

Understanding Prevalence and Association of Suicidal Ideation, Deliberate Self-Harm, Stress, Anxiety Depression, and Mood Swings in Pakistan University Students: A Multilevel Analysis

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Abstract

Background: Prevailing literature supported the relationship among deliberate self-harm, depression, and mood swings, a noticeable risk variable of suicide in youth. The purpose of present study was to examine the potential mediation of suicidal ideation in the relationship among deliberate self-harm, depression, positive and negative affect in male and female university students. However, there is a lack of clarity and scarcity of previous studies on above subject matter globally.

Methods: In present study, a purposive sampling technique and cross-sectional design were used. 200 university students with self-harm tendency, age ranged from 18 to 24 ($M = 20.15$, $SD = 10.02$) years, they were enrolled from different public and private universities of twin's cities of Rawalpindi and Islamabad, Pakistan, in 2020. Four instruments, Beck Scale for Suicide Ideation, Inventory of Statement about Self-Injury (ISAS), Depression Anxiety Stress Scale (DASS), and Positive and Negative Affect Schedule were used to examine deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in university students.

Results: The results of study revealed that suicidal ideation was positively significantly associated with deliberate self-harm, depression and stress in university students. Further, deliberate self-harm was positively significantly associated with stress, anxiety, and depression. Moreover, this study revealed that suicidal ideation partial mediated between deliberate self-harm and positive affect in male university students.

Conclusions: The findings of present study recommended that both deliberate self-harm and suicide ideation could be stimulated mental health problems including stress, depression, and mood swings in university students. Moreover, this study illustrated the need for early screening of deliberate self-harm to prevent and tackle the risk of mental health issues including suicidal ideation, depression and moods swings.

Keywords: Suicidal ideation, deliberate self-harm, stress, anxiety depression, and mood swings

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Background

The mental health in young individuals remains to be a significant public health problem globally (Baker et al., 2020; Islam et al., 2020; Vu et al., 2018). It has an important impact to the burden of disease worldwide (Kinchin & Doran, 2018; Kisa & Collaborators, 2019; Patton et al., 2016). Nowadays, there is an agreement among research scholars all over the world that mental health issues cover a variety of diseases including self-harm, suicidal ideation, stress, anxiety, and depression in youngsters which may vary in duration and intensity as well as may arise rarely and might have deleterious impacts on the mental health and quality of life (Nisar et al., 2020; Noor et al., 2016; Vu et al., 2018).

Self-harm is defined as intentionally harm to oneself; whereas suicide refers to the act of readily causing your own death (Abdelraheem et al., 2019; Nock, 2009). Every year, approximately 800,000 peoples die from suicide worldwide (Naghavi, 2019). A study conducted by World Health Organization demonstrated that suicide rates in youngsters age ranged from 15 to 29 years have been consistent, with 4 in every 100,000 in 2003 to 3.9 in every 100,000 in 2016, meaning that suicide is still a major public health issue (Portugal, 2013). Self-harm is an increasing public health concern (Abdelraheem et al., 2019; Hawton et al., 2003, 2012).

Suicide is characterized as the act of taking one's life and it is considered a public health problem that has harmful impacts on mental health of human and its families and societies (Steele et al., 2018). As per survey of World Health Organization (2014), it illustrated that approximately 800,000 individual's die from suicide yearly, comparing to a universal suicide ratio of 10.7 each 100,000 populace (World Health Organization, 2014). Suicidal ideation defines to feelings, thoughts or consistent patterns of negative thinking or feeling that relate to life being difficult and not value living as well as lead to a preoccupation with self-harm behavior, or whether to perform on these negative thoughts or feelings (Ford & Gómez, 2015). Ideation may vary in intensity and duration from a submissive desire to die to active feelings and thoughts that include a strategy to finish one's life (Turecki et al., 2019).

Self-harm defines as deliberate self-inflicted harm (e.g., burning, cutting, hitting, or scratching oneself) (Klonsky et al., 2015; Klonsky & Glenn, 2009; Steele et al., 2018). Persons who self-harm can involve in harmful behavior without or with committed to die (Ford & Gómez, 2015) however are at raised risk of suicidal ideation (Andover & Gibb, 2010). Non-suicidal ideation leads for self-harm behavior which involves the emotional regulation of chronic levels of pain, to interconnect distress, as well as to punish one's self (Ford & Gómez, 2015). Recognizing and comprehending the deleterious antecedents and consequences that stimulate probability of self-harm behavior and suicidal ideation is a worldwide public health concern (World Health Organization, 2014).

