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# Understanding Suicide and Applying Current Research to Prevent College Student Suicide

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# Understanding Suicide and Applying Current Research to Prevent College Student Suicide

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**Report**

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**Understanding Suicide and Applying Current Research to Prevent College Student Suicide**

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Suicide is a leading cause of death around the world and is on the rise. Suicide is considered to be the second leading cause of death for college students, (Drum, Brownson, Denmark, & Smith, 2009) and the rate of suicide completion is between 6.5 and 7.5 per 100,000 students (Silverman, Meyer, Sloane, Raffel, & Pratt, 1997). Not only are completed suicides an issue on college campuses, but suicidal thoughts and ideation are extremely prominent in this population as well. Approximately 50 percent of college students report having considered suicide at some point in their lives. 18 percent of undergraduate students and 15 percent of graduate students report having seriously considered attempting suicide with 40 to 50 percent of those students reporting multiple episodes of suicidal thought. (Drum et al., 2009). This report will look at the warning signs and risk factors for suicidal ideation and attempts, theories of suicidality, reasons students do not seek treatment, motivations or events that lead to attempting or committing suicide, the most common methods, protective factors against suicide, and finally current and future prevention methods on college campuses.

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## Overview

Suicide is a leading cause of death around the world and is on the rise. Morbidity due to self-harm, including suicide attempts, has increased by 136% within the past decade (Chan, Shamsul, & Maniam, 2014). In 2014, 42,773 suicides were reported, placing suicide at the 10th leading cause of death in the U.S. (American Foundation for Suicide Prevention (AFSP), 2016). In terms of demographics, Caucasians have the highest suicide rate at 14.7 per 100,000 people, followed by American Indians at 10.9, Hispanics at 6.3, Asians and Pacific Islanders at 5.9, and African Americans at 5.5 (AFSP, 2016). In 2014, 70% of the completed suicides were by white males (AFSP, 2016). The most vulnerable population to suicide are males over the age of 85 at 19.3 per 100,000 people, closely followed by males between the ages of 45 and 64 at 19.2 per 100,000 (AFSP, 2016). While the rate of suicide does increase with age, suicide is also a serious issue among college students.

Suicide is considered to be the second leading cause of death for college students, (Drum, Brownson, Denmark, & Smith, 2009) and the rate of suicide completion is between 6.5 and 7.5 per 100,000 students (Silverman, Meyer, Sloane, Raffel, & Pratt, 1997). Not only are completed suicides an issue on college campuses, but suicidal thoughts and ideation are extremely prominent in this population as well. Approximately 50 percent of college students report having considered suicide at some point in their lives. 18 percent of undergraduate students and 15 percent of graduate students report having seriously considered attempting suicide with 40 to 50 percent of those students reporting multiple episodes of suicidal thought. (Drum et al., 2009). Additionally, 8 percent of those undergraduate students and 5 percent of those graduate students disclose

having attempted suicide at least once already (Drum et al., 2009). “Ultimately 14% of undergraduates and 8% of graduate students who seriously considered suicide in the past 12 months actually attempted suicide” (Drum et al., 2009, p. 216). Suicidal ideation, attempts, and completed suicides are widespread issues on college campuses.

While suicide is an immense issue worldwide and there are many similar elements to suicide no matter the age group, this report focuses primarily on aspects of suicidality as they relate to college students. This report will look at the warning signs and risk factors for suicidal ideation and attempts, theories of suicidality, reasons students do not seek treatment, motivations or events that lead to attempting or committing suicide, the most common methods, protective factors against suicide, and finally current and future prevention methods on college campuses.

**Warning Signs and Risk Factors**

After the suicide of a close friend or family member, people often ask the question what did we miss? Were there any indications that this person was suicidal? According to research, the answer is yes. While they may not always be apparent, research has shown that there are both warning signs and risk factors for suicide. According to the ASFP, warning signs are mood, verbal, or behavioral changes that a person who is suicidal may exhibit. Suicidal people may exhibit one or more warning signs and these signs may be especially concerning if any of the changes in behavior are related to a painful event, loss, or change (ASFP, 2016). The ASFP breaks the warning signs into three categories: changes in the way a person talks, changes in behavior, or changes in mood. In terms of verbal changes, people who are thinking about suicide

might talk about being a burden to others, being trapped, experiencing unbearable pain, having no reason to live, and killing themselves. Behaviorally, warning signs include increased use of alcohol or drugs, looking for ways to kill themselves, acting recklessly, withdrawing from activities, isolation from family and friends, sleeping too much or too little, visiting or calling people to say goodbye, giving away prized possessions, or being aggressive. Finally, changes in mood might include depression, loss of interest, rage, irritability, humiliation, or anxiety (ASFP, 2016).

The American Association of Suicidology (AAS) also developed their own list of warning signs for suicidal people who are in need of help or treatment. To remember these warning signs, they created the mnemonic device IS PATH WARM (American Association of Suicidology, 2016). This mnemonic device stands for: Suicide Ideation, Substance Abuse, Purposelessness, Anger, Trapped, Hopelessness, Withdrawal, Anxiety, Recklessness, and Mood Change (Gunn, Lester, & McSwain, 2011; AAS, 2016). The JED foundation also created a similar list of the warning signs which include: hopelessness, rage or uncontrolled anger, seeking revenge, acting reckless or engaging in risky activities, feeling trapped, increased alcohol or drug use, withdrawing from friends, family and society, anxiety, agitation, unable to sleep or sleeping all the time, dramatic mood changes, and expressing no reason for living or no sense of purpose in life (Jed Foundation, 2016). While these lists of warning signs make intuitive sense, the problem is that these feelings and behaviors are also characteristic of a number of emotional disorders, and may be experienced by many college students from time to time.

