman, Lovmo & Hey, 2007).

Suicide is a major, preventable public health problem (National Institute on Mental Health [NIMH], 2009). In the United States, suicide is currently the eleventh leading cause of death for the total population; but, it is the second leading cause of death among youth ages 15 to 19 (SAMHSA, 2008). In 2005, 32,637 Americans completed suicide yielding a rate of 11.0 per 100,000 population. On average, 89 people die by suicide each day in the United States. In the youth age group, 4,212 individuals completed suicide in 2005, a suicide rate of 10.0 per 100,000 population. On average, 11.5 adolescents and young adults kill themselves every day (Suicide Prevention, n.d.). Additionally, it is estimated that more than one-half of all high school students have experienced thoughts of suicide (King, Price, Telljohann & Wahl, 1999).

In the general population, suicide statistics draw a correlation between gender and suicide; there are some clear indications that suicide is different for males and females for both attempted and completed suicides. In 2005, males were four times more likely to die from suicide than females (CDCP, 2008). In 2004, suicide was the eighth leading cause of death for males and the sixteenth leading cause of death for females (NIMH,
However, more females attempt suicide than males; for every male attempted suicide, there are three females attempted suicides (CDCP).

Males and females also differ in the methods of suicide. Overall, firearms, suffocation (including hanging), and poison (including overdosing) are the most common methods of suicide. In 2004, 57% of males complete suicide by firearms compared to their female counterpart of 32%. Suffocation as a method of suicide is close for both genders with 23% for males and 20% for females. Poisoning, on the other hand, is dominated by the female gender with 38% dying by poisoning and only 13% of males using this method (CDCP, 2008). In the overall population, more than half of the suicides were completed with a firearm; both suffocation and poisoning account for approximately one in five suicides. Firearms, suffocation, and poisoning, the three most common methods of suicide, account for 92% of all suicides (CDCP).

Other factors influencing suicide rates are related to time and seasonal factors. The idea that most suicides happen in the winter months is a myth. It seems that the grey, cold winters would be a more depressing time of year and therefore should yield more suicides. The opposite is true. Suicides do occur all year, but the incidents of suicide are highest in the spring months and lowest in the winter months (SMHAI, 2006). According to the American Association of Suicidology (2006), suicides occur most frequently between March and August, with the peak month of June having the highest number of suicides. It is hypothesized that more people feel sad and depressed during the winter months, so a clinically depressed person would have company. In other words, they are surrounded by people in similar moods. But when spring comes and people start feeling
better, the clinically depressed individual is still as depressed as before. As the weather gets nicer, activities increase and the still depressed person isolates, thus highlighting the differences in moods (Sims, 2002). More people die by suicide on Mondays than any other day of the week and Saturdays have the least number of suicides in the United States. Most adolescent suicides occur after school hours and in the family home (AAS, 2006b).

Suicide rates are also influenced by geography and location. Suicides occur in all parts of the United States, but rates are lower in areas of dense population such as metropolitan and urban areas and cities than occur in isolated and remote rural areas. Researchers theorize that the lack of formal and professional resources, isolation from informal support, and availability of firearms in these rural communities are some explanations for this trend (SMHAI, 2006). In 2005, Montana, Nevada, and Alaska had the highest rates of suicide; and Rhode Island, New York, and New Jersey had the lowest rates, respectively. When suicide rates are examined by regions in the United States, the western region has the highest rates and the northeast region has the lowest rates (CDCP, 2008).

**Risk Factors**

Adolescent suicide is a public health problem (Satcher, 1999). There is no single or universal explanation for the 5,000 youth suicides that occur each year. While we cannot pinpoint specific types of adolescents who are suicidal, we do know that some young people are at higher risk for suicide because of certain situations or problems in their lives. Facing one or more of these situations or problems does not automatically make an
adolescent suicidal, but the stress from even one of these situations or problems may be so overwhelming to an adolescent that he or she may feel that suicide is the only solution. There is no one risk factor that makes an adolescent suicidal; it can be a combination of any one or more risk factors. “Risk factors for suicide frequently occur in combination with each other.” Risk factors for adolescent suicide include biological, sociological, and psychological influences. It is important for high school teachers to be able to know the risk factors so that they can identify a student at risk for suicide. Risk factors for adolescent suicide are complex and no single risk factor is an indicator of a teen at risk; however, if multiple risk factors are observed, teachers should be able to identify the increased risk for suicide. This section will cover some of the major risk factors for at risk adolescents including mental health; previous suicide attempts; presence of firearms; illness, disability, and chronic pain; family history; abuse (physical, emotional, and sexual) and violence; and substance abuse.

*Mental Health*

Research indicates that about one-third of adolescent suicide victims appear to satisfy clinical criteria for depression or other treatable mental illnesses (CDCP, 2008; Johnson, 1999). For that reason, this segment of the risk factors section will discuss mental health issues including depression and other mental health disorders that are associated with suicide.

Everyone experiences feelings of unhappiness and sadness some time in their lives. However, when the depressed feelings affect one’s ability to perform daily tasks or enjoy activities that they once enjoyed, the depressed feelings can become what are known as
depressive disorders. The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000) describes two main categories of depressive disorders: Major Depressive Disorder and Dysthymic Disorder. Major Depressive Disorder and Dysthymic Disorder are “differentiated based on severity, chronicity, and persistence. In Major Depressive Disorder, the depressed mood must be present for most of the day, nearly every day, for a period of at least two weeks, whereas Dysthymic Disorder must be present for more days than not over a period of at least two years” (American Psychiatric Association [APA], p. 374). Major Depressive Disorder may be brief in duration, but it is quite severe. It is possible for an adolescent to have an episode of severe depression, feel fine for months, or even years, and then have another episode. For teens, even one episode of severe depression can trigger cause to believe it will never end and prompt a suicidal attempt. Dysthymic Disorder lasts much longer than Major Depressive Disorder, and the depressed feelings are not as severe. Some adolescents suffer from Dysthymic Disorder for years without being diagnosed. These ongoing feelings of depression can also lead an adolescent to suicidal ideation if that teenager becomes discouraged with never feeling happy (Teen Suicide, 2005).

Because adolescents show their depression differently than adults do, adolescent depression can be easily overlooked. The sadness and lethargy associated with adult depression may not be present in adolescent depression. Instead, for example, a depressed youth may develop physical pains, like headaches and muscle aches, or behave in ways that are referred to as ‘acting out,’ such as skipping classes, failing to do homework, or simply doing poorly in school (Johnson 1999). The presence of major
depression among adolescent males and females increases the risk of suicide 12-fold (US DHHS, 1999).

Part of preventing adolescent suicide includes the ability to recognize symptoms of depression in teens. For teachers to identify at-risk students, it is important for them to know that in adolescents, the depressed mood can appear as irritability and displaying acts of defiant, aggressive, and rebellion. (APA, 2000, CDCP, 2008). Teachers should also know that other symptoms of depression in adolescents include feelings of sadness, isolation, fatigue, boredom, hopelessness, helplessness, worthlessness, decreased attention and distractibility, apathy and inertia, eating and sleeping disruption, anxiety and agitation, daydream excessively, and a loss of pleasure in almost everything. In addition, adolescent depression may be masked by over-activity of participating in a constant cycle of social activities, sexual promiscuity, or drug and alcohol abuse and the depression may be demonstrated by the adolescent isolating from friends and family (Kirk, 1993).

While nearly all adolescents at some point can experience symptoms of depression, it is important for teachers to be able to tell teen depression apart from the normal roller coaster of life as a teenager. A general rule of thumb for recognizing teenage depression is that five or more symptoms of teen depression persist continuously for more than two weeks (CDCP, 2008). Some symptoms teachers can look for are depressed or irritable mood, markedly diminished interest in activities, psychomotor retardation or agitation, fatigue or loss of energy, and diminished ability to think or concentrate (APA, 2000).
“Approximately 10% - 15% of adolescents with recurrent Major Depressive Episodes will go on to develop Bipolar I Disorder” (APA, 2000, p. 384) with mixed episodes more likely in adolescents than in adults (APA). Bipolar Disorder is a mood disorder in which episodes of depression and mania alternate. Approximately 20% of all individuals with Bipolar Disorder experience their first episode during adolescence with a peak age of onset between ages 15 and 19. Research shows that adolescents with Bipolar Disorder exhibit a higher frequency of mixed manic periods and more depressive features than adults with this disorder making them at higher risk for suicide (Weller, 2004). 

With Bipolar Disorder, individuals are 10% - 15% more likely to complete suicide. Suicidal ideation and suicidal gestures are more likely to occur when the individual is experiencing a depressed or mixed mood. The Diagnostic and Statistical Manual of Mental Disorders also explains that individuals with early onset are predisposed to alcohol or other substance use problems (APA). Additionally, other disorders that may be co-morbid with Bipolar Disorder are Anorexia Nervosa, Bulimia Nervosa, Attention-Deficit/Hyperactivity Disorder, Panic Disorder, and Social Phobia (APA).

The Surgeon General conveys that almost 90% of completed suicides by all age groups had a diagnosable mental disorder (USDHHS, 1999). Using the psychological autopsy method, different patterns were found in different age groups of suicide victims. Substance abuse and behavioral problems (e.g., conduct disorder and oppositional defiant disorder) were found to be more common among adolescents, whereas depression without substance abuse was the most common among older adult suicide victims (Pearson, 2009). “Suicidal ideation, suicide attempts, and completed suicides occur at a
higher-than-expected rate” for children and adolescents diagnosed with Conduct Disorder (APA, 2000, p. 96). Adjustment Disorder is also associated with suicidal attempts and completions (APA).

Individuals suffering from schizophrenia have an exceptionally high suicide rate. Forty percent of people who have schizophrenia attempt suicide and 10% die by suicide (CDCP, 2008). Schizophrenia affects both genders but onset is generally earlier for males (between 15 and 25) than females (between 25 and 35) (CDCP; APA, 2000). People with eating disorder like anorexia nervosa and bulimia nervosa are also at increased risk for suicidal behavior. A study reported in the Journal of Eating Disorders discovered 67% of individuals with an eating disorder and a history of suicide attempts actually suffered from depression before the onset of the eating disorder. Furthermore, only 3% of the individuals with an eating disorder and no prior history of suicide attempts suffered from depression before the onset of an eating disorder (CDCP).

There are other mental disorders with direct correlations to depressed moods and suicidal ideation. The DSM-IV-TR, for example, recognizes that Intermittent Explosive Disorder is associated with rages and aggressive acts, but also includes a “rapid onset of depressed mood and fatigue after the acts” (APA, 2000, p. 664). Adjustment Disorder is also described as having an association with suicide attempts and completions. Many other disorders often co-occur with depression, such as Learning Disorders, Disruptive Behavioral Disorders and Anxiety Disorders (APA).