This knowledge may helpful and provide insight to risk evaluation and assist the improvement of individualized methods to the treatment or intervention of suicidal ideation and suicide-related consequences such as distress, stress, anxiety, depression, mood swings and borderline personality disorder. Suicidal behaviors and thoughts are affected by numerous cultural, social, environmental, and biological

factors (Ma et al., 2016; Toqeer et al., 2021).

These risk factors usually linked to suicidal ideation including psychiatric history, low socioeconomic status, and unemployment (McClatchey et al., 2017; Rashid et al., 2021; Sarfraz et al., 2021). Specifically, a history of childhood trauma including emotional and sexual abuse has been constantly associated with high risk of suicidal ideation in old age (Brodsky & Stanley, 2008; Thompson et al., 2019). Nevertheless, aforementioned natural and traumatic childhood experiences are fixed risk factors that may not be directly improved and amended. In opposite, vigorous risk factors including physiological and psychological are directly and indirectly associated and caused of suicide. They are changeable or treatable as well as can be handled and managed by different advance therapeutic interventions and preventions globally. Therefore, this present study is trying to identify and recognize these causal dynamic cognitive and psychological risk factors that lead toward suicidal ideation. Many previous theoretical models that concentrated to clarify pathways to suicidal behaviors and ideation have similarly highlighted the importance of psychological, physiological and environment risk factors. Namely, the Integrated Motivational-Volitional model (O'Connor & Kirtley, 2018), the Schematic Appraisals Model of Suicide (Zubrick et al., 2017), and the Interpersonal Theory of Suicide (Joiner et al., 2012) recognized cognitive and psychological factors linked to risk of suicidal ideation in adult and adolescents that theoretically similar with Young's early maladaptive schemas. The Interpersonal Theory of Suicide and the Integrated Motivational-Volitional model highlighted that persons develop pessimistic thoughts and a wish to commit suicide when they experienced unable to modify two ideas: "perceived burdensome-ness" and "thwarted belongingness" (Chu et al., 2017; Aqeel et al., 2020).

As per above mentioned theories, Humans have an inborn desire to belong with others society members. However, Thwarted belongingness defined as to the cognitive- affective state causing from this desire for social and physical interaction not being met with others (Chu et al., 2017). Many previous studies results are in favor of the Interpersonal Theory of Suicide that explained social isolation is one of most strong causal factor for suicidal ideation, suicidal behavior, and suicide attempts in different samples of adolescents and adult (Chu et al., 2017; Ordóñez-Carrasco et al., 2021). Klonsky and May's (2015) proposed three Step Model that similarly explained that interaction and socialization with others can protect factor against the growth of suicidal ideation and behavior in persons suffering hopelessness and pain (Klonsky & May, 2015). This model is aligned with schema theory, these approaches demonstrated that the perceived frustration of personal and social desires is a very important factor in the progression of suicidal behavior and ideation (Klonsky & Glenn, 2009; Klonsky & May, 2015).

In the escape theory of suicide (Baumeister, 1990; Palmier-Claus et al., 2012), suicidal behavior is seen mostly as an effort to flee from negative emotions. Further theorists have emphasized the motivation to flee as central to suicide (Palmier-Claus et al., 2012; Taylor et al., 2009). On the other hand, the interpersonal theory, states that when people hold two specific psychological states in their minds

simultaneously, they develop the desire for death. The two psychological states are perceived burdensomeness and a sense of low belongingness or social alienation (T. Joiner, 2009). Internationally, more than 300 million inhabitants experience depression (Wetherall, Robb, & O'Connor, 2019). It is the most common mental health problem globally (Saif et al., 2021; Vos et al., 2015; Wetherall et al., 2019). Depression is mostly described as an irresistible unhappiness, anguish and despair that can last for months or years (Ferrari et al., 2013; Wetherall et al., 2019). Examples of symptoms include, but are not limited to, a loss of energy, hunger and self-confidence (Wetherall et al., 2019). A history of self-harm, being a strong predictor of dying by suicide (Wetherall et al., 2019; Young et al., 2014). Most of the researches recognize factors contributing to its etiology; these include biological, environmental, social and psychological variables (Schnaas, 2003; Wetherall et al., 2019). The hopelessness theory of depression, posits that repeated exposure to uncontrollable and aversive environmental stimuli leads gradually to the belief that the aversive situation is inescapable and a sense of helplessness ensues regarding the situation and results in depression (Liu et al., 2015). On contrary, Albert Bandura's social cognitive theory (SCT) suggested that people are formed by the connections between their behaviors, thoughts, and environment. Human behavior is a product of learning through observation and experience. Those with depression tend to grasp themselves totally responsible for bad things in their lives and are occupied of self-blame (Hafsa et al., 2021; Noor et al., 2016; Oswalt, 1995).

