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The Role of Anhedonia in Suicidal Ideation among Medical Students: A Predictive Analysis

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ABSTRACT

Objective: *To assess the possibility of anhedonia as the predictor of suicidal ideation in medical students.*

Method: *The survey study was conducted in multiple medical colleges of Karachi, Pakistan. A complete data of 212 medical students was collected after obtaining their informed consent. The scales administered were, Snaith-Hamilton Pleasure Scale (SHAPS)10 and Suicidal Ideation Attribute Scale (SIDAS)11. The relationship between the variables of Anhedonia and suicidal ideation was analyzed using descriptive statistics and regression analysis via SPSS version 25.0.*

Result: *Out of 212 participants, 102 (48.1%) were males and 110 (51.9%) females. The age range of participants were 21 – 25-year-old (22.4±, .971). A linear regression analysis revealed a significant predictive relationship between anhedonia and suicidal ideation in medical students ($R^2 = .210$, $p < .001$).*

Conclusion: *The predictive link between anhedonia and suicidal ideation in medical students was confirmed through linear regression, showing a meaningful relationship.*

Introduction

Experiencing pleasure is the fundamental essence of existence. Pleasure is driven by the brain's reward system where it reinforces behaviors that are essential for survival and wellbeing. However, when an individual loses the tendency to experience pleasure, this condition is known as Anhedonia. This term surfaced in the previous century when it was observed to be in the etiological prediction of many psychopathologies and maladaptive behaviors[1]. The inability to feel pleasure in the activities that were once enjoyable was studied in adults during research using functional MRI and it showed that anhedonia was experienced in the range of likeness (gratifying), want (motivational) and reward[2]. When observed in adolescents, anhedonia was visible through the lack of positive emotions, blunted emotional responses and loss of willingness to perform tasks[3]. Not just the lack of emotional experiences and cognitive limitations Anhedonia is vastly studied as the associated feature of Major Depression citation number). It is also considered as the diagnostic

symptom of psychosis. Above all, it is also observed to be the important constituent of suicidal process (citation number).

Anhedonia has been noted to be the cause of suicidal ideations and attempts. Suicide, the act of ending one's life under the influence of psychological, social or biological factors, does not just happen. It starts from the cognitive process of planning the attempts at suicide to imagine the experience. This phase is known as suicidal ideations. Detailed research observed that even if the depressive symptoms were controlled in participants, Anhedonia persists to be a significant part of suicidal ideation and suicidal attempts indicating that anhedonia is an independent risk factor of suicide[4]. The type and severity of anhedonia have a greater impact on suicidal thoughts and attempts. Occurrence of anhedonia as the symptoms of Major depression, is usually severe and sudden. This kind of Anhedonia is greatly linked with higher risk of suicide[5]. Whereas anhedonia, which is observed as the consistent and chronic pattern of individual, like in psychosis, it is linked with lower possibility of suicide[6].

According to interpersonal psychological theory of suicide (IPT), there are three conditions that can possibly lead to suicide[7]. One, thwarted belonging where a person feels extremely deprived of interpersonal attachments and inclusiveness. Second, perceived burdensome, which is the result of unmet interpersonal and social needs. This often leaves individuals experiencing life struggles to be more burdening than the actual burden. Third factor, acquired capability for suicide, is believed to be the learned behavior after persistently facing failure to overcome the first two factors. The basic factor of this theory, thwarted belongingness is also noted to lead to anhedonia[4]. Considering medical students, they usually face significant risk to suicide in comparison to other populations. Their challenging work and study demand, and exposure to difficult situation (life and death scenarios) along with financial pressures may lead to perceived burdensome[9]. It is also observed by research that medical training is often isolating and provides limited opportunity to foster a strong bond among peers which eventually leads to thwarted belongingness[8]. Therefore, making medical students more vulnerable to suicidal risks than students and professionals of other fields.

Based on previously mentioned studies, the research question formulated for this study is

RQ: *Could anhedonia serve as a significant predictor of suicidal ideation among medical students?*

The current research is focused on observing the possibility of Anhedonia as the predictor of suicidal ideation in the medical students. This study would serve as indicating anhedonia as the precautionary alarm before suicidal risk. The presence of limited or loss of pleasure in students will work predictive factor for suicidal harm. This is hypothesized in our study as that there would be a predictive association between Anhedonia and Suicidal Ideation in medical students.

