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PSYCHOLOGICAL DISTRESS, BORDERLINE PERSONALITY FEATURES, AND COGNITIVE EMOTION REGULATION AMONG MEDICAL STUDENTS

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ABSTRACT

Medical students are particularly vulnerable to psychological distress due to the demanding and high-pressure nature of their training. The current study investigated the relationship between psychological distress, borderline personality features, and cognitive emotion regulation among medical students. The objectives were: (1) to examine whether borderline personality features predict psychological distress; (2) to determine whether maladaptive cognitive emotion regulation strategies (self-blame, rumination, catastrophizing, and other-blame) predict psychological distress; and (3) to assess differences in terms of gender in borderline personality features. A correlational research design was used. The sample consisted of 500 MBBS students (age range 18–30 years) selected through purposive sampling. Data were collected using the Psychological Distress Scale (Khalid, 2020), Borderline Personality Disorder Scale (Bano, 2020), and Cognitive Emotion Regulation Questionnaire. Data were analyzed using descriptive statistics, reliability analysis, linear regression, and independent sample t-tests in SPSS-26. Results indicated that borderline personality features significantly predicted psychological distress ($F = 234.8$, $p < .01$). Maladaptive cognitive emotion regulation strategies including self-blame ($F = 63.6$), rumination ($F = 79.4$), catastrophizing ($F = 65.4$), and other-blame ($F = 31.7$) also significantly and positively predicted psychological distress ($p < .01$). Moreover, there were significant differences in terms of gender on the variable of borderline personality features were found, among female students reported higher borderline personality features ($M = 81.84$) as compared to male students ($M = 76.30$, $p < .05$). Consequently, all the outcomes of the study highlighted the significance of early screening of borderline personality features and maladaptive cognitive emotion regulation strategies to alleviate psychological distress among medical students.

Keywords: *Psychological Distress, Borderline Personality Features, Cognitive Emotion Regulation, Medical Students*

Introduction

Medical studies is far and wide recognized as one of the most intellectually demanding and psychologically taxing academic pathways. The intensive coursework, high intellectual potential, large academic hours, clinical practice, exposure to

patient illness, and high societal expectations collectively place medical students at considerable risk for psychological distress. Medical students are particularly vulnerable to psychological distress and other mental health problems due to the demanding and high-pressure nature of their training. Studies found that medical students have experience higher intensity levels ranges of psychological distress and burnout than the other population, and that these issues can have a adverse effect on their academic performance and overall well-being (Dyrbye et al.,2006, Rottenstien et al.,2016).

Psychological distress refers to a range of emotional, behavioral, and cognitive symptoms that can be indicative of mental health problems. These symptoms may include feelings of sadness, anxiety, irritability, and hopelessness, as well as somatic symptoms such as headaches and stomachaches. Psychological distress can be caused by a variety of factors, including stress, trauma, and environmental factors. (Rottenstien et al., 2016). Hence, understanding the psychological mechanisms underlying distress in this population is of crucial importance.

While environmental triggers in medical training are well defined, individual vulnerability factors play a parallel important role in examine how students react to stress. There are many factors that can contribute to psychological distress, BPD features, and difficulties with emotion regulation among medical students. Additionally, stigma and barriers to seeking help may prevent medical students from accessing the support and resources they need to maintain their mental health. (Shanafelt et al ., 2006).

Borderline personality features are a set of traits that can include emotional instability, impulsivity, and difficulties with relationships. While research on borderline personality disorder (BPD) among medical students is limited, studies have suggested that medical students may be at higher risk of developing BPD or exhibiting BPD traits than the general population (Sotile et al., 2004; Tyssen et al., 2013). Some researchers have hypothesized that the intense demands of medical training caused psychological distress which may exacerbate pre-existing BPD traits (McDuff et al., 2016).

Borderline personality features are a set of traits that are characterized by intense and unstable emotions, impulsive behaviors, and difficulties with interpersonal relationships. People with borderline personality features may struggle with regulating their emotions and may have a tendency to engage in self-destructive behaviors, such as substance abuse or self-harm. (Biggs et al., 2009)

Borderline personality features may also be more prevalent among medical students than the general population, although more research is needed in this area. Some studies have suggested that the stress and pressure of medical training may exacerbate pre-existing borderline personality traits, leading to greater difficulties with emotion regulation and interpersonal relationships. (Zimmerman et al., 2018). Even though, full borderline personality disorder (BPD) is relatively rare, preclinical borderline features are more prevalent and may greatly influence emotional functioning.