Nowadays, the prevalence of deliberate self-harm have increased day by day in all over the world and, remarkably, female adolescents were found in deliberate self-harm as compared to male adolescents. Many previous studies are well recognized that those individuals who suffering from mental health problems such as borderline personality disorders, anxiety and depression because of a traumatic experience are more probability to involve in self-inflict injuries. Many individuals have believed as the act of deliberate self-harm to confer upon the person a sense and feel of relief and release from a dreadful state of mind as well as suffering. Prior study's findings explained the causal association between deliberate self-harm, suicidal ideation and depression in adolescents and adults (Dubicka & Brent, 2017; Hawton et al., 2012).

The purpose of present study was to examine the association among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in Pakistani university students. Moreover, to explore the potential mediation pathways among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect. Additionally, it investigated prevalence and differences of gender on deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect.

Method

Research design

A purposive sampling and cross-sectional design were used to carry out this study.

Objectives

1. To examine the association among deliberate self-harm, suicidal ideation, depression, anxiety, stress,

negative and positive affect in Pakistani university students.

2. To investigate the potential mediation pathways among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in Pakistani university students.
3. To investigate prevalence and differences of gender on deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect.

Hypotheses

1. Deliberate self-harm was positively associated with suicidal ideation, depression, anxiety, stress, negative and positive affect in Pakistani university students.
2. Suicidal ideation was positively associated with depression, anxiety, stress, negative and positive affect in Pakistani university students.

Participants

A purposive sampling and cross-sectional design were used to carry out this study. The sample consisted regular 200 university students, with 100 females and 100 males age ranged from 18 to 24 ($M = 20.15$, $SD = 10.02$) years. 200 university students were enrolled from different public and private universities of twin's cities of Rawalpindi and Islamabad, Pakistan, in 2020. The following inclusion and exclusion criteria were used: only those undergraduate male and female students were participated in present study. An inclusion criterion was set for university students who confirmed deliberate self-harm through deliberate self-harm scale, they were included in present study. Klonsky and Glenn (2009) defined deliberate self-harm (e.g., burning, cutting, hitting, or scratching oneself). Those students who meet the aforementioned deliberate self-harm criterion and they were included in present study and those students who did not fulfill the above mentioned criterion were excluded from study. Those participants who have any psychological and physiological problems were excluded from current study.

Measures

Four instruments, Beck Scale for Suicide Ideation, Inventory of Statement about Self-Injury (ISAS), Depression Anxiety Stress Scale (DASS), and Positive and Negative Affect Schedule were used to examine deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in university students.

Positive and Negative Affect Schedule.

This scale is used to assess positive and negative affect of adolescents and adults. Each item of scale is rating of the level of agreement on a scale from 1 (*not at all applicable*) to 5 (*extremely applicable*). It is an 20-item instrument that comprises of two subscales: Positive and Negative affect (Hussein et al., 2008; Tellegen et al., 1998). Greater scores on both subscales reflected greater occurrence of positive and negative affect. This instrument revealed sufficient reliability ($\alpha = .72$) and validity for present study sample.

Inventory of Statement about Self-Injury (ISAS). This instrument (Klonsky & Glenn, 2009; Nisar et al., 2020) is an 39-item scale that is used to measure deliberate self-harm tendency in adolescents and

adults population. Each item of scale is rating of the agreement's level on a scale from 0 (*not at all relevant*) to 2 (*very relevant*). Higher scores on this scale reveals high tendency of deliberate self-harm. Whereas, lower scores of this scale reflects lower tendency of deliberate self-harm. This instrument revealed sufficient reliability ($\alpha = .90$) and validity for present study sample.