Previous Suicide Attempts
In general, the best predictor of future behavior is past behavior. This is true for adolescent attempted suicide. Research provides evidence that the best single predictor of an adolescent at greater risk for suicide is a previous suicide attempt (Bordini, 2007; Suicide Reference Library, 2004). Two out of three high school students have had thoughts of suicide and one in ten students will make a suicide attempt (Bordini). Forty percent of adolescents who complete suicide have a history of prior attempts; that means that four out of every ten high school students who attempted suicide will go on to complete suicide (Bordini; King et al., 1999; O’Connor, 2008). If a teen makes one suicide attempt, even if the attempt does not appear to be serious, that teen is more likely to make another attempt at some juncture in the future. This is especially true when the original problem that led the teen to suicidal ideation has not been resolved (Suicide Reference Library). Half of all adolescents who have attempted suicide once will attempt suicide again (O’Connor). The most critical time for a subsequent suicide attempt or completion is within the first three months after an attempt (Fetsch & Whitney, 2003). A study indicated that almost half of the study population who committed suicide did so within three months of experiencing a crisis involving a suicide attempt (Price, 2006). An adolescent who attempts suicide receives a lot of attention and support from family, friends, and school staff after the attempt. However, lives of family, friends, and teachers begin to return to normal. The adolescent may not be ready to face “normal” life or he or she may feel a sense of abandonment. Furthermore, a disadvantage of teachers using a previous suicide attempt as an indicator of increased risk is that the teacher may not know about the attempted suicide. Parents may elect to keep that information from school
personnel, consequently suppressing vital information needed to assess a student’s risk for suicide.

**Presence of Firearms**

Firearms are currently the most commonly used method of suicide by all demographic groups in the United States (AAS, 2003; AAS, 2006b; Brent, 2004; Kaplan, Feinstein, Fisher, Klein, Olmedo, Rome & Yancey, 2000; Shain, 2007). Firearms are used in more than half of the suicides of children and adolescent (AAS; CDCP, 2008) and account for 63% of all 15 to 19 year old suicides (New Mexico Voices for Children [NMVC], 2003). Since 1950, rates for adolescent suicide by methods other than firearms remained steady, but adolescent suicide rates by firearms has risen significantly (NMVC). The rate of suicide by firearms since 1950 has increased three times faster than other methods (Bordini, 2007). One theory as to why adolescent suicide by firearms has increased is that guns are increasingly more available to teens. Some note that if guns are not as available to adolescents, that there would be fewer suicides among this group. Others argue that if guns are not available, teens will find another method to kill themselves. Nevertheless, access to lethal means is acutely associated with completed attempts. Only one of four suicides demonstrates any significant prior planning (Bordini); thus, reducing access to lethal means is very important in reducing adolescent suicide rates.

Epidemiological studies have established that the access and availability of firearms is a key factor in observed increases in rates of adolescent suicide (AAS, 2006b). If guns are in the home, it is highly probable to be the method of suicide (Brent, 2004);
therefore, easy access to guns can contribute to an adolescent’s death by suicide. Use of firearms has a higher degree of lethality than any other means of suicide. “If you have a gun in your home, you are five times more likely to have a suicide in your house than homes without a gun” (O’Connor, 2008). Research shows that 90 percent of suicide attempts with firearms are fatal because there is little chance for the individual to reconsider. With other methods of suicide attempts, such as taking an overdose of medications, inhaling automobile exhaust, cutting with a razor or knife, or even hanging, there is a chance that the method will fail or a chance for rescue or time for the individual to reconsider mid-attempt. However, with a firearm, once the trigger is pulled, the act cannot be rescinded (Harvard School of Public Health [HSPH], 2009; Kaplan et al., 2000). For some adolescents who attempt suicide, the absence of a firearm in the home may provide the teen with a second chance, by using an alternate means of suicide, one that may be less fatal. Due to an adolescent’s impulsivity, it is possible that method substitution will not even occur.

There is a direct correlation between firearm availability and the risk of suicide. One third of homes in the United States with children under the age of 18 have at least one firearm in the home representing 22 million children in 11 million homes. A recent study found that about two thirds of the firearms were stored unlocked; of the remaining one third that had been stored locked, the adolescents either knew the combination, knew where the key was stored, or broke into the locked container. Firearms in the home, whether locked or not, are linked with a higher risk of suicide for adolescents. A study of adolescents, ages 17 and under, who completed suicide by firearms found that 82 percent
of the firearms used belonged to a family member, largely a parent. Homes where a firearm is present have a five times more likelihood of having a suicide than homes that do not have guns present and guns are twice as likely to be found in a home of a completed adolescent suicide than in a home of an adolescent suicide attempt (Physicians for Social Responsibility [PSR], n.d.).

A study was done surveying parents who owned guns then separately surveying the children in those homes. Among the parents who reported that their children have never handled the firearms in the home, 22% of the children claimed that they had handled the firearm at least once. Another study addressed the ratio of the benefit of having a firearm in the home for protection versus the risk of suicide by a family member. This study found that for every homicide for self-defense, there were 37 suicides.

Guns in homes of children and adolescents have been proven to be associated with a significant increased risk of suicide and guns are associated with suicide in both males and females adolescents (Brent, 2004). In a study focusing on the entire lifespan, it appears that the association between suicide and firearms in the home is strong across all age groups, but was exceptionally high in the 24 and younger group (Brent). Every day, firearms claim the lives of eight children and adolescents in the United States. Firearms in the homes of children and adolescents pose an increased risk for suicide because of the availability and lethality of firearms coupled with impulsivity of youth behavior (NMVC, n.d.) Firearms in the home, regardless of whether they are locked up or not, are associated with a higher risk of adolescent suicide (Kaplan et al., 2000). Studies that
compare states with high gun ownership levels to those with low gun ownership levels in the United States reveal where there are more guns, there are more suicides. (HSPH, 2009).

Illness, Disability, and Chronic Pain

Many adolescents are preoccupied with personal appearance and anything that sets them apart from their peers is a source of stress for them. Even temporary conditions that affect personal appearance (e.g., acne) can create anxiety because adolescents may not view these conditions as temporary. Additionally, even if the condition is relatively invisible (e.g., diabetes), the student may feel like an outsider among peers. Chronic, long-term illness or a physical handicap can put an adolescent at greater risk for suicide (Johnson, 1999). Research indicates that 17 to 29% of high school students seriously contemplate suicide and 8% actually attempt suicide. Research also suggests that students with a chronic illness or a handicapping condition are at an even higher level of risk (Wachter & Bouck, 2008). A teenager may find a chronic physical illness or a handicapping condition difficult to deal with at school. For this reason, it is important for teachers to know that the stress from these conditions can trigger suicidal ideation (Teen Suicide, 2005).

Jones and Lollar’s (2008) study explored the relationship between physical disabilities or long-term health problems and health risk behaviors among high school students. They found that significantly more students with physical disabilities or long-term health problems than their peers engaged in behaviors that put their health at risk including, seriously considering attempting suicide (33.2% vs. 15.0%) and attempted
suicide (19.0% vs. 6.5%). The study also provided evidence that, compared to their peers, twice as many students with physical disabilities or long-term health problems, reported they felt sad and hopeless almost every day for two weeks or more in a row so that they stopped doing some usual activities. Similarly, compared to their peers, more than twice as many students with physical disabilities or long-term health problems reported seriously considering suicide during the 12 months preceding the survey, and they were almost three times as likely to report having attempted suicide during the 12 months preceding the survey (Jones & Lollar, p. 254-55).

The DSM-IV-TR states that chronic general medical conditions may contribute to the onset or exacerbation of Major Depressive Disorder. Up to 20% - 25% of individuals with certain general medical conditions will develop Major Depressive Disorder during the course of their general medical condition. The Management of the general medical condition is more complex and the prognosis is less favorable if Major Depressive Disorder is present. In addition, prognosis of Major Depressive Disorder is adversely affected (e.g., longer episodes or poorer responses to treatment) by concomitant chronic general medical conditions (APA, 2000).

**Family History**

Suicidal behavior is not inherited (King et al., 1999); however, the family environment and examples by others can be influencing factors of a young person’s thoughts and behaviors. Parents who model unhealthy behavior and negative problem solving methods (e.g., suicide attempts and completions) as coping skills are teaching
their children to do the same, suicide is a learned behavior (Price, 2006). Negative modeling by parents and family members produces adolescents who are more at risk because they imitate modeled patterns. By modeling healthy behavior and positive problem-solving practices, parents and teachers can teach adolescents to deal with their own stress in a healthful and productive way.

Family history of suicide attempts and completions, mental disorders, and substance abuse are major risk factors of suicide for children and adolescents (CDCP, 2008; CDCP, 1999; CHHS, 2008; Field, Diego, & Sanders, 2001; Kaplan et al, 2000). Evidence is found in epidemiological studies and case reports that suicide runs in families (Qin, 2003). Runeson and Asberg (2003) compared the rates of suicide in family members of suicide victims with the rates of suicide in family members of subjects who died of other causes and concluded that “the rate of suicide was twice as high in families of suicide victims as in comparison families” (p. 1525). In another study, Runeson found that 38% of adolescent suicide victims had a parent or sibling who completed suicide (Runeson & Asberg).

According to the National Institute of Mental Health, family history of suicide and psychiatric or substance abuse disorders are leading risk factors in the United States (Qin, 2003). Qin, Agerbo, and Mortensen (2002) studied 4,262 subjects, ages 9 to 45, who completed suicide and compared them to 80,238 controls. The research found that individuals with a family history of suicide are two and a half times more likely to die by suicide and individuals with a family history of mental disorders (requiring hospitalization) increased suicide risk by 50 percent. Qin, Agerbo, and Mortensen note
that a family history of mental disorders significantly increased suicide risk only in people without a personal history of psychiatric illness. The study concluded that the inclusion of familial suicide history and psychiatric history are important in the assessment of suicide risk. The researchers also believe the results “might be essential in prevention programs targeting adolescents and young adults” (Qin Agerbo, and Mortensen, 2002, p. 1129). Another similar study of adolescent suicides found that family history of completed suicides had a stronger effect for boys than girls and stronger in the case of a father’s completed suicide than that of the mother’s (Mittendorfer-Rutz, Rasmussen, & Wasserman, 2008).

Family history of drug and alcohol abuse is another important risk factor for adolescents at risk for suicide. Teens that have a family history of drug or alcohol abuse are at increased risk of drug or alcohol abuse themselves. This is because addiction has genetic associations and because the teen is living in a home where abuse of drugs and alcohol are modeled as acceptable behavior. Additionally, drugs, especially alcohol, are often easy for the teen to obtain because it is in the home (CDCP, 2008). Parents who abuse drugs and alcohol not only model dysfunctional coping skills that may lead to suicide, they provide an unstable and stressful home life that further increases the risk of suicide.