With 18 percent of undergraduate students and 15 percent of graduate students reporting seriously considering suicide and potentially displaying any number of these

warning signs, these lists can seem overwhelming. Therefore, researchers have begun to look at which warning signs may hold more weight when it comes to distinguishing between suicidal ideators versus attempts or completions. A study by Klonsky et al. used 2,367 subjects of various ages and compared the factors of depression, anxiety, impulsivity, ideation, non-suicidal self-injury, and borderline personality disorder (BPD) in order to determine which factors weigh heavily in suicidal ideation versus attempts. They found that when these variables were entered into a logistic regression analysis, only suicidal ideation and non-suicidal self-injury (NSSI) were statistically significantly associated with attempted suicide ($p < .05$) (Klonsky, May, & Glenn, 2013). An explanation proposed for why NSSI is so closely related to suicide attempts is that NSSI habituates people to self-inflicted pain (Nock et al., 2006). This fits in with Joiner's theory of suicide, which will be discussed later, that both desire and capability are necessary in order to make an attempt (Joiner, 2005).

Another study that explored the warning signs that distinguish ideation from attempts looked into the IS PATH WARM model and other warning signs by looking at suicide notes (Gunn et al., 2011). According to this study, all the variables of IS PATH WARM were found to be predictive of suicidal ideation, but when comparing suicide ideators from attempters, the research showed that only anger/aggression, depression, and lack of martial status were predictive of a suicide attempt. Additionally, this study found that aggression was the strongest predictor of an attempt; another piece of research that confirms Joiner's theory of suicide. A study by Bagge, Littlefield, Conner, Schumacher, and Lee looked at a sample of recently hospitalized suicide attempters to examine the events or experiences that led someone with suicidal ideation to make a non-fatal suicide

attempt (Bagge et al., 2014). This article specifically focused on the exposures of alcohol use (AU), negative life events (NLEs), and non-alcohol drug use (DU) within the 24-hour window before a suicide attempt in order to determine whether these specific pressures increase risk. The results of this study indicated that AU and NLE (both interpersonal and non-interpersonal events) are statistically significant predictors of increased suicide attempts, even after they are adjusted for prior suicidal ideation. DU, however, was not significant. A study by Lester, McSwain, and Gunn confirmed these same results that drug use is not a significant predictor of suicidal ideation or attempts (Lester, McSwain & Gunn, 2011**).** Therefore while DU may play a role in suicidal ideation, it may not be as significant of a warning sign as AU, NLE, NSSI, anger/aggression, and lack of marital status.

According to the research, there are warning signs that precede suicide. It would appear as though the more relevant warning signs for suicidal attempts are non-suicidal self-injury, aggression, depression, marital status, negative life events, and alcohol exposure. However, these findings must be considered preliminary, as there is not yet a definitive answer on which signs or events are more relevant than others. As mentioned earlier, there is also research on the risk factors that may increase the chances of someone committing suicide. While warning signs and risk factors may sound similar, warning signs tend to be behavioral or mood changes that indicate if someone is experiencing more distress and may be close to attempting suicide, whereas risk factors tend to be more immutable characteristics or conditions that increase the chance that a person will attempt suicide.

According to the Center for Disease Control (CDC), risk factors for suicide

include: family history of suicide, family history of child maltreatment, previous suicide attempts, history of mental disorders, history of alcohol and substance abuse, feelings of hopelessness, impulsive or aggressive tendencies, cultural or religious beliefs, local epidemics of suicide, isolation, barriers to mental health treatment, loss, illness, access to lethal means, and unwillingness to seek help (CDC, 2015) The Suicide Prevention Resource Center (SPRC) state the same risk factors as well (SPRC 2001).

The ASFP has a similar but more descriptive list of risk factors that include: mental health conditions specifically, depression, bipolar (manic-depressive) disorder, schizophrenia, borderline or antisocial personality disorder, conduct disorder, psychotic disorders or symptoms, anxiety disorders, substance abuse disorders, serious or chronic health conditions or pain, stressful life events which may include death, divorce or job loss, prolonged stress factors which may include harassment, bullying, relationship problems and unemployment, access to lethal means including firearms and drugs, exposure to another person's suicide or to graphic sensationalized accounts of suicide, previous suicide attempts, and family history of suicide attempts. There are also biological risk factors that include: "lower levels of serotonin metabolites in their cerebrospinal fluid, higher serotonin receptor binding in platelets, and fewer presynaptic serotonin transporters sites, and greater postsynaptic serotonin receptors in specific brain areas such as the prefrontal cortex" (Nock et al., 2008). While these lists of risk factors are already quite extensive, research has also been done on personality characteristics that could be considered risk factors that correlate with suicidality.

One such characteristic is perfectionism. Research on suicide related to perfectionism has identified three types of perfectionism that may play a role: self-

oriented perfectionism, which demands that the self must achieve certain standards, other-oriented perfectionism, which demands that others be perfect, and socially prescribed perfectionism, which is based on the perception that others demand perfection from the self (Flett & Hewitt, 2014). Perhaps the most deleterious type of perfectionism in terms of suicide is self oriented- perfectionism (Hewitt, Flett, & Weber, 1994). This type of perfectionism has been linked to suicidal ideation and attempts in numerous studies (Jacobs, Silva, Reinecke, Curry, Ginsburg, Kratochvil et al., 2009; Beevers and Miller, 2004), and has even been found to be a more powerful predictor than hopelessness in some studies (Hewitt et al., 1994; Hunter & O'Connor, 2003; Hewitt, Norton, Flett, Callander & Cowan, 1998). An explanation for this may be that individuals with high levels of self-oriented perfectionism tend to experience more events as stressful, and have strict expectations of themselves that only allow for total success or total failure (Hewitt et al., 1994). This explanation lines up with Dean & Range's finding, that it is perhaps not the number of negative life events that leads someone to suicide, but rather the interpretations of these events; meaning that based upon someone's level of perfectionism it may lead them to interpret events more negatively than someone else, leaving them more susceptible to suicidality (Dean & Range, 1996).