Subject and Methods

A survey method study was conducted in Karachi, Pakistan. Ethical approval was gained through the Ethical review board (ERB) of institute of clinical Psychology, university of Karachi **No: ICP/ERB/25/09**. The sample was conducted from different medical universities of Karachi. The participants were briefed about their confidentiality of information and right to withdraw. After reading the informed consent and signing into study the participants were requested to fill the form.

The data was collected using Snaith-Hamilton Pleasure scale which is based on 14 items. It is designed to measure the inability to experience pleasure in everyday activities including interests, social interactions, food and sensory experiences[10]. It has four Likert – type scale ranging from strongly agree to strongly disagree. The second scale is suicidal ideation attribute scale which is

based on 5 number of items. This scale is used to measure severity suicidal ideations on the ten Likert – type scale ranging from never to almost always.

Table 1: Reliability of Scales:

Name of Scales	Cronbach's Alpha	Number of Items
Snaith-Hamilton Pleasure Scale (SHAPS)	.907	14
Suicidal Ideation Attribution Scale (SIDAS)	.815	5

The Cronbach alpha of SHAPS and SIDAS showed good reliability for the present study (Table 1). The data was analyzed using SPSS 25.0 version.

Results

With the total of 212 participants 102 (48.1%) were males and 110 (51.9%) were females. They were selected from the 3rd year onwards in their medical education. From the 3rd year there were 79 (37.3%) students. From the 4th year there were 75 (35.4%) students and from the 5th year there were 58 (27.4%) students.

Table 2: demographic information of Participants (N=212)

		Frequency	Percent
Gender	Male	102	48.1
	Female	110	51.9
			100
Educational Year	3rd Year	79	37.3
	4th Year	75	35.4
	5th year	58	27.4
			100.0

The results of a linear regression (table 3a) examining the predictive relationship between anhedonia and suicidal ideation in medical students indicates a significant association ($R^2 = .210$, $p < .001$). The R^2 value of 0.21 indicates the 21% variance was caused by the predictor, anhedonia on suicidal ideation. The coefficient table (3b) shows that anhedonia is a significant predictor (**$\beta = .458$, $p < .001$**), suggesting that higher levels of anhedonia are associated with increased suicidal ideation.

Table 3(a): Linear Regression with Anhedonia as the Predictor of Suicidal Ideation

R	R^2	Adjusted R^2	df	F	Sig.
.458[a]	.210	.206	208	54.952	.000

Table 3(b) Coefficients of Anhedonia as a predictor of suicidal Ideation in medical students

Model	Standardized Coefficient		
Predictor	β	t	P
Constant		11.346	< .001
Anhedonia	.458	7.413	< .001

Discussion

The present study aimed to find the predictive role of loss of pleasure, Anhedonia in suicidal ideation among medical students. The current study supported the hypothesis that there was a

significant association between anhedonia and suicidal ideation in medical students. The population highlighted in this study was from Karachi, Pakistan, which can have its very own factors that influence this relationship. For instance, Pakistan is a collectivistic culture. In Pakistan everyone is brought up in the strong bonded family dynamics even if the set-up home is nuclear[12]. They are born and raised to be involved in relationships and closed bonding. During the medical training, students face severe academic pressure and educational competition, which results in losing their strong bonds over time and eventually leads to lack of interpersonal connections. The activities that they used to do along with their social circle are often limited to isolation[13]. Therefore, the charm and pleasure of those activities diminish.

While considering the cultural value of Pakistan, variation in expected gender roles cannot be disregarded. Our study was based on 48.9 percent of male populations and 51.9 percent of female students. Males in Pakistani society are majorly brought up to internalize their distress and avoid emotional expression. Many men believe that if they would share their pressure and admit to being vulnerable in a given situation they will be labeled as weak[14]. Similarly, females in Pakistani society are attached to more domestic role. Females, who pursue their higher studies faces additional pressure to maintain the dual responsibility of academic and domestic parts of life[15]. This contributes to emotional exhaustion and burdensome feelings in them.