Abuse (Emotional Physical, and Sexual) and Violence

History of family problems and family violence is found in the histories of suicidal adolescents. Emotional, physical, or sexual abuse increases the chances of attempted and completed suicides in children and adolescents (CCP, 2008; Bordini, 2007). In a study
researching factors associated with suicidal ideation and attempts among the national probability sample of adolescents found significant differences in child abuse rates between suicidal adolescents and controls. The results included findings that sexual and physical abuses were significantly associated with suicide attempts, but witnessed violence was not. The study also noted that sexual abuse, followed by physical abuse, was associated with the greatest risk of suicidal behavior among the tests administered relating abuse and suicidal ideations and gestures (Waldrop et al., 2007). Another study showed that abused children have higher rates of attempted and completed suicides even when compared to neglected children (Bordini, 2007). It should also be noted that even though the abuse occurred years earlier, abused, molested, or neglected children could still become depressed and even suicidal (Suicide Reference Library, 2004). In addition, children and adolescents who experience sexual, physical, mental or emotional violence, or who witness violence, can be more prone to alcohol and other drug abuse. (CDCP, 2008).

Substance Abuse

Those who abuse alcohol and other drugs are at greater risk for suicide. Studies show that about 50% of young people who commit suicide have a recent history of substance abuse” (Suicide Reference Library, 2004). Teens self-medicate with alcohol and other drugs in an effort to forget about the things that overwhelm them in life (e.g., stress, sadness, loneliness, or abuse). It is a coping mechanism for them, albeit, a poor means of coping, to feel better. Alcohol and other drugs become a way for the adolescent to deal with the problems of life and to forget reality for the time (CDCP, 2008).
Alcohol and other drugs are associated with suicidal thoughts and behavior. This association maintains across all social, economical, and cultural boundaries nationwide. Studies show that although most people who use drugs and alcohol will never attempt suicide, drug and alcohol users are more likely to experience suicidal thoughts and behaviors than their clean and sober counterparts are (Robbins, 1998).

Alcohol is the most commonly used drug among teens and it is one of the major risk factors associated with teen suicide (CDCP, 2008). A 2005 study funded by the National Institute on Drug Abuse found that by the eighth grade, 41% of students had consumed alcohol and by the end of high school, 75% of students had consumed alcohol (Students Against Destructive Decisions [SADD], 2007). The same study also shows that 20% of eighth graders and 58%, more than half, of twelfth graders report having been drunk at least once in their life (SADD). The statistics draw a correlation between gender and drinking, more adolescent males than females reported current alcohol use (29% vs. 28%), binge drinking (21% vs. 16%), and heavy drinking (8% vs. 4%) (SADD).

According to the National Highway Traffic Safety Administration, deaths by motor vehicle accidents are the number one cause of death among adolescents ages 15 to 20. In 2005, there were 7,460 deaths by motor vehicle accidents in this age group; 28% of those drivers killed had been drinking. Also in this age group, alcohol involvement is higher among males than females. Of the 15 to 20 year old drivers involved in fatal accidents, 24% of the male drivers had been drinking compared with 12% of the female drivers. The CDC Youth Risk Behavior Surveillance reports that in 2005, in a 30-day
period, 28.5% of high school students nationwide rode in a vehicle driven by someone who had been drinking (SADD, 2007).

**Warning Signs**

Suicide among high school aged youth is a growing concern (Gibbons & Studer, 2008). There is no typical suicidal adolescent; suicide crosses all boundaries of race, socioeconomic classes, religion, culture, geographic locations, and levels of intelligence. The solution to lowering the suicidal rate is prevention and education. Approximately 17% to 29% of high school students seriously think about suicide and about 8% actually attempt suicide each year (Wachter & Bouck, 2008). Teachers are in an excellent position to assess for suicide risk in students if they have the complete and accurate knowledge. Knowing how to identify risk factors and recognize warning signs and how to access assistance for students considering suicide are vital skills for those who work with students. By engaging in preventative actions, early identification, and efficient use of school and crisis team resources, teachers can potentially prevent a suicide (Wachter & Bouck).

Although the main function of a teacher is to provide an education for their students, teachers must always be watching for signs of suicide. Many of the warning signs for an adolescent at risk for suicide are linked to school problems and the teachers will often see these warning signs in their classrooms. These warning signs include decreasing academic performance, abrupt changes in attendance, writings or drawings about death, sudden failure to complete assignments, truancy, and failing grades. Teachers already know if a student exhibits any of these warning signs by their daily
observations of the students while teaching class; however, many teachers are not aware
that these are major warning signs of adolescent suicide. With proper training about
suicide awareness and prevention, teachers can intervene when a student is considering
suicide.

Other warning signs are those easily observed by teachers in the classroom. These
warning signs include despairing attitude, lack of interest and withdrawal, changes in
relationships with classmates, mood swings, changes in appearance, increased irritability,
inability to concentrate, inappropriate display of emotions, increased aggressiveness, and
frequent expressions of rage. These warning signs are also indicators of depression
(APA, 2000), one of the major risk factors for suicide. Teachers will likely encounter
suicidal students due to their daily contact with them. The ability to recognize warning
signs for suicide will result in saving lives.

Additional warning signs that a teacher should know are, self-destructive
behavior, depression, preoccupation with death, giving away possessions, drug and
alcohol use, making a will or funeral arrangements, running away from home, and
humiliation. These are warning signs that may not present themselves in the classroom
setting; nevertheless, teachers should know that they are critical warning signs of
adolescent suicide.

Teachers should note that although exhibition of these signs does not mean that a
student will definitely attempt suicide, they are signs of an impairment to function
academically, socially, and behaviorally, and/or cognitively (Wachter & Bouck, 2008).
Most suicidal teens really do not want to die. They think the problem is unsolvable or too
painful to deal with and they want the pain to stop. An adolescents’ lack of larger perspective assents to the belief that there is no way out. Many teens are not able to think on an adult developmental level and they lack the life experiences to see that their life can turn around; they are unable to recognize that suicide is a permanent solution to a temporary problem (Johnson, 1999).

Special Youth Populations

There are special populations in the high school setting that are at greater risk for suicide than their mainstream peers are. These groups include gays, lesbians, or bisexuals and youth who are confused about their sexual orientation, runaways, students in special education classes and students with learning disabilities, and adolescents in the gifted programs.

Gay, lesbian, bisexual, and students who are confused about sexual orientation are at greater risk for suicide than heterosexual high school students are. Studies show adolescent suicide rates of 7th through 12th graders are higher for bisexual and homosexual students than their heterosexual peers. Gay and lesbian adolescents have higher rates of suicidal ideation and attempts of three times higher than heterosexual adolescents (Kaplan et al., 2000).

In the 1990s, visibility of gays and lesbians began to be more prevalent in the news and television shows. Public figures, actors, and entertainers began “coming out of the closet” and homosexuality as a civil rights issue became more openly debated. As a result, “the average ‘coming out’ age for gay males has dropped from age 20 in 1979 to age 13 in 1998” (Batelaan, 2000, p.156). Due to the stress of being different, over 95%
of gay, lesbian, and bisexual teenagers report that they feel emotionally isolated from their peers (Batelaan).

Accurate rates of verbal abuse and physical violence are not in the literature, but estimates reveal that half of gay and lesbian high school students are physically assaulted and more than 90% are subject to verbal abuse. Because of this abuse, 30% of gay and lesbian students drop out of school. Gay, lesbian, and bisexual adolescents are two to three times more likely to complete suicide than their heterosexual peers at school are; suicide is the leading cause of death among homosexual and bisexual high school students. Studies show that most suicides of gay, lesbian, and bisexual teenagers are connected with the turmoil associated with self-disclosure (Batelaan, 2000).

Adolescents who runaway are also at increased risk for suicide. Research indicates that “suicidal ideation is associated with a very clear cut form of escapist behavior – running away” (Robbins, 1998, p. 57). The researchers studied adolescents aged from 11 to 18 and found that in both males and females, those who ran away from home reported notably higher suicidal thoughts than their counterparts who had not run away. The study also found that depression was also significantly associated with suicidal ideation and running away. Adolescents who run away from home have a plethora of problems including history of abusive homes, alcohol and drug abuse, having to prostitute themselves to survive in the streets, having dropped out of school, and added to all that, most of these runaways are clinically depressed (Robbins), which places them in added risk for suicidal behavior.
Students in special education and students with learning disabilities appear to have a somewhat higher incidence of suicide than others do. Situations in school are more difficult for them; they may feel unaccepted and alienated from their mainstream peers because they often have fewer school social supports and face social isolation on campus (Wachter & Bouck, 2008). A study found higher depression scores among students with a learning disability than students without a learning disability suggesting that these students might be more susceptible to depression, which is a strong risk factor for suicide (Wachter & Bouck).

Adolescents in the gifted programs are more likely to display suicidal ideations, gestures, and behaviors because of their real or perceived standards of perfectionism, unreasonable societal expectations, unrealistic parental demands, and a belief that academic success determines self-worth (Popehagen & Qualley, 1998). Those in the gifted programs are generally over-achievers and their self-esteem is mainly drawn from accomplishment; as a result, failure can be devastating for them. They set high standards so what may seem like a small failure to peers can be unbearable to students in gifted programs (Suicide Reference Library, 2004).

**Gaps in the Literature**

The literature available studying the level of knowledge among high schools teachers about adolescent suicide is limited. In general, the research found in the literature included all levels of education and very little was found specifically studying high school teachers. Research was found studying the level of knowledge among school counselors and school nurses, but the findings from these studies cannot be generalized to
high school teachers. Many of the research studies had small sample sizes of N = 100 or less and most of the research were qualitative studies. The majority of the research found was conducted in only one school or one city and generalizations are difficult due to the limited diversity of the populations.

There is a gap in the literature studying the level of knowledge among high schools teachers about adolescent suicide awareness, prevention, and intervention. Because an overwhelming number of teens kill themselves every year, there is a need for additional and more comprehensive education to school personnel, especially high school teachers, about adolescent suicide awareness, prevention, and intervention.

There is an overwhelming amount of literature about adolescent suicide, but there is not much literature available about training in schools for teachers about adolescent suicide. A large amount is written about what a comprehensive training for high school teachers should look like, but literature is sparse about actual programs being utilized.

The research has not progressed beyond the point of declaring the need for suicide awareness training for teachers. Literature is just beginning to recognize the need for adolescent suicide awareness, prevention, and intervention training in the nation’s schools. The research literature does not investigate actual successful school training programs; therefore, organized, comprehensive, mandatory trainings for high school teachers about adolescent suicide warrants more research. Therefore, this study examined the level of knowledge among high schools teachers about adolescent suicide awareness, prevention, and intervention.

