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ORIGINAL ARTICLE

Moderating Role of Impulsivity Between Depression and Suicidal Ideation Among University Students

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ABSTRACT

Aim: The aim of this research was to examine the moderating effect of impulsivity in the relationship between suicidal ideation and depression in college students.

Method: The current study employed a cross-sectional correlational methodology to determine the association between the variables. G power was used to determine the sample size, and the convenient sampling procedure was used to select 200 participants, with age range of 18 to 25 years. The information was gathered from various universities in Lahore, Punjab, Pakistan. Participants' demographic information, the Barratt's Impulsiveness Scale, the Columbia Suicide Severity Rating Scale (C-SSRS), and the Depression, Anxiety, and Stress Scale—21 Items (DASS-21) were utilized to collect data. The data was analyzed using SPSS version 24, and the Person product moments correlation and regression analysis tests were used to validate the results.

Results: The results of these investigations are reported, our findings, which show that impulsivity significantly positively attenuated the link between suicidal ideation and depression [β =.403, = 0.637; p <0.05] among university students.

Conclusion: The recent study revealed that impulsivity is important in the link between depression and suicidal ideation.

Keywords: Impulsivity, Depression, Suicidal Ideation, University Students

INTRODUCTION

Depression is a widespread mental illness that affects an estimated 300 million individuals worldwide[1]. It is distinguished by a continuous sense of sadness and an inability to engage in things that one generally enjoys, as well as an inability to carry out daily activities for at least two weeks. Globally, depression is projected to affect 4.4% of the world's population[1]. It can be recurring or chronic, and it severely hinders an individual's capacity to function and cope with daily life[1]. It is not the same as plain grief, bereavement, or a mourning mood, which are all valid emotional reactions to unfavorable situations[2]. Depression is the primary cause of disability and a significant component to the total global disease burden[3]. Despite the fact that depression affects people of various ages, it has been discovered that this mental illness has a variety of distinct symptoms[4].

Research indicates that college students are more likely than the general population to experience depression[5]. This may be because they experience one of the most stressful times in a person's life and are a particularly vulnerable group as a result of the crucial transition from adolescence to adulthood[6]. A number of factors have been linked to an increased risk of depression in students, including female gender[7,8], hopelessness about the future[7], difficulties in relationships and academics[9], financial burden[10], low social support[11], post-traumatic stress disorder and sleep issues[12], family issues[13], death of a family member [9], domestic violence[9], addiction to cigarettes and alcohol[14], and substance abuse[15]. Depression, if ignored and not treated, can progress, worsen and lead to self-harm with the most severe end-result being suicide[1].

The term "suicidal ideation" refers to contemplating suicide[16]. A significant predictor of both attempted and successful suicides, suicidal ideation is also a sign of further mental health issues in young people[17]. Suicide is the second greatest cause of mortality globally for individuals aged 15 to 29. This poses a serious public health concern, according to the World Health Organization (WHO)[3]. Suicidal ideation has been linked to depression in numerous studies[18, 20]. An investigation conducted on teenagers in Malaysia found that those who reported having depression had a considerably higher prevalence of suicidal thoughts (55.8%) than did those who did not (14.4%)[19].

Research indicated that depression is a significant mental health issue that could have a variety of knock-on repercussions for pupils. Suicidal ideas or thoughts, which may result in suicide attempts or actual suicide, are one of these knock-on effects. Suicidal ideation or ideas, communications connected to suicide, suicide attempts, and ultimately suicide constitute the continuum of suicidality or suicidal behavior[21]. Although a survey of theoretical and empirical works reveals that studies on depression and its impact on Pakistani students are widespread, there aren't many that look at how depression affects suicidality in Pakistani students. Studies on suicidality in developing countries are scarce due to a variety of factors, including socio-cultural taboos, political and economic instability, cultural and religious diversity, and beliefs[22, 23, 23 & 25]. Regarding taboo, suicide is viewed as a dishonorable act, and relatives of suicide victims rarely come out to confirm that a loved one has taken their own life. The indigenous studies on depression and suicidal ideation by Zakaria & Hasan (2020)[26], Sabiha et al., (2022)[27], and Zakaria et al., (2020)[28], indicated that Suicidal thoughts and psychological distress have been positively correlated with difficulties in regulating emotions among students. The studies further more explained that females have high degree level of correlated behaviors of depression and suicidal as to male students.

The tendency to act on a whim or without giving the consequences any thought is known as impulsivity[29]. It is frequently examined in connection with making decisions Factor evaluations of instruments used to measure impulsivity have shown several facets of this characteristic. There are four basic criteria found in most self-report impulsivity measurement instruments. These are urgency, sensation-seeking, lack of fortitude, and lack of premeditation. Being unpremeditated is doing without any prior planning or deliberation. The pursuit of novel and thrilling encounters is known as sensation-seeking. The failure to maintain concentrate on a single task for extended periods of time is a sign of a lack of tenacity. Finally, urgency is a reflection of the propensity to make snap decisions based on feelings that you will probably regret later[30].