Hopelessness is another trait that dominates research on depression and suicidality. When undergraduate and graduate students are asked what moods they experienced during periods of suicidal ideation, hopelessness is one of the most frequently cited (Drum et al., 2009). Hopelessness is also associated with longer periods of suicidal ideation, and a greater likelihood of making an attempt when compared to sadness, anger, guilt, or anxiety. A study by Furr et al., confirms that hopelessness is a

large risk factor with 49% of college students stating it as a reason for suicidal ideation (Furr, Westefeld, McConnell, & Jenkins, 2001).

While warning signs and risk factors can seem similar, it is important to distinguish between the two to fully understand suicide risk. Risk factors can be seen as elements of identity or experience that make one more vulnerable to suicide whereas warning signs are verbal, mood, or behavioral indications that someone is suicidal. It is clear that there are quite extensive lists for the warning signs and risk factors of suicide as well as somewhat pervasive personality characteristics that correlate with suicidality. While all of these signs, factors, and characteristics are evidence-based aspects that may contribute to suicidal ideation, they are broad pieces of a very complex puzzle and do not fully capture how one degenerates from healthy to suicidal. This is why philosophers, sociologists, and psychologists have all done research to investigate how people descend into suicidality and get to the point where they seriously consider and/or attempt suicide.

**Theories of Suicide**

In the 19th century, Emile Durkheim, a French sociologist, philosopher, and social psychologist theorized about the causes of suicide. His work and study of suicide was due in part to the publication of statistics and data on suicide rates, but was also a reaction against the current theories of suicide. Durkheim wanted to challenge the notion that suicide stemmed solely from individual motivations and connect the influence of society, and how one fits within a society to suicide. His work was in part a reaction against the Italian school of thought proposed by statisticians, Ferri and Morselli, who believed that suicide was the result of a psychological cause; moral degeneracy (Jones, 1986). Instead,

Durkheim theorized that suicide was driven by social pressures and forces. Durkheim, "considered suicide above all to be a signal of crisis in a society driven by constant and excessively rapid change, a phenomenon which threatened the existence not only of society but also of the individual" (Pickering & Walford, 2000, p. 11). He proposed this theory after looking at statistics, which showed that suicide rates increased in the months, days of the week, and times of the day when people are most active and busy (Jones, 1986). Essentially, Durkheim hypothesized that suicide was at its core a consequence of the intensity of social life and the disintegration of society (Jones, 1986).

He went on to propose that there were four distinct types of suicide: egoistic, altruistic, anomic, and fatalistic; each of which stemmed from different social pressures (Jones, 1986). Egoistic suicide was the result of too much freedom, knowledge, and education. Durkheim proposed this theory after looking into rates of suicide among different religious denominations and found that the groups with the highest level of freedom and education also had the highest rates of suicide. He proposed that this freedom led to excessive individuation, and, "as society weakens or disintegrates the individual depends less on the group, depends more upon himself, and recognizes no rules of conduct beyond those based upon private interests" leading to egoistic suicide (Jones, 1986, p. 193). While Durkheim proposed that too much individuation or egoism leads to suicide, he also proposed that too little individuation did as well. Altruistic suicide occurs when an individual personality has little value and relies too highly on another. He cited examples of this "obligatory altruistic suicide" such as "women upon the deaths of their husbands, followers and servants upon the deaths of their chiefs, and men on the threshold of old age… Like all suicides, the altruist kills himself because he is

unhappy" but with both egoistic and altruistic suicide, the primary cause was the, "individual's insufficient or excessive integration within the society to which he belongs" (Jones, 1986, p. 209).

Durkheim proposed the concept of anomic suicide, which he divided into two categories, economic anomic suicide and domestic ammonic suicide. This type of suicide was caused by the "temporary condition of social deregulation" which causes disequilibrium in society. His evidence for this type was the increased rate of suicide during times of economic crisis or after a divorce, separation, or death in one's personal life (Jones, 1986). Finally Durkheim proposed fatalistic suicide, which he theorized would occur when an individual had too little freedom as a result of societies' control. His example for this type was suicide among slaves. Within all four categories of suicide, Durkheim was determined to show that it was more than just an individual act determined by insanity or internal motivations. "Durkheim showed that if ever there was a phenomenon linked more than any other to the variability of the relations between society and the individual, it was suicide" (Tomasi, 2000, p. 13). His four reasons for suicide all centered on either too much or too little integration into society or too much or too little regulation from society. Despite the flaws in Durkheim's model, it allowed people to view suicide from the social perspective rather than solely on the individual, moral level.

In the 20th century, Edwin Shneidman, an American psychologist, began studying suicide and established it as an interdisciplinary field in psychology. Shneidman is often considered the father of suicidology and created the first comprehensive suicide prevention center. Shneidman had a much more straightforward theory of suicide and believed that, "Suicide is essentially psychological pain… Suicide is caused by

psychache. Psychache refers to the hurt, anguish, soreness, aching, psychological pain in the psyche of the mind. It is intrinsically psychological—the pain of excessively felt shame, or guilt, or humiliation, or whatever" **(**Leenaars, 2010, p. 7). While Shneidman acknowledged that different emotional states such as anger, guilt, shame, or hopelessness had their respective roles in suicide, he believed that a person would not actually commit suicide unless that pain caused unbearable psychological pain or psychache. Shneidman went on to write the 10 commonalities of suicide, which provided more insight and information into his theory of suicide. They are as follows:

"I. The common purpose of suicide is to seek a solution.

II. The common goal of suicide is the cessation of consciousness

III. The common stimulus in suicide is intolerable psychological pain.

IV. The common stressor in suicide is frustrated psychological needs.

V. The common emotion in suicide is hopelessness-helplessness.

VI. The common cognitive state in suicide is ambivalence.

VII. The common perceptual state in suicide is constriction.

VIII. The common action in suicide is egression.

IX. The common interpersonal act in suicide is communication of intention.

X. The common consistency in suicide is with lifelong styles of coping."

(Leenaars, 1999, p. 225).