Cognitive emotion regulation refers to the ways in which individuals manage and regulate their emotions through cognitive processes such as reappraisal, distraction, and rumination (Kommer et al., 2004).

Effective emotion regulation can be protective against psychological distress, while ineffective emotion regulation can contribute to mental health problems. There is some evidence to suggest that medical students may have difficulties with emotion regulation, particularly in the context of stress and burnout (Beckman et al., 2012; Regehr et al., 2014).

Psychological distress is a widespread and notable issue in the medical students, as it was reported by the research studies of the findings showed range of potential of depression, anxiety, and burnout ranging from 10% to 50% (Dyrbye et al., 2006; Rotenstein et al., 2016).

The stringent requirements of medical training consisting of long hours, high stakes, and exposure to patient suffering, can affect to these mental health problems (Rotenstein et al., 2016). Furthermore, stigma and taboo attached to mental

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health with some societal barriers to seeking help may have made hesitant to medical students for taking help and accession the support and facilities which they need to make mentally healthy themselves (Rees et al., 2015).

Diverse studies have There is higher intensity ranges of psychological distress is present in the medical students. For example, a research study by Dyrbye et al. (2006) revealed that probably 50% of medical students experienced burnout on the other hand another research study by Dahlin et al. (2005) reported that 44% of medical students experienced depressive symptoms. Overall, a systematic review by Rotenstein et al. (2016) examined that the prevalence of depression or depressive symptoms in the medical students was 27.2%, which is higher than that of the general population

The diathesis–stress model contributes a useful framework for conceptual understanding this relationship. According to this model, individuals with pre-existing vulnerabilities (e.g., emotional instability, impulsivity) are more prone to become victim of psychological distress whenever exposed to stressful environments. Medical training, with its competitive and high-pressure nature, may act as a trigger stressor that exacerbate borderline personality features. Students with higher borderline personality features may experience greater difficulty regulating emotions, tolerating uncertainty, and maintaining stable interpersonal relationships in their academic and clinical settings. In conclusion, they may be more prone to psychological distress (Roitman et al., 2016).

Another most significant factor affecting psychological outcome is cognitive emotion regulation. Cognitive emotion regulation defines the phenomenon in which an individual uses strategy to manage their emotions. Numerous studies have examined the association between cognitive emotion regulation and psychological distress among medical students. For example, a study by Yusoff et al. (2013) found that maladaptive cognitive emotion regulation strategies (such as rumination and catastrophizing) were significantly correlated with psychological distress among medical students. Similarly, a study by Moslehi et al. (2016) examined that poor cognitive emotion regulation was interlinked with higher levels of anxiety and depression among medical students.

Cognitive emotion regulation elaborates the conscious mental strategies individuals use to manage emotionally arousing situations (Garnefski, Kraaij, & Spinhoven, 2001). According to Gross's (1998, 2001) process model of emotion regulation, individuals regulate emotions through cognitive reappraisal, attentional deployment, and response modulation. Effective regulation strategies such as positive reappraisal and problem-solving can buffer stress, whereas maladaptive strategies such as rumination, catastrophizing, self-blame, and blaming others are associated with increased risk of depression and anxiety (Aldao et al., 2010).

Kraaij and colleagues conducted study in depth and explained several cognitive emotion regulation strategies related to depression (rumination, catastrophizing, self-blame, blaming others, acceptance, positive refocusing and positive reappraisal), in contrast behavioral coping strategies were not significantly correlated with emotion regulation strategies.(Kraji et.al., 2017)

Rumination involves monotonous and passive focus on distress and its possible causes and consequences. Catastrophizing refers to magnifying the negative aspects of a situation and anticipating worst-case outcomes. Self-blame involves attributing negative events to personal shortcomings, while other-blame shifts responsibility externally. Research consistently demonstrates that these maladaptive strategies are trans diagnostic risk factors for emotional disorders (Naragon-Gainey et al., 2017).