With the recent decline in financial graph of Pakistan and economy inflation has left the people struggling for their basic necessities making higher education is a luxury for many[16]. Pursuing a medical career demands long hours of study, intense workload, and high financial costs, often leading to significant distress among students. Many feel a deep sense of obligation to succeed, driven by the guilt of knowing their families have made immense sacrifices to support their education. This pressure can take a toll on their mental well-being, making it difficult to balance academic expectations with personal fulfillment.

With the burdensome education and societal pressures leading to burnout, seeking mental health support on time might help them from getting any worse. However, living in a society filled with stigma related to this field often causes lack of opportunities to get in touch with healer[17]. Some students also worry about being perceived as 'unfit' if they seek help. They fear that such a label could lead to delays in completing their medical degree or, in extreme cases, even force them to drop out.

The findings of this study have significant implications for mental health awareness and intervention among medical students. As the results of our study show that the presence of anhedonia can predict the presence of suicidal ideation, we can utilize this as the red alert signal for forthcoming damage. Early identification of students experiencing loss of pleasure and diminished interests in activities that were once of interest could enable timely interventions. Medical colleges and universities can utilize this significant characteristic as the baseline for the provision of counseling sessions and mental services. Additionally, the study highlights the detrimental impact of academic pressure leading to burnout, which indicates the dire need for important measures to be taken. For instance, reinforcing structured wellness program and work-life balance strategies or integrate counseling services and mental health awareness as part of curriculum. Ultimately, this study emphasizes the need for medical institutions to prioritize students' psychological well-being alongside their academic and professional training.

Conclusion

This study highlights anhedonia as a significant predictor of suicidal ideation among medical students, emphasizing the critical need to assess and address loss of pleasure in this high-risk population. Given the demanding academic and emotional pressures faced by medical students,

early identification and intervention strategies targeting anhedonia could play a crucial role in suicide prevention. Future research should explore underlying mechanisms, including the role of depression, burnout, and coping strategies, to develop targeted mental health interventions aimed at reducing suicide risk in medical students.

Reference

1. Gorwood P. Neurobiological mechanisms of anhedonia. Dialogues in Clinical Neuroscience. 2008 Sept 30;10(3):291–9. doi:10.31887/dcns.2008.10.3/pgorwood
2. Berridge KC, Robinson TE (2003) Parsing reward. Trends Neurosci 26(9):507–513. https://doi.org/10.1016/S0166-2236(03)00233 -9
3. Watson R, Harvey K, McCabe C, Reynolds S. Understanding anhedonia: A qualitative study exploring loss of interest and pleasure in Adolescent Depression. European Child & Adolescent Psychiatry. 2019 Jul 3;29(4):489–99. doi:10.1007/s00787-019-01364-y
4. Loas G, Lefebvre G, Rotsaert M, Englert Y. Relationships between anhedonia, suicidal ideation and suicide attempts in a large sample of physicians. PLOS ONE. 2018 Mar 27;13(3). doi:10.1371/journal.pone.0193619
5. Loas G. Anhedonia in suicide behavior In Anhedonia : a comprehensive handbook. New York: Springer, 2014.
6. Fawcett J, Scheftner WA, Fogg L, Clark DC, Young MA, Hedeker D, et al. Time-related predictors of suicide in major affective disorder.Am J Psychiatry. 1990; 147(9):1189–94. https://doi.org/10.1176/ajp. 147.9.1189 PMID: 2104515
7. Joiner TE Jr, Brown JS, Wingate LR.The psychology and neurobiology of suicidal behavior. Annu Rev Psychol. 2005; 56:287–314. https://doi.org/10.1146/annurev.psych.56.091103.070320 PMID: 15709937
8. Chew-Graham CA, Rogers A, Yassin N. 'I wouldn't want it on my CV or their records': medical students' experiences of help-seeking for mental health problems. Med Educ. 2003; 37(10):873–80. PMID: 12974841
9. Cornette MM, deRoon-Cassini TA, Fosco GM, Holloway RL, Clark DC, Joiner TE.Application of an interpersonal-psychological model of suicidal behavior to physicians and medical trainees. Arch Suicide Res. 2009; 13(1):1–14. https://doi.org/10.1080/13811110802571801 PMID: 19123105