Based upon the 10 commonalities of suicide, it is clear that Shneidman saw suicide as a solution and form of escape from psychological pain and frustrated needs (I-V, VIII). Through his commonalities, Shneidman also tried to communicate that suicide

does have warning signs (IX) and that it is often indicative of an individual's thought patterns and tendencies (X). Much of Shneidman's work and research studied suicide notes in order to further understand this act, and while Shneidman acknowledged that the mind of someone who attempts or commits suicide is constricted (VII), he still believed that suicide notes were the 'golden road' to understand suicide (Shneidman, 1985). Shneidman had a much more clear-cut theory of suicide and believed that suicide was a combination of introspective torture or psychache and that death was a release.

Shneidman's work paved the way for Baumeister to create and publish his theory of suicide in 1990. Building upon Shneidman's idea that suicide was a release from pain, Baumeister conceptualized suicide as an escape. He explained this 'escape' as a downward descent into suicide through a thorough six-step model. "Suicide thus emerges as an escalation of the person's wish to escape from meaningful awareness of current life problems and their implications about the self" (Baumeister, 1990, p. 91). In order to reach this extreme form of escape, Baumeister hypothesized that six steps must occur: "falling short of standards, attributions of the self, high self-awareness, negative affect, cognitive deconstruction, and consequences of deconstruction" (Dean & Range, 1999, p. 561). Simply put, Baumeister's model explains that suicide typically occurs when there is a combination of high expectations and recent failures. While there have been other theories proposed after Baumeister, one that has gained traction is the interpersonal-psychological theory of suicide proposed by Joiner.

Joiner's theory is a more recent model of suicide that has received a lot of attention. His model proposes that someone will not die by suicide unless they have both the desire to die and the ability to do so (Joiner, 2005). Joiner proposes that perceived

burdensomeness and low belonging or social alienation/isolation come together and lead people to feel the desire to die. However, he believes that these psychological states are not enough to ensure that someone will die by suicide. Joiner hypothesizes that there must also be the acquired ability to enact lethal self-injury. This is based upon the idea, "that capability for suicide is acquired largely through repeated exposure to painful or fearsome experiences" (Joiner, 2009, n.p.). Support for this theory is based on the fact that past suicidal behavior is a strong predictor of future suicidal attempts, and this type of behavior habituates one to both the pain and fear of death (Joiner, Conwell, Fitzpatrick, Witte, Schmidt, & Berlim, 2005; Brown, Beck Steer & Grisham, 2000). Many studies have confirmed that the factors proposed in Joiner's theory are in fact predictive of suicidal ideation and attempts, validating his interpersonal-psychological theory of suicide (Van Orden, Witte, Gordon, Bender, & Joiner, 2008; Conner, Britton, Sworts, & Joiner, 2007)

As is evident from the research, there are multiple complex theories as well as more simple traits proposed for why people become suicidal or attempt suicide. While they all have significant research evidence supporting them, it not clear which theory holds more weight or which trait may be more predictive of suicide. Additionally, even with all the information that is known, there is still a problem because many students who are suicidal do not ever seek treatment.

**Barriers to Help-Seeking**

According to a report by Gallagher**,** the majority of college students who die by suicide are not in treatment at college counseling centers (Gallagher, 2006). Another

study confirmed these results stating that only 20% of suicidal students even seek counseling, and interestingly, only 48% of those who sought counseling found it to be helpful (Furr et al., 2001). In contrast to these findings, when all college students, regardless of current emotional status, were asked if they would seek help if they were having suicidal thoughts, 90% stated they would (Turner & Quinn, 1999). These results led researchers to study why it is that students hypothetically report they would seek treatment, but in reality do not.

Researchers have proposed many reasons to account for why people do not seek treatment, including: negative attitudes towards help, stigma, concerns about cost, transportation, inconvenience, confidentiality, other people finding out, feeling like they can handle the problem on their own, and the belief that treatment will not help (Mojtabai, Olfson, & Mechanic, 2002). For many years, researchers settled on the fact that public stigma, or the reaction that the general population has to people with mental illness, is the main barrier to mental health treatment and research supported this notion (Bruffaerts et al, 2011; Corrigan & Watson, 2002). A systematic review of twenty-two published studies of perceived barriers to treatment for young people by Gulliver, Griffiths, and Christensen found stigma to be the most commonly cited barrier to seeking treatment (Gulliver, Griffiths, & Christensen, 2010). Additionally, a study by Wong, Brownson, Rutkowski, Nguyen, and Becker demonstrated that stigma toward people who die by suicide as well as a lack information about suicide is associated with poor attitudes toward help seeking (Wong et al., 2014). While studies have found stigma to be a commonly listed reason for why people do not seek treatment, recently research has

begun to look into other factors as well such as lack of necessity and perceptions of self-reliance.

In 2013, a study by Czyz et al. recruited college students who were at elevated suicide risk but were non-treatment seeking to report barriers in seeking professional help, and found that 'the perception that treatment was not needed' was reported by 66% of the participants (Czyz, Horwitz, Eisenberg, Kramer & King, 2013). Participants also reported lack of time at 26.8%, and preference for self-management at 18%, but stigma was only mentioned by 12% of the students. This study went on to say that while stigma has been considered the predominant factor in the past, according to new data from Healthy Minds, students who did not seek treatment had low stigma as well as positive beliefs about treatment. Burton-Denmark and colleagues found similar results in their study with low perceived risk at 18% being the most commonly cited reason for not seeking treatment (Burton-Denmark, 2011). An analysis of the World Mental Health Survey data found similar results across 21 countries with the most frequently cited reason for avoiding treatment being low perceived need with 58% of respondents endorsing the statement, "the problem went away by itself, and I did not really need help" (Pitman & Osborn 2011, p. 8) Many additional studies have confirmed that the perception that treatment is not needed is often cited as the largest barrier (Downs & Eisenberg, 2012; Eisenberg, Downs, Golberstein, & Zivin, 2009; Golberstein, Eisenberg, Gollust, 2009).