According to Neufeld & O'Rourke (2009)[31], impulsivity is one of the biggest risk factors for suicide, especially in people who have hopelessness and depressive symptomatology. Even though impulsivity in suicidal ideation and behavior has been thoroughly studied, there is still disagreement over whether suicide victims primarily plan their actions or whether their actions are a result of a string of traumatic events that ultimately make it possible for them to carry out the suicidal act. Anestis et al. (2014)[32] contend that rather than being as directly linked to suicidal behavior as has been thought over the previous three decades, impulsivity traits should be better understood as distal risk factors that moderate the impact of experiences or precipitating events that might heighten a person's propensity to commit suicide.

Impulsivity and depression have been found to be two independent variables that are linked to suicidal ideation in several researches[33, 34]. A linear regression model was developed in a different study[35], which discovered that suicide ideation was independently predicted by depression and that suicidal ideation was influenced by impulsiveness when it interacted with traumatic experiences. The research on the relationship between impulsivity and suicidal ideation is conflicting, and it's unclear how impulsivity and depression interact to predict suicidal ideation.

Objective of the Study:

1. To find out the moderating role of impulsivity in relation between and suicidal ideation and depression among university students.

MATERIALS AND METHODS

Research Design: This study examined the moderating influence of impulsivity in the relationship between suicidal ideation and depression among college students by using a cross-sectional and co-relational research design.

Research Study Area & Sampling Technique: Convenience sampling technique was used for the data collection process. The participants were drawn from a variety of Pakistani universities located in Lahore, Punjab.

Sample Size: A total of 200 participants were recruited. The sample size was calculated using the G-Power software. The age of the participants ranged from 18 to 25 years. The sample included both males and females currently studying at different universities. The data was collected using questionnaires.

Study Instrument: The demographic sheet was used to gather information regarding the participant's name, age, gender, birth order the institution of which or e/she is a student, parent' occupation, and family setup. The Columbia Suicide Severity Rating Scale (C-SSRS) (Baseline/Screening Version) This version of the scale was developed by Kelly Posner and her colleagues in 2009 for screening individuals for suicidal ideation and suicidal behavior. It has four subscales: suicidal ideation, intensity of ideation, suicidal behavior, or and actual attempts. The scores are interpreted as follows: moderate (6-10) 1ess the risk of suicide, mod. Severe (11-15) 1es the risk of suicide, severe16–20) 1es the risk of suicide, very severe (21-25344x times the risk of suicide. The Cronbach's alpha of scale is 0.93 for the whole sample. The 30-item BIS-11 is a self-report assessment of impulsive personality traits (Patton, Stanford, & Barratt, 1995; Stanford et al., 2009). Three subscales are scored on this scale: non-planning impulsivity, motor impulsivity, and attention impulsivity. A 4-point Likert scale, ranging from 1 (rarely/never) to 4 (very usually), is used to rate the items. The results of the BIS-11 show strong internal consistency (Cronbach's α = 83; Stanford et al., 2009) and test-retest reliability (Spearman's Rho = 0.83). The Depression, Anxiety, and Stress Scale—21 Items (DASS-21) by (Lovibond & Lovibond, 1995). is a set of three self-report scales designed to measure the emotional states of depression, anxiety, and stress. Each of the three DASS-21 scales contains seven items, divided into subscales. The overall Cronbach's alpha for the DASS-21 scale was 0.74. The depression subscale has a Cronbach's alpha value of 0.66. Only the scores of the depression subscale were used in this study.

Data Analysis Tools: The analysis of the data has been done using the statistical package for social sciences (SPSS) version 24. The multiple regression and person product moment correlation tests were applied to the research variables to check the degree of association.

Ethical Considerations: The head of the institute, the ethics committee, the psychology department of Bahria University Lahore, and the Ethical Review Board was provided their ethical approval. In order to protect the participants' privacy and confidentiality, informed consent was also obtained.

Procedure: Several universities in Lahore, Punjab, Pakistan, provided the data. During university hours, individuals directly approached the participants. While some volunteers declined to participate in the study, others did. The scales and a demographic sheet were given to study participants who consented to participate. All participants also provided written consent. The topic, design, and goals of the study, as well as the process for completing the questionnaire and the significance of the research, were explained to the participants. They received guarantees that the data they submitted would be kept private and used exclusively for study. Every participant received individual instruction. Each item was to be carefully read by each participant, and their response was to select one from the possibilities provided. Three weeks were used to gather all of the data for this study, and it took an average of 15 to 20 minutes for each participant to complete the questionnaire. Participants were appreciated for their cooperation and involvement at the end.

RESULTS & ANALYSIS

Table 1 presents bivariate correlations between variable measures for university students. The data indicates a strong positive correlation between impulsivity and suicidal thoughts (r=.214*) and a positive and significant correlation between impulsivity and depression (r=.302*). Likewise, among college students, there was a strong positive correlation (r=.779**) between depression and suicide thoughts.

Table 1: Inter-Correlations Measure for University Students.