Beck Scale for Suicide Ideation. It is an 19-item instrument that is used to measure tendency of suicidal ideation in adolescents and adults. Each item of scale is rating of the agreement's level on a scale from 1 (*not at all applicable*) to 5 (*extremely applicable*) (Ayub, 2008). Higher scores on scale demonstrated higher prevalence tendency of suicidal ideation. This instrument illustrated sufficient reliability ($\alpha = .70$) and validity for present study sample

Depression Anxiety Stress Scale (DASS). It is applied to measure anxiety, depression, and stress in university students (Lovibond & Lovibond, 1995). It is an 42-item instrument that asks students to rate and response their agreement's level on scale of 3 (*applies to me very much*) and 0 (*did not apply to me at all*). Higher scores on subscales of DASS revealed higher prevalence of stress, anxiety and depression in university students. This instrument illustrated sufficient reliability ($\alpha = .79$) and validity for present study sample.

Procedure

This present research was performed in agreement with the ethical guidelines of Foundation University Islamabad and American Psychological Association (APA).

This current research and its instruments were sanctioned by the institutional Ethical Review Committee of Foundation University Islamabad, Pakistan. Two hundred university students were recruited from different public and private universities of twin's cities of Rawalpindi and Islamabad, Pakistan. Verbal and written informed consent was obtained all study's participants. Only those volunteer university students were included who articulated their willingness to participate in present study. Four self-report instruments were used to collect present study's data. The university students were invited to fill a set of instruments within time of 20 minutes. Consent to carry out current study was sought from the higher school's authority after clarifying them the purpose of the research as well as ensuring them that study's information of participants would be kept secret.

Analysis plan

First of all, missing values of deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect were handled on SPSS18 through an imputation method (Field, 2017). Subsequently, the Pearson correlation technique was used to study the association among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in university students (Field, 2017). Finally, a moderation and mediation analysis was carried out to examine the potential mediation pathways among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in university students (Baron & Kenny, 1986), through SEM 21 (Byrne, 2013).

Results

Table 1

Correlation matrix among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in University students (N = 200)

Variables	M	SD	α	1	2	3	4	5	6	7	8	9
1.Suicidal ideation	31.87	7.140	.70	-	.48**	-.02	-.11	.10	.25**	.26**	.16	.22*
2.Deliberate self-harm	65.45	18.80	.90		-	.01	.01	.01	.27**	.25**	.30**	.16*
3.PANAS	57.60	12.61	.72			-	.75**	.74**	.18**	.14	.17*	.16*
4.Positive affect	30.96	8.54	.71				-	.12	-.12	-.16*	-.07	-.10
5.Negative affect	26.72	8.31	.68					-	.43**	.39**	.37**	.36**
6.DASS	45.97	11.74	.79						-	.85**	.84**	.87**
7.Depression	14.97	11.74	.67							-	.56**	.61**
8.Anxiety	15.40	11.74	.78								-	.65***
9.Stress	15.53	4.49	.65									-

Note. PANAS=Positive and negative affect; DASS= Depression, anxiety and stress scale, * $p < .01$, ** $p < .00$, *** $p < .000$.

Table 2

Gender wise differences on deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect (N= 200)

Variables	Male students (n = 100)		Female students (n = 100)		t(df)	p	Cohen's d
	M	SD	M	SD			
Suicidal ideation	35.07	6.78	30.85	6.98	2.7(198)	.01	.05
Deliberate self-harm	65.96	20.96	65.74	18.14	.05(198)	.95	-
PANAS	60.23	11.71	56.97	12.80	1.48(198)	.14	-
Positive affect	30.95	7.30	31.08	8.87	-.09(198)	.92	-
Negative affect	29.23	8.69	26.01	8.13	2.23(198)	.02	.04
DASS	46.38	8.84	45.72	12.50	.32(198)	.74	-
Depression	15.34	4.32	14.82	5.11	.60(198)	.54	-
Anxiety	15.90	4.05	15.20	4.30	.95(198)	.33	-
Stress	15.13	3.02	15.61	4.83	-.61(198)	.53	-

Note. PANAS=Positive and negative affect; DASS= Depression, anxiety and stress scale.