Self-reliance is the other factor that has gained traction in recent research. While self-reliance is rarely the most commonly endorsed reason for not seeking treatment, it is

often the second and is more frequently cited than public stigma. In Bruffaerts et al., analysis of the World Mental Health Survey data, 'the desire to handle the problem alone' was the second most commonly cited reason with stigma following far behind at only 7% endorsement (Pitman & Osborn, 2011). In another study looking specifically at Asian American college students, researchers found that those who did not seek mental health help cited two main reasons: "they would control the situation/problem themselves and they would seek informal help" (Han & Pong, 2015, p. 9). Another study, "found that 39% of their suicidal participants did not seek professional help because of attitudinal barriers such as beliefs that they should handle things on their own and embarrassment in acknowledging existing problems" (Nada-Raja, Morrison, & Skegg, 2003, p. 603). Finally, the previously cited study by Burton Denmark which found perceived low risk to be most commonly cited barrier to treatment also found that 'privacy' or the 'desire to deal with it personally' was the third most frequently cited barrier at 15% (the second most commonly listed was not wanting to be a burden to others (16%)) (Burton-Denmark, 2011).

Another interesting aspect that influences treatment seeking is help negation. While it may be a reason for not seeking treatment, it is not often listed because it seems to be more of an unconscious phenomenon rather than a specific reason or barrier. Help negation is a phenomenon where as psychological symptoms increase, help-seeking intentions decrease (Yakunina, 2010). As Deane et al. put it, "help–negation is expressed behaviorally by the refusal or avoidance of available help and cognitively by the inverse relationship between self-reported symptoms of psychological distress and help-seeking intentions" (Deane, Wilson & Ciarrochi, 2001). A study by Deane, Wilson and Ciarrochi

found that as students' levels of suicidal ideation increased, intention to seek help decreased (Deane, Wilson & Ciarrochi, 2001). This was found to be consistent not only with seeking professional help, but also with seeking informal support from family or friends (Rickwood, Deane, Wilson, & Ciarrochi, 2005**).** Since help-negation is a somewhat recent concept, there have only been a few hypotheses put forth for why this phenomenon might occur. One such explanation by Deane, Wilson, & Ciarrochi is that, "help-negation is a function of suicidal thoughts that contribute to ineffective problem-solving solutions (i.e., seeking help from no one) and inhibits the recall of appropriate social-problem-solving strategies or the generation of other solutions" (Deane, Wilson, & Ciarrochi, 2001**,** p. 910). This hypothesis makes sense in light of the fact that a constricted affective psychological state (Beck and Weishaar, 1995) or "tunnel vision" is characteristic of suicidal individuals (Jobes & Nelson, 2006).

At this point in the research, there seem to be multiple substantiated reasons why people do not seek treatment even when they are in emotional distress. The three most commonly cited reasons are lack of necessity, self-reliance, and stigma. The difficulty in distinguishing between these three reasons, however, is that while they are different barriers and are cited as such, they may have similar underpinnings. It can be difficult to distinguish public stigma from internalized stigma, and to determine how public stigma may influence or create internalized stigma. Additionally, help-negation, although not a specific reason, is another important concept in understanding why suicidal individuals do not seek treatment. In reality, "each barrier is unlikely to act in isolation, but likely interacts with and reinforces the others. The complex relationship of various

precipitative, exacerbative, and maintenance effects of barriers is unique in each clinical case" (Institute of Medicine, 2002, p. 331).

**Stressors and Motivations for Suicide**

As has been discussed earlier in this report, there are many different risk factors that influence one's susceptibility to becoming suicidal and there are also theories that attempt to explain why someone might choose to attempt or commit suicide. Building upon both of these aspects, research has also been done on the different motivations, factors, or events that influence people to consider or attempt suicide. Researchers tend to study these factors in one of two ways: by analyzing the suicide notes from those who have attempted or completed suicide or by collecting survey data on people who are currently suicidal. This research has looked at both the recent events and factors that a suicidal individual experienced as well as the emotional experiences.

In a study by Drum et al., they asked students to rate the events occurring in the last 12 months that had a large impact on them seriously considering suicide (2009). The list of events to choose from included: alcohol/drug problems, emotional/physical pain, family problems, friend problems, financial problems, impact of wanting to end my life, relationship violence, romantic relationship problems, school problems, sexual assault, and showing others the extent of my pain. Both undergraduate and graduate students ranked these events in nearly the same order, albeit at different rates, with the four most highly rated items being: emotional/physical pain (65% undergraduates, 65% graduate students), romantic relationship problems (59% undergraduates, 53% graduate students), impact of wanting to end my life (49% undergraduates, 47% graduate students), and

school problems (43% undergraduates, 45% graduate students) (Drum et al., 2009).

A similar study asked both suicidal and non-suicidal undergraduate and graduate students, " 'to reflect on the most stressful period of time you have experienced in the past 12 months, including the present day. The were then asked which category 'best describes the contributors to this stressful period'" (Brownson, Drum, Becker, Saathoff, & Hentschel, 2016, p. 8). While many of the stressors endorsed were similar to those found in the study by Drum et al., (i.e. academics, romantic relationships, and emotional or physical health problems), this study found that the most powerful factors were: gender identity concerns (30%), sexual assault (25%), relationship violence (19%), sexual orientation concerns (18%), and emotional health problems (15%). While the factors listed were low in population prevalence, they were found to heavily contribute to suicidality when they occur. Since these two studies are so similar in nature, it is interesting to note the stressors that are most common along with those that are most potent when it comes to seriously considering suicide. Studies have also distinguished between the stressors that affect men versus women.

