Suicidal Risk and Protective Factors among University Students

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Abstract

Background: Suicide is one of the leading causes of death among adolescents. There is a drastic difference in the prevalence of suicidal thoughts, 24% vs. 9%, and attempts, 9% vs. 2.7%, in the university students when compared with the adult population as a whole. Emotional dysregulation and partaking in self-damaging behaviors have demonstrated an increase in suicide risk among university students where emotional dysregulation is defined as encompassing “non-acceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity” both as individual components and to a higher extent when in combination. The view of oneself being burdensome to others along with the lack of perceived meaningful relationships is an important concept within emotional dysregulation and leads to continued painful or dangerous experience engagement and eventually the ability of the student to commit suicide. Suicidality in the college student is a growing concern and many studies have demonstrated that before a student’s death by suicide about 50% visited a primary care provider within the month preceding and 25% had been under the care of a mental health professional the month preceding the event. There have also been some studies on protective factors targeting university students. A systematic review analyzing suicide risk among university students reported that reasons for living and hope provided significant protective effects.

Keywords: Suicidal risk, protective factors, university students

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Introduction:

Suicide is one of the leading causes of death among adolescents. According to research by the World Health Organization (WHO), suicide is the fourth leading cause of death among individuals aged 15–29 years globally (1)

Suicidal thoughts: Prevalence, Risks, and Screening

There is a drastic difference in the prevalence of suicidal thoughts, 24% vs. 9%, and attempts, 9% vs. 2.7%, in the university students when compared with the adult population as a whole. There are several factors that predispose students to suicidal thoughts and attempts that include "depression, impulsivity, poverty, poor neighborhood, lack of parental warmth, and/or abuse and family conflict" along with anxiety, poor self-esteem, and substance use (2). Among these, psychiatric disorders are recognized as one of the most important modifiable factors.

Individuals with psychiatric disorders have a high relative risk of suicide ranging from 7 to 12 folds compared to those without psychiatric disorders. The transition from suicidal ideation and suicidal attempts to actual suicide in youth is a highly complex process, and those who present with suicidal ideation and attempt and those who die by suicide might be very different vulnerable groups (3). Psychiatric disorders were known to have significant attribution to suicide and were potentially treatable and preventable (3). A more sophisticated focus on youth suicide may help understand the attribution of each specific psychiatric disorder and develop more targeted and effective strategies for prevention (4).

Risk factors of suicide among university students

Emotional dysregulation and partaking in self-damaging behaviors have demonstrated an increase in suicide risk among university students where emotional dysregulation is defined as encompassing "non-acceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity" both as individual components and to a higher extent when in combination (5). The view of oneself being burdensome to others along with the lack of perceived meaningful relationships is an important concept within emotional dysregulation and leads to continued painful or dangerous experience engagement and eventually the ability of the student to commit suicide (5).

Self-damaging behaviors include several concepts including those with potential to cause physical harm to self, nonsuicidal self-injury, and substance use disorders (5). Self-damaging behaviors in the university students generally manifest as substance misuse, physical altercations with others, and lack of common safety concerns and precautions (5). Although these self-damaging behaviors may lead to increased suicide risk, the main purpose of these events to the student is to assist in relieving or reducing their negative emotions (5).

Adverse childhood events:

Early life suicidal thoughts and behaviors is a common occurrence before entering university, with approximately one-third of university students having these thoughts or behaviors before enrollment, which can lead to poorer academic performance, increased university dropout rate, and persistent mental and physical problems (6).Several adverse childhood events could increase the risk of suicidality in university students but none seems to be higher than those that experience childhood abuse, with about a 2.5 times higher prevalence, and even a higher risk for those who experienced sexual abuse and complex abuse (6).Recent studies also demonstrate that there seems to be a ceiling effect to the "impact of childhood adversities and related toxic stress" on the risk of future suicidal thoughts and behaviors (6).

Mental health problems

An increase in the prevalence of all mental illness within university student populations has been demonstrated in a number of different studies. According to the World Health Organization study on the prevalence of mental health issues among university students, 35% of all full-time students studied screened positive for at least one common lifetime mental health disorder and 31% screened positive for at least one of those disorders within the last 12 months before survey completion (7). These disorders included major depressive disorder, mania/hypomania, generalized anxiety disorder, panic disorder, alcohol use disorder, and drug use disorder with each having a varying degree of correlation to several demographic factors (7).

There are many possible explanations as to why this increase in mental health disorders among this age group exists, with most agreeing that the major life transition into university with its associated issues of having an unstable life structure leading to feelings of uncertainty and need to explore options while focusing on one's self combine to cause a significant amount of distress in the student's life, all of which increases the likelihood of developing a mental health disorder (7). In addition to these issues, university students are confronted with adult responsibilities that they most likely have not had before, including financial stability and the development and maintenance of significant relationships (8). All of these conditions may lead individuals within the university community to place themselves in unfamiliar situations to gain social recognition or to become more insular and avoid fellow students (9).