Variables	1	2	3
Impulsivity	---	.302*	.214*
Depression	__	---	.779**
Suicidal ideation (SI)	__	__	__

**p < 0.01., *p < 0.05 Coefficients are for students (N = 200).

Several analyses were carried out with depression and suicidal ideation as the dependent variables of students for the entire study, testing for a potential moderating impact of impulsivity between depression and suicidal ideation findings using hierarchical regression analysis. In the first phase, independent variables were input as a covariate. Depression ratings were submitted in Step 2. In phase three, impulsivity scores were recorded. Lastly, the correlations between impulsivity and depression after centering methods were examined in the third phase to look into the moderating effects (Aiken and West, 1991). The results of these investigations are reported in Table 2. Table 2 illustrates our findings, which show that impulsivity significantly positively attenuated the link between suicidal ideation and depression [β =.403, = 0.637; p <0.05] among university students.

Table 2: Hierarchical Regression Analyses Examined the Moderating Influence of Impulsivity between Depression and Suicidal Ideation in University Students.

Variables	ΔR	B	P
Model 1	0.78		
Depression		.403**	.000
R	.354		
R^2	.125		
F	2.67		
Model 2	.76		
Moderator variable		.798*	000
R	.444		
R^2	.214		
F	2.56		

Note: Dependent Variable: Suicidal ideation (SI) & moderator is impulsivity

DISCUSSION OF FINDINGS

In this survey, 43.9% of the undergraduate participants had a solid understanding of depression. Among the responders, depression and suicidal thoughts were present in 22.5% and 21.4% of cases, respectively. The study's findings also identified the risk factors—sexual assault, bullying, low self-esteem, poor academic performance, and substance dependence—that are linked to depression and suicide thoughts. Suicidal thoughts were substantially correlated with the presence of depression.

In this study, less than half (43.9%) of the participants accurately classified depression. Similar studies with low awareness of depression were carried out in the western and south-eastern parts of Nigeria (with 10.4% and 17.4%, respectively) and Sri Lanka (17.4%)[36, 37]. On the other hand, 63% of participants in a comparable study among US undergraduates correctly identified depression[35]. Parallels were also observed in a Portuguese investigation, when 61% of participants correctly classified depression[38].

In this study, the prevalence of suicidal ideation was 21.6%. The occurrence of suicide thoughts among students in Botswana[39] was comparable to this. On the other hand, the prevalence was marginally greater than that of a related study carried out in Ethiopia, where it was 19.9%[40]. Moreover, comparable investigations carried out in the US revealed lower rates of 6.6%–11%[41, 42]. Additionally, the results are significantly higher than the general population's prevalence of suicidal ideation, which was shown to be 7.28% in a Lagos state mental health survey[43]. Thus, since this study and other related ones have indicated that undergraduates are more vulnerable, greater focus must be placed on them.

Table 1 illustrates the substantial correlation between depression and suicidal ideation in this study. In this study, 53.8% of the respondents who had depression said they had considered suicide. Numerous investigations have confirmed the substantial correlation between suicidal thoughts and depression[44–46]. Suicidal ideation prevalence rises in tandem with the intensity of depressed symptoms. Numerous comparable research conducted globally have similarly discovered this positive linear association between suicidal thoughts and the degree of depression[44, 46–48]. This implies that an individual's likelihood of having suicidal thoughts increases with the severity of their depressive symptoms.

There were certain risk factors that showed a statistically significant correlation with suicidal thoughts or depression. Nonetheless, a few risk factors were connected statistically strongly to both depression and thoughts of suicide. In this study, risk factors such as impulsivity, bullying, low self-esteem, and sexual assault were statistically linked to depression and suicide ideation. This study finding also shows that impulsivity paly the important role between depression and suicidal ideation. The results further indicated that impulsivity increase the severity level of depression as well as increase the suicidal behaviors which are also reported by previous studies impulsivity and depression have been found a strong variables that are linked to suicidal ideation in several researches[33, 34]. A linear regression model was developed in a different study[35], which discovered that suicide ideation was independently predicted by depression and that suicidal ideation was influenced by impulsiveness when it interacted with traumatic experiences. The research on the relationship between impulsivity and suicidal ideation is conflicting, and it's unclear how impulsivity and depression interact to predict suicidal ideation.

CONCLUSION

There is a clear correlation between depression and suicidal thoughts, suggesting that those who suffer from depression are more likely to consider suicide. The study also investigated the effects of impulsivity in conjunction with traumatic experiences on depression and suicide ideation.

Recommendation: Based on the study's findings, the following recommendations were made. The Federal Ministry of Health, in collaboration with non-governmental organizations and school administrations, should raise awareness of the causes and manifestations of depression among students and the general public. Periodic screening for depression and suicidal ideation should be done in universities to allow for early detection of these issues and early intervention measures to address them. The school administration should provide effective and user-friendly counseling services to students at higher education institutions, and the Federal Ministry of Health should raise public knowledge of suicide hotlines.

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