According to a study by Brownson, Drum, Smith & Burton-Denmark, women were more likely to report a sexual assault, relationship violence, problems with family, and self-harm as a contributor to their suicidal ideation whereas men reported questioning their sexual orientation more (Brownson et al., 2011). Another study also distinguished between the factors that affect men versus women and found that while the most common stressors endorsed by men and women were very similar, there were some differences in terms of frequency (Brownson et al., 2016). Females more frequently endorsed: "death of a close person, family problems, financial problems, friendship problems, life transition,

emotional health, physical health problems of a close person, relationship violence, romantic relationship problems, sexual assault, and other traumatic experiences" whereas males more frequently endorsed: "legal problems, sexual orientation concerns, and drug/alcohol concerns" (Brownson, et al., 2016, p. 105).

Researchers also looked at the emotional states that precipitate someone seriously considering suicide in order to decipher which emotions correlate more strongly with attempts. According to the Drum et al. article, "sadness, loneliness, and hopelessness were the most frequently endorsed moods during students' typical periods of suicidal ideation" (Drum et al., 2009, p. 217). However, when looking more closely at what distinguishes suicidal ideation from attempts, only hopelessness/helplessness correlated with longer periods of ideation and a stronger likelihood of attempts. A study by Klonsky et al. studied these emotional states as well, but only in those who had made a suicide attempt in the past three years and found that the most frequently endorsed motivations behind these attempts were psychache (65.8%) and hopelessness (63.6%) (Klonsky, May, & Glenn, 2013). They also found that those with intrapersonal motivations for suicide were more highly associated with greater intent to die whereas interpersonal motivations were associated with less lethal intent and had a greater chance of receiving help. Research has also looked into the different preparatory steps and methods of suicide students choose in order to further understand different levels of lethality and create preventions for suicide.

**Suicide Preparations and Common Methods**

As has been mentioned previously, out of a nationwide college sample, 18% of

undergraduates and 15% of graduate students endorsed the statement that they had, "seriously considered attempting suicide" (Drum et al., 2009). Out of this same sample, 8% of undergraduates and 5% of graduate students reported having attempted suicide at some point in their lives. When asked if they had seriously considered attempting suicide in the last 12 months, the numbers were similar with 6% of undergraduates and 4% of graduate students endorsing this. Out of the students who had seriously considered attempting suicide in the past 12 months, 92% of undergraduates and 90% of graduate students considered how they would do so, and 37% of undergraduates and 28% of graduate students made preparations such as writing a suicide note, gathering materials, doing a practice run, or beginning an attempt (Drum et al., 2009). According to Joiner, engaging in preparatory behavior or rehearsals increase suicide risk because it is hypothesized to overcome ambivalence about dying, desensitizes anxiety about performing the suicide act, tests or perfects the method of a planned suicide, and firms one's resolve to complete suicide (Joiner & Rudd, 2002; Simon et al., 2016).

Out of the previously mentioned 6% of undergraduates and 4% of graduate students who seriously considered suicide in the past 12 months, 14% of those undergraduates (N=126) and 8% of the graduate students (N= 36) actually attempted suicide (Drum et al., 2009). The most commonly attempted method was a drug overdose with 51% of undergraduates and 50% of graduate students choosing this type of attempt. May and Klonsky found similar results regarding the most commonly used methods with overdose being the most common attempt in 55.6% of the sample (May & Klonsky, 2013). A study by Schwartz compared the methods of suicide between men and women as well as between college students and the national sample (Schwartz, 2011). It is

important to note that while Drum et al. and May & Klonsky studied suicide attempts, Schwartz evaluated the methods of suicide completions (Drum et al., 2009; May & Klonsky, 2013; Schwartz, 2011). Schwartz found that for women in college hanging was the most common method at 29%, followed by poison at 16%, firearms and jumping both at 10%, and other at 36%. For men, however, the most common methods were firearms at 31%, hanging at 26%, jumping at 19%, poison at 9%, and other at 24% (Schwartz, 2011). It is interesting to note that the methods used in attempts versus completions differs significantly, and lines up with research on what methods are more lethal (i.e. firearms and hanging).

Additionally, it is interesting to note the differences between the methods for college students with that of the US population not in college between the ages of 20-24. While hanging is the leading method for women in the national sample as well at 35%, the use of firearms is significantly different with women in the national sample using this method at 31% versus female college students at only 10%. In fact, among all of the methods, the only significant difference between female college students and females nationally is the use of firearms (Schwartz, 2011). "For male students, use of a firearm was the leading method (for suicide 31%), but was not significantly more common than the second leading method, hanging (27%). Nationally…firearm use was substantially and significantly the most common method for males, accounting for as many suicides (52%)" (Schwartz, 2011, p. 363). It is hard to escape the fact that perhaps the reason for lower rates of suicide on college campuses in comparison to the national sample may in part be due to the restriction of firearms on campus.

While the information on the number of students considering or planning suicide

as well as those that attempt suicide is alarming, it is time to turn to the information on what might protect a student from actually making an attempt; or taking this a step further, the information on what might protect students from considering suicide in the first place.

**Protective Factors**

"Protective factors are characteristics that make it less likely that individuals will consider, attempt, or die by suicide" (SPRC & Rodgers, 2011, p. 1). By looking into the protective factors that buffer against the intensity of a student's suicidality, it can offer information on where prevention should be focused. While there has been significant research on the risk factors that lead to suicide, less has been done on the protective factors that prevent it. Therefore this section will look into protective factors for both the college and national population.

Based upon the research, there is a consistent set of protective factors that buffer against suicidality at any age. These include: effective mental health care, connectedness to individuals, family, community and social institutions, problem solving skills, spirituality, and contact with caregivers (Nock et al., 2008). A study by Malone et al. looked into the protective factors of 'fear of suicide' and 'child-related concerns' and found that fear of suicide was statistically significant between the attempters and non-attempters, but that child-related concerns was not (Malone et al., 2000).