Sociodemographics that correlate the highest with developing both lifetime and 12 months prevalence were female gender, nonheterosexual identification and older age, aged 19 to 20 years or older when beginning university studies (7). Other demographics that showed some positive correlation were students of unmarried parents, students with at least one deceased parent, those with lower high school rankings (lower 70% of class), extrinsically motivated students and those identifying as having no religious affiliation, although not to the level of previously mentioned demographics (7).

There were no studies that demonstrated having more than one of these correlates actually infers an additive risk to the development of mental health problems in this age group. These mental disorders could also create life-long implications due to the double risk of university discontinuation without receiving a degree, which is consistent with approximately 20% of students with mental disorders identifying its negative impact on their academic performance and demonstrated by an average decrease of 0.2 to 0.3 grade point average (GPA) on diagnosis of a mental health disorder (10).

These life-long implications could be furthered observed by an "increase in physical and emotional problems in the mid to long term, labor market marginalization, worse quality of sleep, and dysfunctional relationships" with those with mental health diagnosis at the university age. These issues could then create the unstable mentality for the students allowing them to be prone to increasing stressors that lead to more mental disorders and a cycle of worsening mental stability (9).

Attention deficit hyperactivity disorder (ADHD)

ADHD is a commonly occurring mental health condition in the university student that also often creates a decreased ability to adjust to university life resulting in decreased academic achievement, reduction in relationships that are meaningful, and an overall lower quality of life (11).Due to these social issues, first-year university students have a significantly elevated prevalence, up to 4 times as high, of suicidal thoughts and attempts when compared with those students not diagnosed with ADHD (11).Depression co-occurs in ADHD students at an approximate rate of 32.3%, which also furthers the risk of suicidality in this patient population (11).

Mood disorders and suicide

Depressive disorders, including major depressive disorder and dysthymia, contributed to the highest proportion of youth suicide mainly due to the high prevalence across sex and age groups (3). MDD is a common psychiatric disorder which is associated with significant personal suffering, physical and mental disability, with a global point prevalence being around 4.7% and a lifetime prevalence ranging from 3% in Japan to 16.9% in USA, whilst in other Western countries the figures varied between 8% and 17% (12).

The association between MDD and suicide attempts (SA) and/or thoughts has been well documented, being SI and suicidal behavior frequently reported during depressive episodes, with a suicide risk rate equivalent to around 15% (12). Furthermore, epidemiological studies reported as well that MDD subjects with comorbid anxiety disorders were among the main predictors of SA amongst depressed suicide subjects (14).

Research has consistently demonstrated that depressive symptoms are a frequent precursor of suicidal thoughts and taking life by suicide. Jing et al., (14) noted that the primary risk factor of suicidal thoughts among university students is a history of major depressive disorder (14). Another study demonstrated that self-rated depression scores for university students correlated directly with their suicidal thoughts (14). A systematic review indicated that multiple factors such as stressful events influenced suicidal thoughts of university students and that depressed mood was the determinant factor of suicidal thoughts (15).

Additionally, a study showed the relationship of bipolar disorder with suicidal ideation and taking life by suicide. Depression accompanying bipolar disorder may be a risk factor of suicide among teens and university students (16).

International students often feel isolated from family and friends, which consequently increases their risk of developing mental health problems. A socially disadvantaged background with features such as low socioeconomic status, low income and poverty has been suggested as risk factors of suicide. In university students, financial problems and increased level of anxiety and depression contribute to increased suicidal behavior (17).

During university, a variety of factors lead to the onset of symptoms of depression. One of them is the transition from home to university, being away from existing social support networks like family support, trying to learn new skills and time requirements (18).

Anxiety disorder and suicide

Anxiety symptoms are the most common mental health concern within the college population. Of concern, given collegiate sample, adolescents and young adults diagnosed with anxiety are 8 times more likely to experience suicidal ideation and 6 times as likely to attempt suicide, than individuals without anxiety disorders **(19)**

Adolescents and young adults who attempt suicide are more than twice as likely to have a family member who has attempted suicide, compared to individuals without a family history of suicide-related behavior. For young adults, social and interpersonal disruptions often contribute to anxiety symptoms, including those of generalized anxiety disorder **(20)** and, for university students, academic and parental pressures may be key contributors to both anxiety and suicide risk.

Psychosis and suicide

Psychotic disorders are serious illnesses that emerge during the youth and young adult years, often causing a significant functional impairment and illness-related burden. Individuals with psychosis are at elevated risk for early mortality, dying an estimated 20 years earlier than general-population peers. Suicide is a major contributor to this early mortality; suicide rates in psychosis are approximately 12 times greater than in the general population **(21)**.

An estimated 25–50% of individuals with psychosis attempt suicide during the course of illness, with 5–10% dying by suicide. Hung and his colleagues found that the suicide risk was higher among adolescents than young adults **(3)**.