Table 3

The mediating role of suicide ideation in the relationship among deliberate self-harm, positive and negative affect in male and female university students (N=200)

Variables	Suicidal ideation			Positive affect			Negative affect		
	B	SE	β	B	SE	β	B	SE	β
<i>Male students(n=100)</i>									
Deliberate self-harm	.27	.05	.74***	.26	.09	.72***	-.08	.12	-.18
Suicidal ideation				-.58	.26	-.60**	.02	.34	.01
<i>Female students(n=100)</i>									
Deliberate self-harm	.18	.04	.48***	.00	.05	.01	.01	.05	.02
Suicidal ideation				-.17	.16	-.13	.08	.14	.07

Figure 1. The mediating role of suicide ideation in the relationship among deliberate self-harm, positive and negative affect in male university students (N=100)

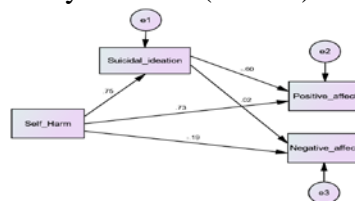
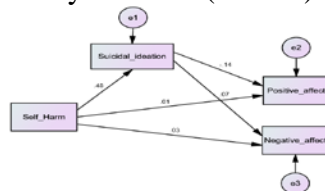


Figure 2. The mediating role of suicide ideation in the relationship among deliberate self-harm, positive and negative affect in female university students (N=100)



Results

In Table 1, The Cronbach's alpha coefficient was suitable for all the study instruments which used in the current research. The result of present study revealed that suicidal ideation was positively significantly associated with tendency of deliberate self-harm, depression and stress in university students. Further, it demonstrated that tendency of deliberate self-harm was positively significantly associated with stress, anxiety, and depression. Additionally, positive affect was positively significant associated with stress and anxiety. Moreover, negative affect was negatively significant associated with depression in present study.

The results of independent samples *t*-test in Table 2 demonstrated that there is only found significant differences on suicidal ideation ($t = 2.7, p > .05$) and negative affect ($t = 2.23, p > .05$) in male and female university students. This study's results also revealed that female university students ($n = 100, M = 35.07, SD = 6.78$) were shown more tendency of suicidal ideation compared to male university student ($n = 100, M = 30.85, SD = 6.98$). Further, the results of present study illustrated that female university students ($n = 100, M = 29.23, SD = 8.69$) were shown more tendency of negative affect compared to male university student ($n = 100, M = 26.01, SD = 8.13$). However, The results of independent sample *t*-test also provided information that there was found non-significant differences between male and female university students on deliberate self-harm, depression, anxiety, stress, and positive affect.

Table 3 illustrates the results for the model investigative the mediating role of all study variables in present study. The study's results revealed that the present model fit adequately; $\chi^2(2) = 4.74, \chi^2/df = 2.37, p < .09, RMSEA = .08 (.00, .18), IFI = .91, CFI = .91, NFI = .90, TLI = .90$.

This study's results illustrated that deliberate self-harm was statistically significant positively predicting to suicidal ideation ($\beta = .74, p < .000$) and positive affect ($\beta = .72, p < .000$) in male university students. However, suicidal ideation was statistically negatively predicting to positive affect ($\beta = -.60, p < .01$) in male university students. Additionally, this study's results demonstrated that deliberate self-harm was statistically significant positively predicting to suicidal ideation ($\beta = .48, p < .000$) among female university students. These findings displayed that suicidal ideation partial mediated in the relationship among deliberate self-harm and positive affect in male university students. Moreover, it illustrated that gender was also playing role of moderator among deliberate self-harm, positive and negative affect.

Discussion

The purpose of present study was to examine the association among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in Pakistani university students. Moreover, to explore the potential mediation pathways among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in male and female university

students. Additionally, this study also explored prevalence and gender differences on deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect.

The findings of the present research demonstrated that deliberate self-harm was statistically significant positively associated with mental health problems including suicidal ideation, stress, anxiety, and depression in Pakistani university students. The findings of this study is supporting and consistent with our first objective and both hypotheses. Furthermore, the findings also demonstrated that suicidal ideation partial mediated in the relationship among deliberate self-harm and positive affect in male university students. Moreover, this study's results revealed that gender was also playing role of moderator among deliberate self-harm, positive and negative affect. This study's results are consistent with our second objective. Our study's findings are also consistent with numerous previous studies. Furthermore, this study's results illustrated that female university students were shown more tendency of suicidal ideation compared to male university student. Additionally, the results of present study demonstrated that female university students were shown more tendency of negative affect compared to male university student.