Summary
In this chapter, literature relevant to the subject of adolescent suicide awareness, prevention, and intervention was reviewed. Some of the topics discussed in this chapter included a history of suicide in the United States, adolescent suicide risk factors and warning signs, and special youth populations who are at greater risk for suicide. Gaps in the literature was also discussed. In the next chapter, the methodology of the study will be described.
Chapter 3

METHODS

Introduction

This chapter describes the research design and methodology used for the study. It includes the research question, an explanation of the research design, the study and sample populations, the instrument used, the data gathering procedures, and the analysis of the data. This chapter concludes with a discussion about how human subjects were protected, and ends with a chapter summary.

Research Question

This study was designed to investigate the following research question: What is the level of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers?

Research Design

The research strategy used in this study was a positivist approach survey research design. Positivism is “an approach to science that adheres to the principles of objectivity, causality, deduction, collecting quantitative data, and producing and generalizing results” (Marlow, 2001, p. 354). With self-administered survey research, the participants can answer the questions objectively, without the researcher’s biases or values interfering with the examination of the problem (Marlow). This study was quantitative because numerical values were attached to the data collected from the questionnaire so that the data could be statistically analyzed (Marlow). After analysis, the data and results were then generalized to the rest of the study population.
The design of the research was a cross-sectional survey research because the participants answered the survey questions only once at a single point in time (Marlow, 2001; Rubin & Babbie, 1993). This study was considered exploratory because it “generates initial insights into the nature of an issue and develops questions to be investigated by more extensive study” (Marlow, p. 350). By researching what high school teachers know and do not know about adolescent suicide awareness and prevention, further research can be stimulated.

An advantage of survey research is that it makes large populations practicable and is useful in describing the characteristics of a large population (Rubin & Babbie, 1993). Another advantage to using survey research is the participants have time to answer the questions and there is a fairly quick turnaround (Trochin, 2006). Additional strengths of survey research is “surveys present information about specific, definable populations about which generalizations can be made” (Dickinson & Blunt, 2005, p. 53) and measurements are made in the natural setting (Dickinson & Blunt).

Disadvantages of utilizing survey research include the facts that the researcher cannot explain the study in person, close-ended questions are more feasible, and a low response rate is likely (Trochim, 2006). Additional weaknesses to survey research are that they concentration on the present without consideration of the past or the future, the cooperation and concentration of the participants is requested but it may not be given by each participant, and the variables are not controlled therefore leaving a large number of sources of potential error and bias in data (Dickinson & Blunt, 2005).

*Variables*
The dependent variable in this study was high school teachers’ knowledge of adolescent suicide. The first two independent variables, 1) total years in teaching high school and 2) years in teaching at current high school, were measured by a ratio level of measurement. They are considered ratio measures because the data “are sequenced in some order, the distance between the different points are equal, and each value reflects an absolute magnitude [and] the zero point reflects an absence of value” (Marlow, 2001, p. 58). The following three independent variables, 3) if their school offers in-service training on adolescent suicide awareness and prevention; 4) if their school has a written protocol for dealing with students who show signs of suicide; and 5) if their school has a crisis team were measured by a nominal level of measurement. The choices for responses were “Yes” or “No” and although numbers were assigned to these two categories, the numbers themselves have no meaning. For example, the number one was assigned to “Yes” and the number two was assigned to “No,” but if the numbers were reversed, no meaning would have been lost (Marlow).

The next sets of variables are the dependent variables, or the knowledge of adolescent suicide awareness, prevention, and intervention. The dependent variables, 1) warning signs of adolescents at risk for suicide and 2) risk factors that put an adolescent at greater risk for adolescent suicide, were also measured by a nominal level of measurement because their answers also reflected a “Yes” or “No” response. The last dependent variable, myths truths about adolescent suicide, was measured by an ordinal level of measurement because the choices of responses were organized into mutually exclusive categories that had an essential order to them. The responses were ordered in
sequence from “strongly agree” to “agree” to “disagree” to “strongly disagree” and were numbered from one to four or four to one. Although the sequence of responses was significant, the distances between the responses were not necessarily equal (Marlow, 2001).

Study Population

The study population of this research was high school teachers working in two high schools selected from the same urban community in California. All teachers at the two selected schools were invited to participate in the study.

Sample Population

The sample population consisted of 48 high school teachers that chose to participate in the study by mailing their completed surveys back to this researcher. A total of 48 teachers were surveyed with teaching experience as a high school teacher ranging from less than 5 years to 16 or more years of experience.

The sample population was gathered utilizing a form of probability sampling, called cluster sampling. Cluster sampling “typically involves the initial sampling of groups of elements – clusters – followed by the selection of elements within each of the selected clusters” (Rubin & Babbie, 1993, p. 247). In this study, the elements were the high school teachers and the groups of elements, or clusters, were the high schools. The elements, or teachers, that participated in the research were those teachers who chose to participate in this study by returning the questionnaire to the researcher.

Instrumentation
The focus of the questionnaire used in this study was to determine how much high school teachers know, and, more importantly, what they do not know, about adolescent suicide. (See Appendix A). Some topics of interest included recognizing warning signs, having knowledge of risk factors, identifying at-risk students, knowing school policy and procedures for intervention, and the ability to distinguish myths from truths about adolescent suicide.

The study participants were asked to complete a written questionnaire structured to assess teachers’ knowledge and training with adolescent suicide awareness, prevention and intervention. The questionnaire used was a newly developed document written by the researcher chiefly for this research. The questionnaire contained four sections. The first section dealt with information about the participant’s experience as a high school teacher, and whether or not their high school offered in-service training, had a written protocol for dealing with students who show signs of suicide, and if their school had an organized crisis team. The second section used multiple choice questions to determine the participant’s knowledge of certain warning signs and risk factors of adolescents at risk for suicide. The third section utilized a four-point Likert scale system to measure the participant’s ability to distinguish myths from truths about adolescent suicide. The fourth and final section offered participants an opportunity to make comments.

This research tool has reliability because participants are presented with a self-administered, standardized questionnaire, therefore, eliminating unreliability in observations made by the researcher (Rubin & Babbie, 1993). There is some evidence of sources of error when the reliability of this instrument is assessed. The definitions of the
variables are clear, resulting in high reliability; however, the researcher cannot control the conditions under which the questionnaires are administered. Additionally, retrospective data is gathered through participant recall which can also result in low reliability (Marlow, 2001).

The instrument used in this research has content validity because it was expressly written for this study. By designing the questionnaire, the researcher can construct the document to accurately reflect the concepts that the researcher wants to measure (Marlow, 2001; Reamer, 1998). The questionnaire has criterion-related validity, predictive validity, because there is a correlation offered between this measuring instrument and another standard (Marlow). The measures can be tested according to the ability to predict a criterion that will occur in the future. If the high school teachers do not know the risk factors and cannot recognize the warning signs of students at risk for suicide, they cannot fully contribute to prevention and intervention of adolescent suicide.

Data Gathering Procedures

The researcher met with the principals at each of the two high schools surveyed to request permission to conduct the study at their schools. The researcher introduced herself and the research, explaining the methods and procedures of the study, human subjects’ protection, and voluntary participation. The researcher also reviewed the letter of consent and the questionnaire with the principals. Both principals gave their permission in writing for this researcher to conduct her study at their high schools.

At a later date, the researcher delivered 110 questionnaire packets to the school principals. Each packet included a consent form with an introduction to the research, a
survey questionnaire, and a stamped envelope addressed to the researcher. Packets were then distributed by school personnel to each teacher at the high school. Each teacher then chose to participate or not to participate in the research. Interested participants returned the completed questionnaire to the researcher by mail in the self-addressed stamped envelope provided.

Informed consent was obtained from the subjects. (See Appendix B). The consent form was not signed by participants because a signature is not required from the participants of an anonymous survey. Consent to participate was assumed when participants mailed the surveys back to the researcher. Mailing of the survey indicated that the participant had read and understood the consent form and agreed to participate in the study.

Data Analysis

The data gathered from the questionnaires returned by mail was entered by this researcher into the SPSS computer database and statistically analyzed. Frequencies of the dependent variable and the independent variables were analyzed. Chi-square tests were performed between the dependent and independent variables.

Protection of Human Subjects

Subjects’ rights to privacy and safety were protected. Information for the research was collected without identifying the subjects that participated in the research and confidentiality was assured since data was only reported on the aggregate form. The consent forms and the questionnaires were destroyed at the completion of the study. Participants were asked not to write their names or any other identifying information on
the surveys or consent forms.

Risk involved in participating in the research was minimal. Participation in this research may have involved some emotional or psychological risks due to the subject matter. Questions on the survey questionnaire may have made participants feel uncomfortable or upset because of memories associated with their answers. If participants experienced any psychological discomfort during the study or any time after completing the research, they were referred to Mental Health Psychiatric Emergency Services.

Participation in the study is entirely voluntary. Participants could decline to answer or skip any questions that they did not wish to answer. Participants could also stop at any time.

Summary

This chapter addressed the qualitative methods utilized in this research study. A discussion of the study population and how it was acquired are included. This chapter also explained the questionnaire used in the study, the data collection procedures, and the protection of human subjects. The results of the data will be analyzed and presented in the following chapter.
Chapter 4  
DATA ANALYSIS

Introduction

This chapter presents the research findings of the study. The study examined if teachers can recognize warning signs, have knowledge of risk factors, can identifying at-risk students, and know school policy and procedures for intervention. The demographics of the participants are examined and the questionnaire responses are discussed. The participants’ level of knowledge of adolescent suicide awareness, prevention, and intervention are explored.

The purpose of this study was to research the following question: What is the level of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers?

Demographics of Participants

Surveys were collected from 48 high school teachers in two high schools from the same urban community in California. In the first part of the questionnaire, the teachers were asked five questions about their years of experience as a high school teacher and school policy and procedure regarding adolescent suicide awareness, prevention, and intervention. The responses to these five questions function as the independent variables in this study (Appendix A).