In the adult population, Tomblin and his team investigated emotion regulation, depressive symptoms and quality of life in epileptics. Their analysis showed bidirectional relationship between depressive symptoms and emotional dysregulation, and observed that both having higher levels that are significantly associated with a poorer quality of life. Bahrami and fellows examined emotion regulation in adults with cancer, where positive refocusing, positive reframing and putting into perspective were significantly having direct correlation with quality

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of life, on the other hand other-blame was significantly having indirect correlation. In that research, the only predictor was positive reframing. (Bahrimi, 2018)

Importantly, the interaction between borderline personality features and cognitive emotion regulation may further compound vulnerability. Borderline traits are strongly associated with emotional dysregulation, which may predispose individuals to use maladaptive cognitive strategies. For example, emotional instability may increase rumination, while fear of rejection may increase self-blame or other-blame tendencies. Thus, borderline personality features and maladaptive cognitive emotion regulation strategies may jointly contribute to psychological distress among medical students.

Looking into how gender plays a role makes sense here. It was stated that female students frequently show more symptoms of mental health problems Female students often show more signs of mental strain than male students (Bayram & Bilgel, 2008). Women are highly emotional neurochemistry as some studies reported it. Still, when it comes to symptoms linked to borderline personality, consequences disperse no clear pattern stands out, especially among younger adults. Measuring gender differences in the medical students may reflects culturally appropriate insight, especially in context where gender roles influence the emotional expression and regulation.

In Pakistan, research investigating psychological distress in the medical students is occurring but remains constrained, particularly in research studies merging personality traits and cognitive emotion regulation concurrently. Due to the competitive academic culture, societal expectations, and inadequate mental health facilities in many institutions, Pakistani medical students may face distinctive psychosocial challenges. Therefore, there is a scarcity of empirical research studies to examine how borderline personality features and maladaptive cognitive emotion regulation strategies predict psychological distress within medical students.

Thus, the present study aims to fill this gap by investigating:

1. Whether or not borderline personality features significantly predict psychological distress among medical students.
2. Whether or not maladaptive cognitive emotion regulation strategies (self-blame, rumination, catastrophizing, and other-blame) predict psychological distress.
3. Whether or not there are gender differences in borderline personality features.

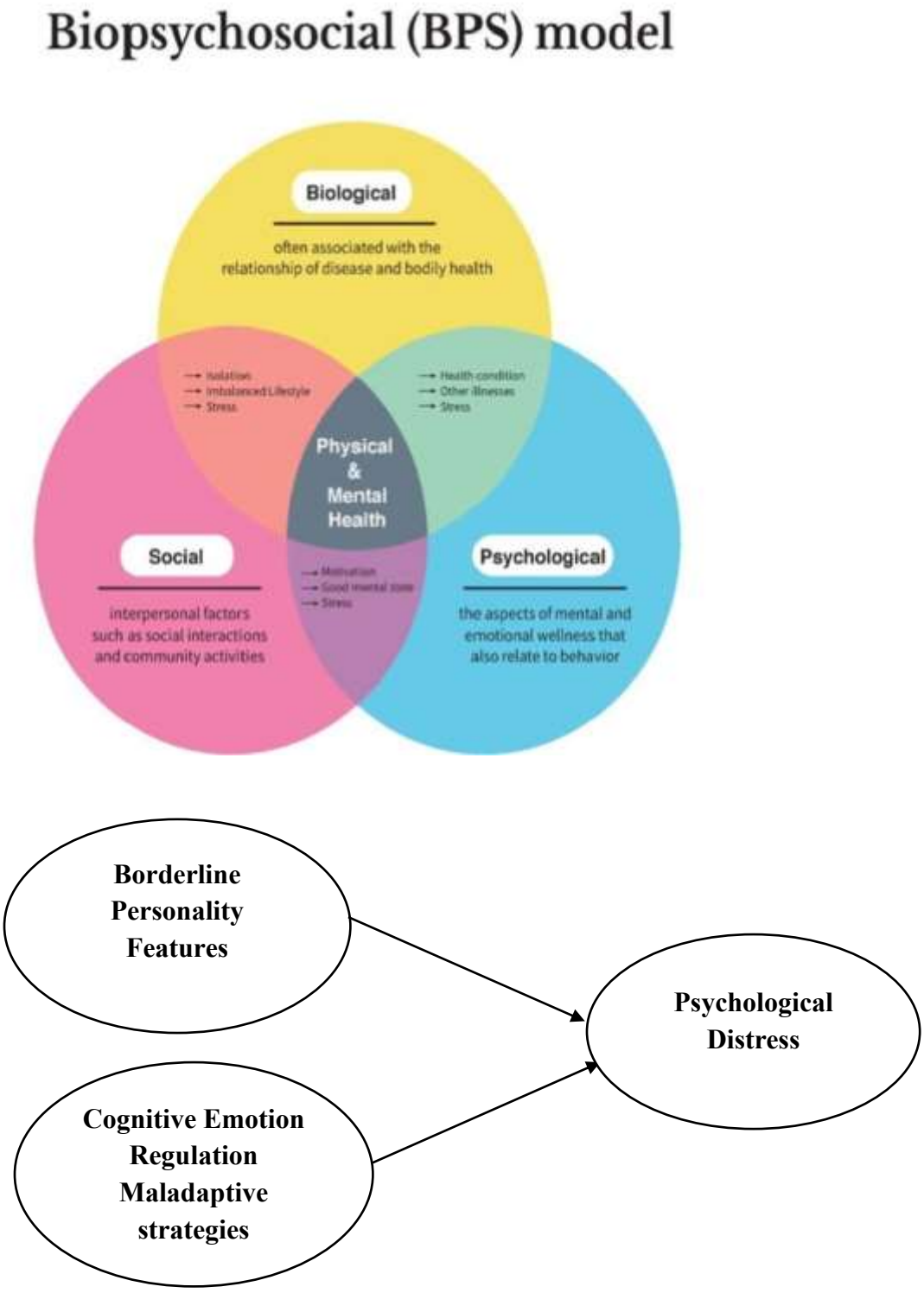
Understanding these relationships is essential for pre-screening of at-risk students and for planning strategic psychological interventions. By incorporating personality vulnerability and cognitive emotion regulation framework, the present study devotes to more comprehensive conceptual understanding of Psychological distress among medical students. Moreover, it is helpful in planning strategic intervention for gender specific intervention to prevent full scale borderline personality features.