The first objective of the present study was to examine the association among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in Pakistani university students. The findings of the present research demonstrated that deliberate self-harm was statistically significant positively associated with mental health problems including suicidal ideation, stress, anxiety, and depression in Pakistani university students. The findings of this study is supporting and consistent with previous study's results. Many earlier studies suggested that deliberate self-harm could stimulated and lead toward suicidal ideation and behavior in young students (Brausch & Gutierrez, 2010; Castellví et al., 2017). In contrast, a few studies illustrated that deliberate self-harm can be reduced tendency of suicidal ideation and behavior (Nock, 2009). However, many research scholars believed that deliberate self-harm was one of the most important leading risk factor for suicidal ideation in youngsters (Godoy Izquierdo & Godoy, 2004). Additionally, many previous studies explained that there is not cleared association between deliberate self-harm and suicidal ideation because of their complex relationship. Sometime, both factors occurs simultaneously and drag toward different mental health issues including stress, anxiety, depression, post-traumatic stress disorder, substance abuse, borderline personality disorder, attention deficit, impulsivity, conduct disorder. This present study also explored complex and controversial relationship between study variables. Moreover, to explore the potential mediation pathways among deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect in male and female university students.

Additionally, this study also explored prevalence and gender differences on deliberate self-harm, suicidal ideation, depression, anxiety, stress, negative and positive affect. This study's results

illustrated that female university students were shown more tendency of suicidal ideation compared to male university student. Additionally, the results of present study demonstrated that female university students were shown more tendency of s negative affect compared to male university student. Nowadays, the prevalence of deliberate self-harm have increased day by day in all over the world and, remarkably, female adolescents were found in deliberate self-harm as compared to male adolescents.

Limitation

Overall, the present research has several limitations. First of all, this study was conducted through cross-sectional design, the causality and temporality of the experimental relationship of the deliberate self-harm associated with suicidal ideation, depression, anxiety, stress, and negative and positive affect cannot be established. Secondly, a noteworthy drawback is the reliability and validity of the collected data. This study was based on self-reported data and may therefore be affected by inaccuracy, insecurity and social desirability. Students may have felt uncomfortable revealing self-harm, suicidal ideation as well as preferred not to reveal them. Finally, Future researches should consider that selecting large sample and from more than one source can be more representative of population. Using measures other than self-reported in case of self-harm and suicidal ideation would be more productive.

Implications of study

The results of present study provided and guided to new directions for preventing and management of deliberate self-harm and suicide ideation in youth. These findings are not only helpful in development of the prevention of deliberate self-harm and suicide ideation but it also applied to comprehend the antecedent and consequence of suicide ideation in students that might

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Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions/Author details

Miss Meezab Shahzad performed the main study under the supervision of Dr. Khadeeja Munawar. Dr. Fahad Riazwrote the article under the guidelines of Nature-Nurture Journal of Psychology.

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Ethics declarations

Ethics approval and consent to participate

This study was approved by the Institutional

stimulates the risk of self-harm and suicidal ideation as well as these causal factor may further trigger mental health issues in university students. This present research suggested that new preventions and interventions should be developed to tackle and management of suicide ideation and self-harm in Pakistani school settings.

Conclusion

Young university students with deliberate self-harm, suicidal ideation or behavior experienced a considerably higher risk of mental health problems including mood swings, stress, anxiety, and depression as compared to those university students who had not experienced like threats. This study also suggested that suicide ideation and deliberate self-harm could be triggered mental health problems such as depression and mood swings in young university students. Moreover, the results revealed the need for prompt identification of deliberate self-harm to prevent and tackle the risk of psychological issues including suicidal ideation or behavior, depression and moods swings in young university students. Additionally, this unique study's evidence could be used to inform decisions related to the provision of means to address and management this significant public health problems in the setting of any underdeveloped countries like Pakistan.

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Ethical Consideration

The study was approved by the Foundation University Islamabad. Consent Form was taken before taking data and participants were asked to take voluntary participation

Review Board (Foundation University Islamabad). A written informed consent was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare to have no competing interests.

Additional Information

Not applicable.

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