

Predictive role of negative emotions in exploring psychiatric illnesses among patients with self-harm

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Abstract

Objective: To investigate the predictive role of negative emotions in psychiatric disorders among self-harm patients.

Method: The cross-sectional study was conducted at the Foundation University, Rawalpindi Campus, Rawalpindi, Pakistan, from July 2020 to January 2022, and comprised self-harm patients. Data on negative emotions and psychiatric illnesses was collected using standardised scales and questionnaires. Data was analysed using SPSS 23.

Results: There were 220 patients (males=96, females=124) with mean age 26.44 ± 5.95 years (range: 18-35 years). Depression, narcissistic personality disorder, borderline personality disorder, histrionic personality disorder and antisocial personality disorder were significant predictors of negative emotions among self-harm patients ($p < 0.01$).

Conclusion: Emotions could play a substantial role in worsening psychiatric illnesses among self-harm patients.

Keywords: Negative emotions, Psychiatric illnesses, Self-harm. (JPMA 76: 1619; 2026)

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Introduction

Incidents triggered by self-harm behaviours are increasing drastically¹ and they are 10-20% more widespread than suicide.² According to the World Health Organisation (WHO) in 2018, there were approximately 800,000 deaths yearly due to suicide,³ representing a global suicide ratio of 11.4 per 100,000. A study established that there are about 100,000 self-harming acts being committed in Pakistan alone.⁴ Psychiatric illnesses, like depression, anxiety, drug addiction, emotional dysregulation and low self-image, are related with self-harm behaviours.⁵ Understanding the exact phenomenon of deliberately harming one's own self has perplexed clinicians and researchers as it involves attempts to get an escape from the distressing pain of life.⁶ Extensive empirical evidence in predicting self-harm supports that psychiatric illnesses elevate the incidence of self-harm, including hopelessness, negative emotions, depression, emotional dysregulation and personality disorders (borderline and antisocial personality disorders).² Negative emotions refer to maladaptive coping and responses to significant internal and external events. Psychiatric illnesses by way of physical action re-links the individual with a sense of self or reality by regulating emotions and grounding those emotions in

the experience of bodily sensation.⁷ Therefore, negative affect, being the main component in regulating emotions in order to avoid psychiatric illnesses and self-harming behaviour, deserves extensive research.

Psychiatric illnesses include bipolar spectrum disorder (BSD), depression, anxiety and cluster B of personality disorders. BSD has been defined as an ailment that encompasses mood swings, decreased or increased energy levels, attentiveness and routine tasks.⁸ Personality disorder has been described as a lasting pattern of maladaptive personality features that lead to substantial distress and functional impairment.⁹ Lifetime prevalence¹⁰ for depression is 4-5.7%, and 15-20% for anxiety. In Pakistan, 17.2% cases of depression and 21.4% of anxiety are evident in form of self-harming behaviours.¹¹ A research suggested that in Pakistan, predictive role of negative emotions leads to high incidence of psychiatric illnesses, and creates a relationship among negative emotions, psychiatric illnesses and self-harm.¹² Research has suggested that when psychiatric illnesses do not get relief from negative emotions, desperateness and powerlessness creep in, thus worsening psychiatric illnesses, which may lead the patient to take up self-harm as a choice.¹³ Further, self-harm and psychiatric illnesses may get worse if overlooked, and this threat among the clinical population is significantly higher than in the general population.¹⁴

The current study was planned to investigate the predictive role of negative emotions in psychiatric disorders among self-harm patients.

Patients and Methods

The cross-sectional study was conducted at the Foundation

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University (FU), Rawalpindi Campus, Rawalpindi, Pakistan, from July 2020 to January 2022. Patients admitted with self-harm were approached at the emergency departments (EDs) of different hospitals. Purposive sampling was used as a strategic choice to gain in-depth understanding from the self-harm group, but at the same time it came with trade-offs in terms of bias and generalisation. The sample size was calculated using EpiTool¹¹ with 95% confidence level, 5% level of significance, 6% absolute precision and 71% expected true proportion. Approval was taken from the ethics review board of FU, Islamabad. Those included were individuals aged 18-35 years with at least one year of involvement in self-harm behaviour. Participants having tattoos and/or culturally sanctioned behaviours, having active episode of psychosis or risk of violence and with intellectual disability were excluded. Those having less than matriculation qualification, and those with depression, anxiety, BSD and personality disorders were also excluded.

After taking written informed consent from the patients, negative emotions were measured using the negative affect (NA) subscale of the Urdu version of the Positive and Negative Affect Schedule (PANAS),¹⁵ with higher scores reflecting higher negative emotions. Depression and anxiety were measured using the depression and anxiety subscales of the Depression Anxiety Stress Scale (DASS),¹⁶ with higher scores on depression and anxiety subscales leading to diagnoses of depression and anxiety, respectively. BSD was measured using the Mood Disorder Questionnaire (MDQ),¹⁷ with higher scores suggesting a BSD diagnosis. Cluster B of personality disorders includes dramatic, emotional and erratic personality disorders, leading to histrionic personality disorder (HPD), narcissistic personality disorder (NPD), borderline personality disorder (BPD) and antisocial personality disorder (APD). These were measured using the relevant subscales of the Personality Diagnostic Questionnaire-4 (PDQ-4),¹⁸ with higher score against each subscale reflecting subsequent diagnosis. Later, semi-structured clinical interviews were conducted with each participant as it has been suggested that an interview followed by the administration of psychometric scale is the most effective approach in clinical and research settings.¹⁹

Data was analysed using SPSS 23. Bivariate correlation was used to find relationship between variables, and regression analysis was used to determine causal relationships between the variables. $P < 0.05$ was set as the level of statistical significance.