First, the teachers were questioned regarding how many years they have been teaching high school. Of the 48 teachers surveyed, about 40% have worked less than five years, less than one-fifth have worked 5 to 10 years or 11 to 15 years, and one-
quarter have worked 16 or more years as a high school teacher. Second, information was collected to learn how many years the teachers have been teaching at their current high schools. Of the 48 participants, over half teachers have worked at their current high school less than five years, about one-quarter have worked there 5 to 10 years, less than 10% have worked there 11 to 15 years or have worked there 16 or more years. The third query was if the teachers’ schools offered in-service training on adolescent suicide prevention and awareness. Of the 48 participants, over 91% of the teachers said that their school does not have in-service training on the subject of adolescent suicide prevention and awareness. The fourth question asked whether the school had a written protocol for dealing with students who show signs of suicide. Of the 48 teachers, approximately 20% said that there is a written procedure currently at their school in contrast to the 80% who state that they do not. The fifth and final demographic question was if the high school has an organized crisis team. Of the 48 participants, 71% of the teachers stated their high school has a crisis team and 29% responded that their school does not have an organized crisis team (Table 1).
Table 1
Demographics of Participants

<table>
<thead>
<tr>
<th>Number of years teaching high school</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>19</td>
<td>39.6</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>8</td>
<td>16.7</td>
</tr>
<tr>
<td>11 - 15 years</td>
<td>9</td>
<td>18.8</td>
</tr>
<tr>
<td>16 or more years</td>
<td>12</td>
<td>25.0</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of years teaching at current high school</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>25</td>
<td>52.1</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>13</td>
<td>27.1</td>
</tr>
<tr>
<td>11 - 15 years</td>
<td>4</td>
<td>8.3</td>
</tr>
<tr>
<td>16 or more years</td>
<td>6</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School offers in-service training on suicide prevention and awareness</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>8.3</td>
</tr>
<tr>
<td>No</td>
<td>44</td>
<td>91.7</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School has written protocol for dealing with students who show signs of suicide</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>10</td>
<td>20.8</td>
</tr>
<tr>
<td>No</td>
<td>38</td>
<td>79.2</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School has an organized crisis team</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>29.2</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The second part of the questionnaire was divided into two subdivisions. The first subdivision asked the teachers to identify risk factors that put an adolescent at greater risk for suicide. The second subdivision asked the teachers to identify warning signs of adolescents at risk for suicide.

In the first subdivision, a list of possible risk factors was provided and the participants were asked to identify the answers that they believed to be risk factors that put an adolescent at greater risk for suicide. This section discusses the answers chosen by the high school teachers to be risk factors (Table 2).
Table 2

Risk Factors Identified by the Teachers

<table>
<thead>
<tr>
<th>RISK FACTORS</th>
<th>TEACHERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>physical, emotional, and sexual abuse</td>
<td>43</td>
<td>89.6</td>
</tr>
<tr>
<td>depression</td>
<td>43</td>
<td>89.6</td>
</tr>
<tr>
<td>previous suicide attempts</td>
<td>42</td>
<td>87.5</td>
</tr>
<tr>
<td>major disappointment</td>
<td>39</td>
<td>81.3</td>
</tr>
<tr>
<td>bullied at school</td>
<td>38</td>
<td>79.2</td>
</tr>
<tr>
<td>family history of mental disorders</td>
<td>37</td>
<td>77.1</td>
</tr>
<tr>
<td>family history of suicide attempts/completions</td>
<td>37</td>
<td>77.1</td>
</tr>
<tr>
<td>confusion about sexual orientation</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>drug and alcohol use</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>chronic and multiple stressors</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>gay or lesbian youth</td>
<td>33</td>
<td>68.8</td>
</tr>
<tr>
<td>recent family relocation</td>
<td>32</td>
<td>66.7</td>
</tr>
<tr>
<td>family history of substance abuse</td>
<td>29</td>
<td>60.4</td>
</tr>
<tr>
<td>runaway</td>
<td>26</td>
<td>54.2</td>
</tr>
<tr>
<td>eating disorders</td>
<td>26</td>
<td>54.2</td>
</tr>
<tr>
<td>presence of firearms in the home</td>
<td>24</td>
<td>50.0</td>
</tr>
<tr>
<td>death of a pet</td>
<td>23</td>
<td>47.9</td>
</tr>
<tr>
<td>illness of a parent</td>
<td>23</td>
<td>47.9</td>
</tr>
<tr>
<td>single parent home</td>
<td>21</td>
<td>43.8</td>
</tr>
<tr>
<td>school bully</td>
<td>21</td>
<td>43.8</td>
</tr>
<tr>
<td>special ed. student</td>
<td>17</td>
<td>35.4</td>
</tr>
<tr>
<td>learning disabilities</td>
<td>17</td>
<td>35.4</td>
</tr>
<tr>
<td>in the gifted program</td>
<td>15</td>
<td>31.3</td>
</tr>
<tr>
<td><strong>MEAN</strong></td>
<td><strong>30</strong></td>
<td><strong>62.3</strong></td>
</tr>
</tbody>
</table>

The two most recognized risk factors are *physical, emotional, and sexual abuse* and *depression*; 89.6% of the participants are able to identify these as risk factors for adolescent suicide. *Previous suicide attempts* and *major disappointment* at 87.5% and 81.3% respectively are the next two most recognized risk factors by the 48 teachers surveyed. Almost 80% of the teachers recognized *bullied at school*, but only about 44%
of the teachers identified *school bully* to be a risk factor for adolescent suicide. The next two risk factors recognized by 77% of the participants are *family history of mental disorders* and *family history of suicide attempts and completions*; however, *family history of substance abuse* is only considered a risk factor by approximately 60% of the teachers. The three least recognized risk factors are *special education student, learning disabilities, and in the gifted program*. Only about one-third of the teachers recognize that these students are at increased risk for suicide. The mean number of teachers identifying the risk factors is 30 or 62.3%.

Five sets of chi-square tests were conducted to examine the relationships between the demographics of the teachers and the risk factors that put an adolescent at greater risk for suicide. The tests explored the relationships between the risk factors and: 1) the number of years the teachers have been teaching high school; 2) the number of years teachers have been teaching at their current high schools; 3) if the school offers in-service training on adolescent suicide prevention and awareness; 4) if the school has a written protocol for dealing with students who show signs of suicide; and 5) if the school has an organized crisis team. There was no statistical significance found in any of the five tests completed.

The number of years the teachers have been teaching high school may have shown statistical significance except for the fact that in each of the examples there were one or more cells with a count of less than five. For that reason, the answers “less than 5 years” and “5 – 10 years” are combined and converted to “up to 10 years” and the answers “11 – 15 years” and “16 or more years” are combined and converted to “more than 10 years.”
The chi-square tests were conducted again to examine the relationships between the risk factors and the number of years the teachers have been teaching high school using the combined answers. Statistical significance was found in three of the relationships tested.

The first correlation was between the number of years the teachers have been teaching high school and family history of substance abuse ($x^2=3.884; df=1; p<0.049$) (Table 3). Nearly half of the teachers who have taught less than ten years (48.1%) as compared to over three-quarters of those teaching more than 10 years (76.2%) considered family history of substance abuse as a suicidal risk factor. The second association was between the number of years the teachers have been teaching high school and eating disorders ($x^2=7.294; df=1; p<0.007$) (Table 4). Of the teachers who have taught less than ten years, only 37% considered eating disorders to be a risk factor compared to 76.2% of those teaching more than 10 years. The third relationship was between the number of years the teachers have been teaching high school and death of a pet ($x^2=5.259; df=1; p<0.022$) (Table 5). In this case, one-third of teachers who have taught less than ten years considered death of a pet to be a risk factor adolescent suicide compared to twice as many of those teaching more than 10 years regarded it as a risk factor. Overall, just over 60% of all of the teachers considered family history of substance abuse as a suicidal risk factor, 54% considered eating disorders to be a risk factor, and less than one-half of all of the teachers believed death of a pet to be a risk factor for adolescent suicide.
Table 3

Statistical Significance with Family History of Substance Abuse

<table>
<thead>
<tr>
<th></th>
<th>family history of substance abuse</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How many years have you been a high school teacher?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“up to 10 years”</td>
<td>Count</td>
<td>13</td>
<td>14</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>% within: “up to 10 years”</td>
<td>48.1%</td>
<td>51.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within: family history of substance abuse</td>
<td>44.8%</td>
<td>73.7%</td>
<td>56.3%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>27.1%</td>
<td>29.2%</td>
<td>56.3%</td>
</tr>
<tr>
<td>“more than 10 years”</td>
<td>Count</td>
<td>16</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>% within: “more than 10 years”</td>
<td>76.2%</td>
<td>23.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within: family history of substance abuse</td>
<td>55.2%</td>
<td>26.3%</td>
<td>43.8%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>33.3%</td>
<td>10.4%</td>
<td>43.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>Count</td>
<td>29</td>
<td>19</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>% within: How many years have you been a high school teacher?</td>
<td>60.4%</td>
<td>39.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% within: family history of substance abuse</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>60.4%</td>
<td>39.6%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Table 4

Statistical Significance with Eating Disorders

<table>
<thead>
<tr>
<th>How many years have you been a high school teacher?</th>
<th>eating disorders</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>Yes</td>
</tr>
<tr>
<td>“up to 10 years”</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>% within: “up to 10 years”</td>
<td></td>
<td>37.0%</td>
</tr>
<tr>
<td>% within: eating disorders</td>
<td></td>
<td>38.5%</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>20.8%</td>
</tr>
<tr>
<td>Or</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>“more than 10 years”</td>
<td></td>
<td>76.2%</td>
</tr>
<tr>
<td>% within: “more than 10 years”</td>
<td></td>
<td>61.5%</td>
</tr>
<tr>
<td>% within: eating disorders</td>
<td></td>
<td>33.3%</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>33.3%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>26</td>
</tr>
<tr>
<td>% within: How many years have you been a high school teacher?</td>
<td></td>
<td>54.2%</td>
</tr>
<tr>
<td>% within: eating disorders</td>
<td></td>
<td>100.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td></td>
<td>54.2%</td>
</tr>
</tbody>
</table>
Table 5

Statistical Significance with Death of a Pet

<table>
<thead>
<tr>
<th></th>
<th>death of a pet</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>How many years have you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>been a high school</td>
<td>9</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>teacher?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“up to 10 years”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>9</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>% within: “up to 10 years”</td>
<td>33.3%</td>
<td>66.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within: death of a pet</td>
<td>39.1%</td>
<td>72.0%</td>
<td>56.3%</td>
</tr>
<tr>
<td>% of Total</td>
<td>18.8%</td>
<td>37.5%</td>
<td>56.3%</td>
</tr>
<tr>
<td>“more than 10 years”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>14</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>% within “more than 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>years”</td>
<td>66.7%</td>
<td>33.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within: death of a pet</td>
<td>60.9%</td>
<td>28.0%</td>
<td>43.8%</td>
</tr>
<tr>
<td>% of Total</td>
<td>29.2%</td>
<td>14.6%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>23</td>
<td>25</td>
<td>48</td>
</tr>
<tr>
<td>% within: How many</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>years have you been a</td>
<td>47.9%</td>
<td>52.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>high school teacher?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within: death of a pet</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>47.9%</td>
<td>52.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