When looking specifically at protective factors for college students, the results are similar but also offer unique factors based upon the collegiate environment. A study by Drum et al. found that student's who participate as a leader or even just as a member of student organizations are less likely to have seriously considered attempting suicide in the

past 12 months than those who did not participate in organizations (Drum et al., 2009). This same study also found that "40% of undergraduates and 35% of graduate students report that wanting to finish school was an important reason for not attempting suicide" (Drum et al., 2009, p. 219). Finally this study looked at external reasons or protective factors for not attempting suicide and found that family and friends had a large impact; 56% of students indicated not wanting to disappoint or hurt their family as a reason for not attempting suicide and 49% said the same of not wanting to disappoint or hurt their friends (Drum at al., 2009). These results lend support to why college campuses need to create a sense of belonging, purpose, and connectedness for their students in order to potentially prevent them from becoming suicidal or from moving further along the suicidal continuum.

So far in this report numerous aspects of suicidality have been looked at including warning signs and risk factors of suicide, theories of suicidality, barriers to treatment, motivations for attempting or committing suicide, common methods, and protective factors. While this is all helpful and informative research in order to understand all aspects of suicidality, the purpose of gaining this information is really to prevent further suicide and should be used to inform college campus suicide prevention programs.

**Suicide Prevention on a College Campus**

In the current literature, there seem to be two different ways of looking at suicide prevention on a college campus: the individual or crisis centered approach and the problem or population centered approach. Up until recently, the individual centered approach was the main paradigm for understanding suicide prevention. This approach

focuses on prevention when students are imminently suicidal and in need of treatment, and therefore centers around suicide assessment, crisis counseling, and ongoing therapy. More recently, however, there has been a shift to consider suicide prevention from the problem-centered approach. This approach acknowledges recent research that shows how common thoughts of suicide really are in a college population, and targets the entire student body on a college campus. Drum et al. explain the individual versus problem-centered approaches,

> "The individual-focused (person-centered) paradigm, rather than suffusing intervention efforts to the entire spectrum of symptoms and their related contributing factors, is place specific on the spectrum; that is, it micro-focuses on the individual in crisis... Additionally, by focusing solely on the individual in crisis, the current paradigm obscures the reality of how common a phenomenon it is for students both prior to and during the college years to engage in one or several behaviors considered part of a continuum of suicidality"… "A problem-focused paradigm requires the entire campus community to share responsibility for reducing student suicidality. Rather than focusing on the suicidal student as the institution's problem, the new paradigm defines the problem as how to reduce suicidality in all its forms of expression among the entire population of students" (Drum et al., 2009, p. 219-220).

While both individual and problem focused efforts can be effective, research has shown that intervention efforts will be more successful when they reach students at a lower level of risk for attempting suicide than if students have progressed further along

the suicide risk continuum (Carlton & Deane, 2000). Therefore proponents of the more recent problem focused paradigm do not advocate for the discontinuation of the person-centered or crisis approach, but rather believe that, "the combination of a population-oriented prevention paradigm with a clinical services paradigm has the potential to overcome the limitations of each one when used alone" (Brownson et al., 2011, p. 292).

While both person and population interventions are necessary, the current system in place that focuses solely on the individual in crisis is not enough. "According to the current paradigm, if the individual treatment phase is deemed successful, then the student is released from treatment, typically into the same environment in which the suicidal crisis originally emerged" (Drum et al., 2009, p. 221). Additionally, college counseling centers are overloaded with students due to increases in the number of students attending college as well as increases in mental health issues, and therefore do not have the resources to provide affordable, quality treatment for the number of students currently seeking it on many campuses (Henriques, 2014). While increased funding for mental health centers is important, there also needs to be a shift in the focus from treating the individual to treating the environment and culture at large. Therefore this report will highlight research that can inform population focused suicide prevention efforts on college campuses in order to look at prevention from another angle.

When looking at suicide prevention research both on and off college campuses, there are two primary methods that are often cited: reducing access to lethal means and training health-care workers to recognize, assess, and refer for suicidality (Drum et al., 2009; Institute of Medicine, 2002; Simon, 2011; Brownson et al., 2016; Nock et al., 2008; Mann, Apter, Bertolote, Beautrais, Currier, Haas, et al., 2005). Due to both high

levels of stigma (internal and public) and lack of insurance coverage for mental health services, many people do not seek mental health treatment when suicidal. However, the majority of people who commit suicide do have contact with a health-care provider within the year of their death and approximately 40% within the month (Institute of Medicine, 2002). Therefore training health-care professionals to increase their knowledge on suicide prevention, developing and implementing suicide risk screenings, assessments, and referrals in primary health care settings, and educating patients to increase compliance with treatment could be highly effective in decreasing suicidality (Rihmer, 1996; Institute of Medicine, 2002). In fact, a systematic review of suicide prevention programs found that training physicians to recognize and treat depression and suicidal behavior showed reductions in suicide rates between 22-73 percent (Nock et al., 2008).

Means restriction is another universal prevention strategy that has proven to be effective. Means restriction can apply to numerous methods of suicide such as protective measures and barriers on rooftops, restricted access to lethal drugs and chemicals, and campus bans on firearms (Burton-Denmark et al., 2012). While all of these are important, research has shown that access to firearms is a particular risk factor for youth (Institute of Medicine, 2002). When means- restriction programs are put in place, however, they have been successful and have shown reductions in suicide rates anywhere from 1.5-23 percent (Nock et al., 2008; Mann et al., 2005).