Results

A sample of 220 patients participated in the study, including 96 males (43.6%) and 124 females (56.4%). The

Table-1: Bivariate correlation among study variables (n=220).

Variables	1	2	3	4	5	6	7
HPD	-	0.33**	0.19**	0.59**	0.16*	0.05	0.05**
NPD		-	0.41**	0.27**	0.02	0.22**	0.37**
BPD			-	0.12	0.34**	0.50**	0.48**
APD				-	0.35**	0.20**	0.29**
BSD					-	0.41	0.34*
Depression						0.29**	0.71**
Anxiety						-	0.56
Emotions							-

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.000$; HPD- histrionic personality disorder; NPD- narcissistic personality disorder; BPD- borderline personality disorder; APD- antisocial personality disorder; BSD-bipolar spectrum disorder.

Table-2: Multiple regression analysis showing the main effect of psychiatric illnesses in the prediction of emotions among self-harm patients.

Predictors	B	S.E	t-test	B	p-value	95 % CI
(Constant)	15.89	0.86	18.50			[14.19, 17.58]
BSD	0.03	0.07	0.49	0.03	0.62	[-.09, .16]
Depression	0.13	0.04	3.61	0.30	0.00	[.06, .20]
Anxiety	-0.03	0.04	-0.80	-0.06	0.42	[-.11, .04]
Histrionic PD	0.78	0.18	2.19	0.17	0.03	[.02, .73]
Narcissistic PD	0.26	0.11	2.29	0.16	0.02	[.48, 1.04]
Borderline PD	0.89	0.09	1.52	0.11	0.03	[.45, 1.64]
Antisocial PD	0.58	0.17	3.46	0.27	0.00	[.24, .91]

BSD: Bipolar spectrum disorder, PD: Personality disorder, CI: Confidence interval.

mean age of the participants was 26.44 ± 5.95 years (range: 18–35 years). Both married and unmarried individuals were included. All participants had a minimum educational qualification of 12th grade.

Psychiatric illnesses had a positive relationship with negative emotions, with depression, HPD, NPD, BPD and APD having a significantly positive correlation with emotions (Table 1).

Multiple regression analysis produced an R^2 value of 0.07 for the overall model which showed that the predictors accounted for 7% variance in emotions ($F [3, 216] = 6.44$, $p < 0.01$). Depression ($\beta = 0.30$, $p < 0.01$) was a strong predictor of negative emotions. BSD ($\beta = 0.04$, $p > 0.01$) and anxiety ($\beta = -0.06$, $p > 0.01$) could non-significantly predict emotions. NPD ($\beta = 0.16$, $p < 0.01$), BPD ($\beta = -0.11$, $p < 0.01$), HPD ($\beta = 0.16$, $p < 0.01$) and APD ($\beta = 0.27$, $p < 0.01$) significantly predicted negative emotions (Table 2).

Collinearity statistics indicating that multicollinearity was within acceptable limits, with tolerance values > 0.10 and variance inflation factor (VIF) values < 10 .

Discussion

The current study showed that negative emotions had a significant positive correlation with depression, HPD, NPD, BPD and APD. However, although BSD and anxiety did not show statistically significant associations, they were

positively correlated with negative emotions. This suggests a potential trend or underlying relationship that may not have reached significance, possibly due to sample size or variability. Reporting such non-significant but directionally meaningful findings enhances transparency, and provides a more balanced data interpretation. Regression analysis revealed that negative emotions significantly predicted depression, NPD, BPD, HPD and APD. However, regression analysis revealed non-significant results for BSD and anxiety. This indicates that, despite showing positive correlations with negative emotions, these variables did not significantly predict the outcome when controlling for other factors in the model. These results are consistent with previous findings as it is anticipated that youths with healthy emotions are esteemed, and have sound wellbeing.²⁰ Likewise, a 2023 study found that those suffering from psychiatric illnesses experienced more negative emotions and problems with emotion regulations.²¹ A 2004 study also examined emotional intensity among psychiatric patients and found that these patients struggle more in handling worried, sad and anger experiences due to experiencing emotions with high intensity, and reported little ability to regulate these emotional arousal.²² Gratz et al. in 2010²³ examined negative emotions and deficits in emotion regulation among psychiatric inpatients and found that the patients displayed more negative emotions and deficits in emotional regulation compared to the controls. Findings of the present research are consistent with previous studies. Moreover Gratz found that negative emotions and emotional dysregulation were associated with BPD among self-harm individuals. and highlighted the underlying role of emotions between BPD and intensity of self-harm.²² Emotional instability is a hallmark feature of personality disorders, thus self-harm become part of a complex system which is difficult to manage for healthcare professionals and family members.²² Hence, psychiatric illnesses arise as a negative-reinforced behaviour in order to control subjectively intolerable emotional arousal to escape intense emotional states. Self-harm behaviours and psychiatric illnesses can be managed by working on negative emotions since these lead to major sufferings in social dynamics or healthcare setups.²⁴ The current study also highlighted the predictive role of negative emotions in psychiatric illnesses.

The current study has limitations as it did not investigate the interaction of various variables to test their mediating or moderating roles. Future studies should take into account numerous precipitating and protective factors to assess the aetiology of suicidal intent among self-harm patients. Moreover, the study was completed in January 2022, and three-year-old data may affect the

generalizability of the findings.

Conclusion

Negative emotions were found to be strong predictors of psychiatric illnesses among self-harm patients, highlighting their significant role in provoking psychiatric illnesses.

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Conflict of Interest: None.

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Author Contribution:

NY: Concept, design, data acquisition and advanced analysis.

OJ: Data entry and revising draft critically.

SY: Drafting, data collection and analysis.

SA: Revising it critically for important intellectual content.