In the second subdivision, a list of possible warning signs was provided and the participants were asked to identify the answers that they believed to be warning signs of adolescents at risk for suicide. This section discusses the answers chosen by the high school teachers to be warning signs (Table 6).
Table 6

Warning Signs Recognized by the Teachers

<table>
<thead>
<tr>
<th>WARNING SIGNS</th>
<th>TEACHERS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>self-destructive behavior</td>
<td>44</td>
<td>91.7</td>
</tr>
<tr>
<td>depression</td>
<td>44</td>
<td>91.7</td>
</tr>
<tr>
<td>decreasing academic performance</td>
<td>42</td>
<td>87.5</td>
</tr>
<tr>
<td>despairing attitude</td>
<td>40</td>
<td>83.3</td>
</tr>
<tr>
<td>lack of interest and withdrawal</td>
<td>40</td>
<td>83.3</td>
</tr>
<tr>
<td>abrupt changes in attendance</td>
<td>38</td>
<td>79.2</td>
</tr>
<tr>
<td>preoccupation with death</td>
<td>38</td>
<td>79.2</td>
</tr>
<tr>
<td>writings or drawings about death</td>
<td>38</td>
<td>79.2</td>
</tr>
<tr>
<td>changes in relationships with classmates</td>
<td>37</td>
<td>77.1</td>
</tr>
<tr>
<td>sudden failure to complete assignments</td>
<td>35</td>
<td>72.9</td>
</tr>
<tr>
<td>mood swings</td>
<td>35</td>
<td>72.9</td>
</tr>
<tr>
<td>changes in appearance</td>
<td>35</td>
<td>72.9</td>
</tr>
<tr>
<td>giving away possessions</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>increased irritability</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>truancy</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>school problems</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>drug and alcohol use</td>
<td>34</td>
<td>70.8</td>
</tr>
<tr>
<td>inability to concentrate</td>
<td>33</td>
<td>68.8</td>
</tr>
<tr>
<td>making a will/funeral arrangements</td>
<td>33</td>
<td>68.8</td>
</tr>
<tr>
<td>failing grades</td>
<td>32</td>
<td>66.7</td>
</tr>
<tr>
<td>running away from home</td>
<td>30</td>
<td>62.5</td>
</tr>
<tr>
<td>inappropriate display of emotions</td>
<td>29</td>
<td>60.4</td>
</tr>
<tr>
<td>increased aggressiveness</td>
<td>28</td>
<td>58.3</td>
</tr>
<tr>
<td>frequent expressions of rage</td>
<td>27</td>
<td>56.3</td>
</tr>
<tr>
<td>sleeping in class</td>
<td>26</td>
<td>54.2</td>
</tr>
<tr>
<td>humiliation</td>
<td>26</td>
<td>54.2</td>
</tr>
<tr>
<td><strong>MEAN</strong></td>
<td><strong>35</strong></td>
<td><strong>72.4</strong></td>
</tr>
</tbody>
</table>

*Self-destructive behavior* and *depression* are the two most identified warning signs; they are the only two warning signs that 90% or more of the teachers recognize from the list on the questionnaire. *Decreasing academic performance* is identified by almost 88%
of the teachers surveyed; yet, *failing grades* is identified by only 67% of the teachers. *Humiliation* and *sleeping in class* are the least recognized warning signs of a student at risk for suicide at 54.2%. The next set of warning signs that are least recognized by the teachers are *frequent expressions of rage, increased aggressiveness,* and *inappropriate display of emotions.* Just more than one-half of the teachers believe these are warning signs of suicide. More than one-half of the teachers recognize all of the listed warning signs for adolescent suicide; the mean number of teachers identifying the warning signs is 35 or 72.4%.

Five groups of chi-square tests were conducted to examine the relationships between the demographics of the teachers and the warning signs of adolescents at risk for suicide. The tests explored the relationships between the warning signs and: 1) the number of years the teachers have been teaching high school; 2) the number of years teachers have been teaching at their current high schools; 3) if the school offers in-service training on adolescent suicide prevention and awareness; 4) if the school has a written protocol for dealing with students who show signs of suicide; and 5) if the school has an organized crisis team. There was no statistical significance found in any of the five tests completed.

The number of years the teachers have been teaching high school may have shown statistical significance but for the fact that in each of the examples there were one or more cells with a count of less than five. For that reason, the answers “less than 5 years” and “5 – 10 years” are combined and changed to “up to 10 years” and the answers “11 – 15 years” and “16 or more years” are combined changed to “more than 10 years.” More chi-
square tests were conducted to examine the relationships between the warning signs and
the number of years the teachers have been teaching high school using the combined
answers. There was one statistical significance found when examining the number of
years the teachers have been teaching high school and the warning sign, humiliation
\((x^2=4.481; df=1; p<0.034)\) (Table 7). Of the teachers who have taught high school for up
to ten years, 40.7% considered humiliation to be a warning sign for adolescent suicide
compared to 71.4% of those who have taught ten or more years.

Table 7

Statistical Significance with Humiliation

<table>
<thead>
<tr>
<th>How many years have you been a high school teacher?</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>“up to 10 years”</td>
<td>Count</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>% within: “up to 10 years”</td>
<td>40.7%</td>
</tr>
<tr>
<td></td>
<td>% within: humiliation</td>
<td>42.3%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>22.9%</td>
</tr>
<tr>
<td>“more than 10 years”</td>
<td>Count</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>% within: “more than 10 years”</td>
<td>71.4%</td>
</tr>
<tr>
<td></td>
<td>% within: humiliation</td>
<td>57.7%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>31.3%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>% within: How many years have you been a high school teacher?</td>
<td>54.2%</td>
</tr>
<tr>
<td></td>
<td>% within: humiliation</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>54.2%</td>
</tr>
</tbody>
</table>
The third part of the questionnaire utilized a four-point Likert scale system to measure the participant’s ability to differentiate myths from truths about adolescent suicide. The teachers were asked to strongly agree, agree, disagree or strongly disagree with a statement about adolescent suicide (Appendix A). Because there were several cells with a count of less than five after numerous chi-square tests were performed, strongly agree and agree were combined and disagree and strongly disagree were combined (Table 8).

Table 8

Statements of Truths and Myths

Asking or talking about suicide with a suicidal person increases the risk of suicide. (this statement is a myth)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>48</td>
<td>100.0</td>
</tr>
<tr>
<td>AGREE</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

An individual's improvement following a suicide crisis means that the risk is over. (this statement is a myth)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>48</td>
<td>100.0</td>
</tr>
<tr>
<td>AGREE</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Adolescents who talk about suicide are serious about killing themselves. (this statement is a truth)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGREE</td>
<td>23</td>
<td>47.9</td>
</tr>
<tr>
<td>DISAGREE</td>
<td>25</td>
<td>52.1</td>
</tr>
</tbody>
</table>

Total 48 100.0

Most suicidal people are not mentally ill.
People who attempt suicide are in the most danger when they start to feel better.

<table>
<thead>
<tr>
<th>(this statement is a truth)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGREE</td>
<td>30</td>
<td>62.5</td>
</tr>
<tr>
<td>DISAGREE</td>
<td>18</td>
<td>37.5</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Few suicides happen without some warning.

<table>
<thead>
<tr>
<th>(this statement is a truth)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGREE</td>
<td>7</td>
<td>14.6</td>
</tr>
<tr>
<td>DISAGREE</td>
<td>41</td>
<td>85.4</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Most adolescents who attempt suicide fully intend to die.

<table>
<thead>
<tr>
<th>(this statement is a myth)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>42</td>
<td>87.5</td>
</tr>
<tr>
<td>AGREE</td>
<td>6</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The most common method of adolescent suicide completion involves drug overdose.

<table>
<thead>
<tr>
<th>(this statement is a myth)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>19</td>
<td>39.6</td>
</tr>
<tr>
<td>AGREE</td>
<td>29</td>
<td>60.4</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Adolescents often attempt or complete suicide impulsively after something bad happens to them.

<table>
<thead>
<tr>
<th>(this statement is a myth)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>23</td>
<td>47.9</td>
</tr>
<tr>
<td>AGREE</td>
<td>25</td>
<td>52.1</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Five chi-square tests were conducted to examine the relationships between the demographics of the teachers and the true and false statements (using the combined “agree” and “disagree” answers). The tests explored the relationships between the true and false statements and: 1) the number of years the teachers have been teaching high school; 2) the number of years teachers have been teaching at their current high schools; 3) if the school offers in-service training on adolescent suicide prevention and awareness; 4) if the school has a written protocol for dealing with students who show signs of suicide; and 5) if the school has an organized crisis team. There was no statistical significance found in any of the five tests completed.

The number of years the teachers have been teaching high school may have shown statistical significance but for the fact that in each of the examples there were one or more cells with a count of less than five. For that reason, the answers “less than 5 years” and “5 – 10 years” are combined are converted to “up to 10 years” and the answers “11 – 15 years” and “16 or more years” are combined and converted to “more than 10 years.”

More chi-square tests were conducted to examine the relationships between the true and false statements and the number of years the teachers have been teaching high school using the combined answers. There was a statistically significant finding when
comparing the number of years the teachers have been teaching high school and the myth, “adolescents often attempt or complete suicide impulsively after something bad happens to them” ($x^2=5.259; df=1; p<0.022$) (Table 9). Only one-third of the teachers who have taught less than ten years agreed the statement, “adolescents often attempt or complete suicide impulsively after something bad happens to them,” was a myth. However, two-thirds of the teachers who have taught more than ten years believed the statement to be a myth.
Table 9

Statistical Significance with “Adolescents often attempt suicide impulsively after something bad happens”

<table>
<thead>
<tr>
<th>How many years have you been a high school teacher?</th>
<th>Count</th>
<th>1.00</th>
<th>2.00</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>“up to 10 years”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>9</td>
<td>18</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>% within: “up to 10 years”</td>
<td>33.3%</td>
<td>66.7%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>% within: Adolescents often attempt suicide impulsively after something bad happens.</td>
<td>39.1%</td>
<td>72.0%</td>
<td>56.3%</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>18.8%</td>
<td>37.5%</td>
<td>56.3%</td>
<td></td>
</tr>
<tr>
<td>“more than 10 years”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>14</td>
<td>7</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>% within: “more than 10 years”</td>
<td>66.7%</td>
<td>33.3%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>% within: Adolescents often attempt suicide impulsively after something bad happens.</td>
<td>60.9%</td>
<td>28.0%</td>
<td>43.8%</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>29.2%</td>
<td>14.6%</td>
<td>43.8%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>23</td>
<td>25</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>% within: How many years have you been a high school teacher?</td>
<td>47.9%</td>
<td>52.1%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>% within: Adolescents often attempt suicide impulsively after something bad happens.</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>% of Total</td>
<td>47.9%</td>
<td>52.1%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>
Summary

This chapter examined the demographics of the participants of this study. This chapter also explored the responses to the questions about the level of knowledge of the teachers regarding risk factors, warning signs, and distinguishing myths from truths about adolescent suicide. The next chapter will discuss the conclusions and recommendations of the data gathered in this study. Chapter five will also present the limitations and implications for social work practice and policy.
Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter provides a summary of the conclusions from this study and the variables that were shown to be statistically significant will be discussed. This chapter also includes a discussion of limitations to the study and provides implications for social work practice and policy. The chapter concludes with recommendations and future research.