A possible explanation is that suicide often occurs in the early course of schizophrenia, resulting in high suicide risk among adolescents. Suicide risk for individuals with psychosis is greatest among young adults, early in the course of illness with recent data suggesting that suicide is the leading cause of death in the five years following diagnosis and 8–10% of individuals with first-episode psychosis (FEP) attempt suicide during the initial years of treatment **(22)**.

Obsessive-compulsive disorder and suicide

Most OCD occurs in adolescence and early adulthood; although, there is significant variation in the onset of OCD. These behaviors are extensively noticed among university students as university life is full of challenges, responsibilities, stress, deadlines, competitions, social pressure, and new environmental requirements. The above challenges, among others, can lead to different psychological disorders that include depression, anxiety, interpersonal relationship difficulties, suicide, and substance use **(23)**. People with OCD have a higher risk of suicide, as 63% of people with OCD experienced suicidal thoughts, and 26% attempted suicide.

A study by Huz and his colleagues on university students revealed that the risk of suicidal behavior increases with the comorbidity of depression, PTSD, substance use, and impulse control disorders.Presence of one or more OCS was associated with an increased odds ratio of suicide risk of approximately 2.4, although this was no longer a significant risk factor when controlling for depressive symptoms **(24)**.

Substance or alcohol use disorder and suicide

Although attending college has historically been considered a protective factor against the development of substance use disorders, in recent decades substance use has become one of the most widespread health problems on college campuses in the United States. Students who regularly use substances are more likely to have lower GPAs, spend fewer hours studying, miss significantly more class time, and fail to graduate or to be unemployed postgraduate. Substance use is also associated with significant general medical and psychiatric morbidity and mortality for many students. Possible explanations include that substance or alcohol use would weaken impulse control and impair judgment, thereby increasing the risk of committing suicide **(25)**.

Sleep disorder and suicide

Sleep disorders are prevalent in youth. Several studies have demonstrated that sleep disorders are associated with high suicidality among youth compared with that of other age groups. Although sleep disorders might often be comorbid with other psychiatric disorders, it was a significant independent risk factor after controlling for covariates such as substance or alcohol use disorder or mood disorders **(26)**.

One possible explanation is that sleep disturbance worsens problem-solving abilities and increases impulsivity due to sleep deprivation and disrupted frontal lobe function. Another explanation is that sleep disturbance leads to low serotonin synthesis and postsynaptic serotonin receptor sensitisation in the prefrontal cortex (**26**), finally resulting in poor judgment, increased impulsivity, and aggression.

Protective factors of suicide among university students

There have also been some studies on protective factors targeting university students. A systematic review analyzing suicide risk among university students reported that **reasons for living and hope** provided significant protective effects. Reasons for living also moderated the relationship between depression and suicidal thoughts and behavior as reported by **(27)**.

Some other factors have been identified as protective against suicidality. For example, **(28)** identified that **gratitude** (the feeling of being thankful) had a protective impact of suicide risk on 913 South-Eastern US university students. Gratitude was related to lower suicide risk via beneficial associations with hopelessness, depression, social support, and substance misuse. Furthermore, **emotional stability** was shown to have protective effect against suicide risk by Bruns and Letcher (2018) among 413 graduate students at a large mid-Western US University. The results indicated emotional stability as the strongest predictor for participants' suicide risk with high emotional stability providing protective effects against suicide risk (29).

Effective **coping and optimism** were reported to be a protective factor by Yi et al. (30) from a study comprising a sample of 252 American university students. The study concluded that effective coping and optimism are associated with decreased suicide risk and increased suicide protection **(30).**

In addition, psychological buffers (such as **life satisfaction, self-esteem, perception of family cohesion, and perception of social support**) and its role in the development of hopelessness and suicidal thoughts were assessed by Chioqueta and Stiles (2007) in a study involving 314 university students in Norway **(31).**

Hopelessness seems to be minimized by the level of life satisfaction and level of self-esteem exhibited by the individuals, while the key factor to the mitigation of suicidal thoughts seems to be perception of **social support**. Connectedness and sense of coherence were studied by Drum et al. (32) among 26,742 university students from 74 participating institutions in the US. Connectedness mitigated the impact of distress while sense of coherence mitigated the impact of pre-existing vulnerabilities on movement along the suicidal continuum **(32)**.

Screening

Suicidality in the college student is a growing concern and many studies have demonstrated that before a student's death by suicide about 50% visited a primary care provider within the month preceding and 25% had been under the care of a mental health professional the month preceding the event **(33).**The need to develop a better tool to screen for suicide risk in the college student in order to decrease the loss of life is paramount. According to Frick, Butler and deBoer, there was a slightly higher prevalence of suicidality during the sophomore year when compared with all other years, which were equivalent **(33).**That same study identified that increased awareness and universal screening of college students demonstrated a significant increase in referrals to the mental health provider along with more than doubling the number of individuals that scheduled appointments with these providers **(33).**

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