When focusing specifically on college campus suicide prevention, research pinpoints even more specific ways to decrease suicidality and increase student well-being overall. Drum et al., highlight four major areas to focus on in prevention efforts: “to refashion the environment so that it is both more supportive and more protective, to

increase awareness and promote help seeking through the dissemination of educational materials and self-assessments, to reduce the incidence of traumatic negative life events, and to increase the available sources of internal resilience among the population" (Drum et al., 2009, p. 220). The first step of creating a 'more supportive and protective environment' is often cited as a prevention method and makes sense in light of Joiner's theory of suicide. Therefore, colleges need to go beyond simply encouraging student's to take an active role on campus and be involved, and actually provide students with meaningful opportunities to make connections with other students and feel a sense of belonging on campus. An article by Burton-Denmark et al., cite programs such as 'Freshman Interest Groups (FIGs), Living Learning Communities (LLCs), and programs for incoming freshman and transfer students as ways for students to make meaningful connections with other students and even faculty on campus (Burton-Denmark et al., 2012).

The second step of 'increasing awareness and promoting help seeking' can be developed in a number of ways. College campuses can create suicide prevention weeks to highlight self-awareness as well as create other physical promotional materials on campus to increase education on suicidality. They can educate gate-keepers and other staff who have interactions with students to recognize the warning signs and risk factors for suicide. Additionally, Drum et al., discuss how web-based mental health assessment tools may help students begin to think about their level of distress and ways to manage it (Drum et al., 2009). While web-based tools are still a fairly recent prevention method, research is increasingly being done on their use as an intervention and is showing some success. One study found that students who engaged in an online discussion with a

therapist after taking a personal assessment were three-times more likely than those who were simply told to being treatment after taking the assessment to actually go to an in-person evaluation and begin treatment (Durkee, Hadlaczky, Westerlund, & Carli, 2011).

The third step of 'reducing traumatic negative life events' is more complicated but is still something college campuses should be working towards in order to reduce suicidality. As evidenced by the research presented earlier on what leads students to attempt suicide, traumatic negative life events rank very highly on the list, particularly sexual assault and relationship violence (Brownson et al., 2016). Therefore colleges should continue to work towards creating safe campuses through advocacy campaigns that promote awareness and education, safety measures on campus, and bystander interventions to reduce the prevalence of sexual assault, homophobia, and relationship violence. Reducing access to lethal means on campus is an additional way to create safe campuses and decrease negative life events.

Finally, the fourth step of 'increasing available sources of internal resilience' among college students may be different for each student but colleges should create resources that facilitate this process for students. One way to enable students to continue creating resilience is through campus recovery communities. "Suicide is a highly relapsing condition… A final phase of treatment focused on relapse prevention is needed and may include the use of support groups that incorporate coping and problem-solving skills and mindfulness-based practices" (Drum et al., 2009, p. 220). While suicide relapse prevention groups are a necessity, other groups for addiction, depression, and eating disorders are also ways to target reducing suicidality as the issues are often co-occurring (Drum et al., 2011). Colleges can also work towards reducing sources of unproductive

stress on campus by decreasing barriers to academic success. Brownson et al. give examples of how to do so by, "reducing discrimination on campus, promoting collaborative work, encouraging academic and career advising and enhancing preparatory courses to support students entering college" (Brownson et al., 2016, p. 110).

As mentioned earlier, a college campus needs to not only work towards reducing the incidence of suicidality but should also strive to enhance student well-being overall. The prevention efforts listed above are a culmination of the ideas from the problem centered approach that moves from focusing on the individual in crisis to reducing suicidality amongst the entire student body and increasing student well-being. While some of the efforts mentioned above are focused specifically on suicide prevention (i.e. web-based assessment tools, suicide relapse prevention groups), others can increase overall health for all students (freshman interest groups, decreasing unnecessary stress, reducing negative life events). Although this report did not focus on the individual centered approaches, continued promotion, education, and funding for mental health resources such as college counseling centers and crisis intervention programs are essential to student health and wellness and are crucial for preventing suicide on a college campus. Through the combination of both individual and problem focused preventions and interventions on college campuses, the goals of reducing the incidence of suicide and increasing student well-being on college campuses becomes much more possible.

## Conclusion and Future Directions

College student suicide is a major issue worldwide and is the second leading cause of death for college students (Drum et al., 2009). While more and more awareness is being brought to the issue of mental health, "95% of college counseling center directors surveyed said the number of students with significant psychological problems is a growing concern in their center on campus" and, "seventy percent of directors believe that the number of students with severe psychological problems on their campus has increased in the past year" (Henriques, 2014, n.p.). According to the American College Health Association, the suicide rate among young adults has tripled in the last 50 years, particularly for African-American students with suicide rates increasing 93% for females and 214% for males between 1980-1995 (Henriques, 2014). It is clear that colleges are at a critical juncture when it comes to preventing and treating mental health issues on campus, and particularly suicide.

While many would argue for prevention methods to continue to focus solely on the individual in crisis, this is simply not feasible. With both increases in the numbers of students attending college as well as the number of students who have severe psychological distress, college counseling centers are already turning students away from services. While increases in funding for college counseling centers to expand services certainly should be considered, this still may not be sufficient to handle the need; a true culture shift on college campuses is needed. This is why an emphasis on problem-centered approaches to suicide prevention on college campuses is becoming more and more necessary. Problem-centered approaches not only benefit those on the continuum of suicidality but also bring overall wellness to the entire student body, making it a more

enticing option for funding sources and key stakeholders.

Therefore with the continued development and implementation of these problem-centered approaches to suicide prevention, more research should be done on their credibility and efficacy. As this type of prevention is a relatively new, future research should look into the different types of interventions being implemented on college campuses and determine the most effective methods and programs. Further research on the problem-focused approach is not an attempt to discredit the former individual centered approach, but rather aims to work in tandem to reduce suicide rates. "College campuses have the additional responsibility of not only protecting the student in suicidal crisis, but also considering the public health goals of reducing the incidence of suicidality and enhancing the health and well-being of the larger population of students" (Drum et al., 2009, p. 219). Through both individual and problem centered prevention efforts, colleges can work towards reducing the incidence of suicide on their campuses while also striving toward overall student health and well-being.

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