Summary

Little research is available on the level of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers. This study explored the level of knowledge of high school teachers in two high schools in the same rural California community. The results of the study revealed that the high school teachers surveyed do not have the level knowledge for awareness, prevention, and intervention of students at-risk for suicide. The mean of the teachers who identified the risk factors was 62.3%. Surprising to this researcher, two-third of the teachers did not know special education students, learning disabled students, and students in the gifted programs were at increased risk for suicide. The mean of the teachers who recognized the warning signs was 72.4%. Less than three-quarters of the teachers recognized sudden failure to complete assignments, truancy, school problems, inability to concentrate, failing grades, and sleeping in class as warning signs of a student at risk for suicide. These are all school related issues and all of these warning signs are easily observed by the teachers
without any extra time or effort invested by the teachers. Some of least recognized warning signs were frequent expressions of rage, increased aggression, and inappropriate display of emotions. According to the DSM-IV-TR, these are all signs of depression, which the participants identified as one of the top two risk factors for adolescent suicide (APA, 2000).

Chi-square tests were conducted to examine the relationships between the demographics of the teachers and the risk factors, warning signs, and true and false statements regarding adolescents at risk for suicide. Statistical significance was found in five of the relationships tested. The chi-square test results showed a statistical significance between the number of years the teachers have taught high school and: 1) the risk factor, family history of substance abuse; 2) the risk factor, eating disorders; 3) the risk factor, death of a pet; 4) the warning sign, humiliation; and 5) the myth, “adolescents often attempt or complete suicide impulsively after something bad happens to them.”

The next section will discuss the findings of each significance found.

Discussion

The first correlation found was between the number of years the teachers have been teaching high school and the risk factor, family history of substance abuse. Nearly half of the teachers who have taught less than ten years as compared to over three-quarters of those teaching more than 10 years considered family history of substance abuse as a suicidal risk factor. Overall, just over 60% of all of the teachers considered family history of substance abuse to be a suicidal risk factor.
Addiction has genetic associations making family history of drug and alcohol abuse an important risk factor for adolescents at risk for suicide (CDCP, 2008; CHHS, 2008; Field, Diego, & Sanders, 2001; Kaplan et al, 2000). Drugs, especially alcohol, are often easy available to the teen because it is in the home. Parents who abuse drugs and alcohol not only model dysfunctional coping skills that may lead to suicide (Price, 2006); they provide an unstable and stressful home life that further increases the risk of suicide (CDCP).

The second association found was between the number of years the teachers have been teaching high school and the risk factor, eating disorders. Of the teachers who have taught less than ten years, only about one-third considered eating disorders to be a risk factor compared to over three-quarters of those teaching more than 10 years. Overall, just more than half of the teachers considered eating disorders to be a risk factor for suicide.

A 2007 study of more than 1,000 patients hospitalized for an eating disorder examined factors associated with a history of suicide attempt or current suicidal ideation at the time of admission to the hospital (Fedorowicz, Falissard, Foulon, Dardennes, Divac, Guelfi & Rouillon, 2007). The study concluded that Bulimia Nervosa was the diagnostic category most strongly associated with a history of suicide attempts and suicidal ideation. However, Anorexia Nervosa and Bulimia Nervosa both have Binge-Eating/Purging types (APA, 2000) and the research suggests that symptomatology, such as binging and purging, is more important than the actual diagnosis category (Fedorowicz et al.). Another study focusing on adolescents with eating disorders found that along with
full syndromal eating disorders, those with subsyndromal eating disorders are also at increased risk of suicide. The study suggests, “it appears that suicidal behavior in adolescents is associated even with low-level eating disorder symptoms,” such as fasting, vomiting, and meal skipping (Crow, Eisenberg, Story & Neumark-Sztziner, 2008, p. 82).

The mortality rate for eating disorders are the highest of any psychiatric disorder (Crow et al., 2008); medical complications of the eating disorder and suicide are the two leading causes of death, with suicide replacing starvation as the second leaning cause (Fedorowicz et al., 2007). With eating disorders, there is an increased frequency of depressive and anxiety symptoms (APA, 2000). Approximately 90% of individuals with eating disorders are female and the onset of Anorexia Nervosa typically begins in adolescence (age 14 – 18), while Bulimia Nervosa usually begins in late adolescence or early adulthood. (APA).

The third relationship found was between the number of years the teachers have been teaching high school and the risk factor, death of a pet. In this case, one-third of teachers who have taught less than ten years considered death of a pet to be a risk factor adolescent suicide compared to twice as many of those teaching more than 10 years. Overall, less than one-half of all of the teachers believed death of a pet to be a risk factor for adolescent suicide.

The loss of a pet in childhood is frequently the first face-to-face encounter with death. A leading researcher on bereavement suggests that the death of a pet is similar to losing a family member or close friend (Podrazik, Shackford, Becker & Heckert, 2000). Inter-species attachment and bonding is assumed to develop in much the same manner as bonding between humans and
death of a pet is experienced in a similar manner (Field, Orsini, Gavish & Packman, 2009). Research found that loss of a pet after two weeks and eight weeks revealed grief scores that are similar to those reported after losing a human relationship (Field et al.). The relationships that are developed with pets are expansive and individuals are usually not prepared for the onset of emotion and sense of loss that accompanies their passing (Podrazik et al.). For some children and adolescents, their pet may be their best friend or possibly their only friend. When losing a pet, the child or adolescent may experience physiological (e.g., changes in sleeping patterns or appetite) and psychological (e.g., depressed mood or irritability) symptoms and social difficulties (e.g., inability to engage in activities previously enjoyed or missing school) comparable to losing a family member or a friend (Field et al.). In a study examining attitudes about death among 448 freshman college students, the participants were asked how they felt when they lost a pet (Matoba & Coultis, 2004). The results showed that 41% “cried most of the day” and 10% stated they were “sad for a long time and had trouble doing anything” (Matoba & Coultis, p. 30). When the students were asked when they thought about death, the responses were as follows: 8% before elementary school; 53% elementary school; 22% junior high school; 13% senior high school; 2% college; and 2% other. More than half of the participants thought about death in elementary school suggesting suicide awareness training for junior high and elementary teachers as well as high school teachers. When asked if the participants have ever been impacted by a death, the top three responses were grandparent 41%, pet 27%, and friend 22%. In this study, the participants were more impacted by the death of a pet than by the death of a friend (Matoba & Coultis).

The fourth statistical significance was found when examining the number of years the teachers have been teaching high school and the warning sign, humiliation. Of the teachers who have taught high school for up to ten years, two-fifths considered
humiliation to be a warning sign for adolescent suicide compared to almost twice the rate of those who have taught ten or more years. Overall, just more than half of the teachers considered humiliation to be a warning sign of at-risk students. Also noted, humiliation was the least recognized warning sign by all of the teachers.

Humiliation expresses feelings of mortification, shame, embarrassment, disgrace, or dishonor (Merriam-Webster, 2005). Humiliation is the abasement of dignity and pride; often in the cases of children and adolescents, it is a result of bullying. Bullying occurs when one student or group of students repeatedly hurts another student through actions or words. Bullying involves a real or perceived imbalance of power where the bully or bullies have more power, in terms of either physical strength or social standing. Bullying involves repeated physical assault from shoving to sexual assault, verbal harassment, intimidation, or more subtle methods such as manipulation. Bullying is widespread and perhaps the most underreported safety problem on American school campuses. Contrary to popular belief, bullying occurs more often at school than on the way to and from school (Sampson, 2008).

Studies show that students who are bullied and abused by their peers are at risk for mental health problems and suicide (Aslund, Starrin, Leppard & Nilsson, 2008). Experiences of being repeatedly subjected to humiliation, ridicule and social exclusion can result in what Aslund et al. (2008) refers to as ‘toxic’ shame, which they declare may form a basis for psychological and physical pathological reactions.

The fifth and final statistically significant result was found when comparing the number of years the teachers have been teaching high school and the myth, “adolescents
often attempt or complete suicide impulsively after something bad happens to them.”

Only one-third of the teachers who have taught less than ten years agreed the statement, “adolescents often attempt or complete suicide impulsively after something bad happens to them,” was a myth. However, two-thirds of the teachers who have taught more than ten years believed the statement to be a myth. Overall, less than half of the teachers considered the statement a myth.

Recent research has made progress in explaining the role of impulsivity in suicidal behavior (Smith, Witte, Teale, King, Bender & Joiner, 2008). Past research has linked impulsivity to death by suicide as a strong risk factor; however, recent research has shown that most suicides are not attempted impulsively, the suicides are planned. It is noted that although people who attempt suicide tend to be more impulsive than non-suicide attempters, the actual act of suicide is generally not carried out impulsively (Smith et al.). According to the American Association of Suiciology, warning signs preceded approximately 80% of suicide attempts and completions by teens (Bordini, 2007; Fisher, 2006).

In examining the overall results of the five correlations where statistical significance was found, there are two repeating themes noted. In all five cases, only about half of the teachers overall had the knowledge of the information presented in that example. Also in all five relationships, the teachers who have taught more than ten years knew the information presented at almost twice the rate than the teachers who have taught up to ten years (71% vs. 38%).

Working within the ecological systems perspective allows teachers to look at the individual students as well as their environments for signs of an at-risk student. Applying
the ecological systems theory to adolescents at risk for suicide is important because it allows examination of an individual as a system who interacts with other systems (Bronfenbrenner, 1989). Additionally, the ecological systems theory provides insight as to how the human system connects with and affects the environment and how the environment changes that system. The theory allows analysis of an individual adapting to its environment to achieve equilibrium and harmony and it enables examination of how the environment disturbs an individual’s emotional stability and ability to utilize coping skills. When an adolescent’s homeostasis is unbalanced, that adolescent becomes at greater risk for suicide (Bronfenbrenner).

Limitations

Limitations of this study involve the size of the sample population (N=48) and the participants of the study. The study population of this research was high school teachers working in two high schools selected from the same urban community in California. Because this study looked at a limited diversity of participants and was derived from one location, the results cannot be generalized to a larger geographical area. Another significant limitation to this study was not collecting more demographic information from the participants. More information should be collected in future studies including gender, age, the education level, where teachers went to college, what degree the teachers earned, and when participants earned their degrees. Additional demographic informational would be if the teachers have any children and if so, what are their ages and whether or not teachers have had any personal exposure to suicide. These limitations suggest future studies be performed as this is a significant topic for social workers; the professionals in
the field of mental health; teachers; school social workers, school counselors and nurses; and school administration and staff.

Implications for Social Work Practice and Policy

In this study, there are implications for social work practice and policy. Presently, only a small amount of research exists on this topic and the information gained from this study will help to increase the knowledge base. It is the researchers hope that the information gathered from this research will encourage others to do additional research on this topic.

Suicide is a growing concern in all communities in the United States. Adolescent suicide is a problem that most social workers will come across in their career. They might work with suicidal clients, families or friends of suicidal individuals, or help a population deal with a completed suicide in their community. Social workers need to be educated and aware of what the issues are surrounding adolescent suicide. They need to know that it is an epidemic in this country.

On a micro level, teachers can use the information in this study to understand that there is more that they need to know about risk factors and warning signs that put an adolescent at greater risk for suicide. If the information that is presented in this study is utilized by high schools, it is hoped that schools will implement more training for teachers, administration, and staff about adolescent suicide awareness, prevention, and intervention. School social workers are in key positions to advocate for these trainings and help put the programs into practice at their schools.
On the mezzo level, there are opportunities for the information in this study to be used by community-based organizations (e.g., PTA clubs) and community resource centers to educate the public about risk factors and warning signs that put adolescents at increased risk for suicide. Also at this level, the shame and misunderstandings associated with suicide can be discussed and myths about suicide can be dispelled.

In 1999, David Satcher, M.D., Ph.D., Assistant Secretary for Health and Surgeon General Office of Public Health and Science, revealed a plan to prevent suicide in the United States. The document, The Surgeon General’s Call to Action to Prevent Suicide, delineates fifteen strategies that can be utilized by individuals, communities, organizations, and policymakers, all areas in which social workers are involved. In his presentation speech, Surgeon General Satcher stated, “Suicide is a serious public health problem. Not only that, but it is reaching epidemic proportions in some groups… We must institute training about suicide risk assessment” (Satcher, 1999, p. 4). At the macro level, social workers have the collective chance to work toward changes for more education about social issues. Every social worker should be a member of the National Association of Social Workers (NASW) because as a member, social workers will be more informed of the current serious public health problems and will have more opportunities to advocate for further education about these crises, like adolescent suicide.

Recommendations

The purpose of this study was to explore the level of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers. By researching what high school teachers know and do not know about adolescent suicide
awareness and prevention, further research can be stimulated. The following section is a list of recommendations developed for present and future social workers:

- Both qualitative and quantitative studies with larger samples should be conducted to further examine the depth and breadth of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers.
- Social work education programs should include mandatory education regarding suicide awareness, prevention, and intervention.
- Social workers should include the ecological systems theory framework when assessing for suicide risk because it allows the social worker to examine both the individual and the environment.
- As recommended by Surgeon General Satcher, more local, state, and federal resources should be allocated for training on the subject of suicide risk assessment.
- Training in the teachers’ credentials program needs to include suicide awareness, prevention, and intervention training.
- Training is school social work program needs to include suicide awareness, prevention, and intervention training.

Conclusion

The purpose of this study was to determine the depth and breadth of the knowledge and training of high school teachers regarding adolescent suicide. Based on the finding
of this research, more research needs to be conducted in the area of knowledge among teachers about adolescent suicide awareness, prevention, and intervention.

Secondary purposes of the study were to increase the amount of research available on the topic of adolescent suicide and a later use of the information learned in this study (and future studies) to develop a training workshop for high school teachers on adolescent suicide awareness, prevention, and intervention.

In 1999, David Satcher, M.D., Ph.D., Assistant Secretary for Health and Surgeon General Office of Public Health and Science, revealed a plan to prevent suicide in the United States. The document, a framework for suicide prevention, called Awareness, Intervention, and Methodology (AIM), was developed. The Suicide Prevention Advocacy Network-California (SPAN-California), a non-profit organization existing to reduce the incidence of suicide, responded to the Surgeon General’s Call to Action. In a conference in May 2004, participants worked on a recommended strategy to make suicide prevention a priority and set goals and objectives. Some goals of the proposed plan were: 1) Promote awareness that suicide is a preventable public health problem; 2) Develop and implement suicide-prevention programs; 3) Promote efforts to reduce access to lethal means and methods of self-harm; 4) Implement training for recognition of at-risk behavior and delivery of effective treatment; and 5) Promote and support research on suicide and suicide prevention (California Department of Education, 2005).
APPENDICES
Appendix A

SURVEY QUESTIONNAIRE
Questionnaire for High School Teachers
Adolescent Suicide Awareness and Prevention

Please check the box that most accurately answers the question.

How many years have you been a High School Teacher?

- O Less than 5 years
- O 5 – 10 years
- O 11 – 15 years
- O 16 or more years

How many years have you been a High School Teacher at your current high school?

- O Less than 5 years
- O 5 – 10 years
- O 11 – 15 years
- O 16 or more years

Does your school offer in-service training on adolescent suicide prevention and awareness?

- O Yes
- O No

Does your school have a written protocol for dealing with students who show signs of suicide?

- O Yes
- O No

Does your school have an organized crisis team?

- O Yes
- O No
What are risk factors that put an adolescent at greater risk for suicide?

Please check all answers that apply.

- Recent Family Relocation
- Wealthy Family
- Single Parent Home
- Death Of A Pet
- Gay Or Lesbian Youth
- Confusion About Sexual Orientation
- In The Gifted Program
- Bullied At School
- School Bully
- Runaway
- “A” Student
- “F” Student
- Popular Student
- Unpopular Student
- Alcohol Present In The Home
- Special Ed. Student
- Illness Of A Parent
- Divorce Or Separation Of Parents
- Major Disappointment
- Physical, Emotional And Sexual Abuse
- Family History Of Mental Disorders
- Family History Of Suicide Attempts/Completions
- Family History Of Substance Abuse
- Depression
- Drug And Alcohol Use
- Prescription Medications Present In The Home
- Learning Disabilities
- Eating Disorders
- Previous Suicide Attempts
- Presence Of Firearms In The Home
- Chronic And Multiple Stressors
- Other

Please describe. ________________
What are warning signs of adolescents at risk for suicide?

Please check all answers that apply.

- Giving Away Possessions
- Abrupt Changes In Attendance
- Decreasing Academic Performance
- Inability To Concentrate
- Sudden Failure To Complete Assignments
- Changes In Relationships With Classmates
- Exceptional Hygiene
- Inappropriate Display Of Emotions
- Increased Irritability
- Mood Swings
- Sleeping In Class
- Changes In Appearance
- Average Grades
- Preoccupation With Death
- Despairing Attitude
- Writings Or Drawings About Death
- Failing Grades
- Truancy
- School Problems
- Self-Destructive Behavior
- Drug And Alcohol Use
- Increased Aggressiveness
- Depression
- Substance Abuse
- Making A Will
- Making Funeral Arrangements
- Running Away From Home
- Humiliation
- Frequent Expressions Of Rage
- Frequent Expressions Of Kindness
- Lack Of Interest And Withdrawal
- Other

Please describe.____________________
Of the four responses (strongly agree, agree, disagree, strongly disagree), please circle the answer that most applies for each statement below.

**Asking or talking about suicide with a suicidal person increases the risk of suicide.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**An individual’s improvement following a suicide crisis means that the risk of suicide is over.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**Adolescents who talk about suicide are serious about killing themselves.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**Most suicidal people are not mentally ill.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**People who attempt suicide are in the most danger when they start to feel better.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**Few suicides happen without some warning.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**Most adolescents who attempt suicide fully intend to die.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**The most common method of adolescent suicide completion involves drug overdose.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

**Adolescents often attempt or complete suicide impulsively after something bad happens to them.**

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>
Appendix B

CONSENT TO PARTICIPATE IN RESEARCH FORM
Consent to Participate in Research

You are being asked to participate in research conducted by Susan Williamson, a graduate student in Social Work at California State University, Sacramento as a part of my graduation requirements for a Master’s of Social Work degree. The research for this project includes requesting information from high school teachers about their knowledge and training with adolescent suicide awareness, prevention, and intervention. The goal of the study is to learn about the knowledge high school teachers have about adolescent suicide. The participants will be asked to complete a written questionnaire structured to assess teachers’ knowledge and training with adolescent suicide awareness, prevention and intervention. A secondary purpose of the study is to later use the information learned in this study to develop a training workshop for high school teachers on adolescent suicide awareness, prevention, and intervention.

You will be asked to complete a questionnaire about your training and knowledge in adolescent suicide awareness and prevention. The questionnaire may require up to 15 minutes of your time to complete. You will complete the questionnaire on your own time. When you complete the questionnaire, you may mail it to the researcher in the provided addressed stamped envelope.

Some of the questions may make you feel uncomfortable or upset because of possible memories associated with your answers. You are free to decline to answer or skip any questions you do not wish to answer. You may stop at any time. If you experience any psychological discomfort during the study or any time after completing the research, you may call or visit Sutter-Yuba Mental Health Psychiatric Emergency
Services at (530) 673-8255, 1965 Live Oak Blvd., Yuba City, CA 95991 (24 hours/day, 7
days/week) at no charge.

Your participation in this research is important because your information may
contribute to designing a training workshop for high school teachers on adolescent
suicide awareness and prevention.

Your participation in the study will be kept confidential; however, the results of the
study will be aggregated and published as a thesis project and may also be shared with
the public. You will not be required to provide your name or any demographic
information that may identify you personally on the questionnaire. The consent forms
and the questionnaires will be destroyed upon the completion of this study which is
anticipated by December, 2009.

You will not receive any compensation for participating in this study.

If you have any questions about this research, you may contact Susan Williamson at
(916) 768-2819 or by e-mail at susanlikespurple@aol.com or Maria Dinis, PhD, MSW,
thesis advisor at California State University, Sacramento at (916) 278-7161 or by e-mail
at dinis@csus.edu.

So that you will remain completely anonymous, I am requesting that you do not
write your name or any other personal indicators of your identity on the questionnaire or
return envelope.

Your participation in this research is entirely voluntary. You may decline to
participate in this study without any consequences. Your consent to participate in this
study is assumed if you decide to mail the survey back to me.
REFERENCES


National Mental Health Information Center.


Substance Abuse & Mental Health Services Administration. United States Department of Health and Human Services. 1 Choke Cherry Road, Rockville, MD 20857.