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Theoretical Framework

The present conducted study's foundation is the Biopsychosocial Model (Engel, 1977), that proposes psychological distress, mental health illness and inner personality dysfunction occur due to the interlink dynamics of biological vulnerabilities, psychological dynamics and social factors. In the current study context that is medical students, MBBS students are prone to academic and interpersonal stress, that may interrelate with individual differences in cognitive emotion regulation and borderline personality features. Consequently, the model contributes a comprehensive framework to understand how maladaptive cognitive strategies and personality features contribute to psychological distress during a high pressure academic environment. In the present study social factors are adjustment problems, academic stress and peer conflicts, biological factors are sleep deprivation, neurobiological sensitivity, Psychological components are emotional dysfunction, impulsivity and maladaptive coping strategies.

Figure 1 : Conceptual model of effect of borderline personality features and cognitive emotion regulation on Psychological distress,



Methodology

Research Design

The present study employed a quantitative research approach using a cross-sectional correlational survey design. This design was considered appropriate because it allows for the investigation of relationships among variables without controling them. The study aimed to investigate the predictive relationship between borderline personality features and maladaptive cognitive emotion regulation strategies on psychological distress among medical students. Data were collected through purposive sampling through standardized self-report questionnaires and analyzed using statistical techniques.

Participants

The sample consisted of 500 medical students aged between 18 and 30 years who were currently enrolled in MBBS programs at various medical colleges. Both male and female students participated in the study. A purposive sampling technique was used to recruit participants who met the inclusion criteria.

Inclusion and Exclusion

- Medical students included in the current research.
- 18-30 years' students included.
- Only those students included which were currently enrolled in the course.
- Students from other fields were excluded.
- Students from BDS were excluded.

Instruments

Data were collected using a set of standardized instruments along with a researcher-developed demographic questionnaire. The demographic form was designed to gather background information including age, gender, year of study, marital status, area of residence, socioeconomic status, family system, family income, parents' education, and parents' occupation.

Psychological distress Scale Psychological distress was measured using the Psychological Distress Scale developed by Khalid (2020). This scale measures three components: anxiety, depression, and stress. It consists of 38 items rated on a four-point Likert scale. It has 3 subscales which are Anxiety, Depression and stress. Anxiety measure from item 1 to 15, Depression measure from item 16-26 and stress measure from 27-38. It has value of Cronbach's alpha is 0.91.

Borderline Personality Disorder Scale Borderline personality features was measured by Borderline Personality Disorder scale that is developed by Rasheed (2019). It is five point Likert type scale score ranges from 1-5. It measures as a whole borderline personality features. It has value of Cronbach's alpha is .949.

Cognitive Emotion Regulation Questionnaire Among the variety of strategies individuals habitually use to regulate their emotions, cognitive emotion regulation (CERQ) strategies refer to what individuals think to handle their emotions in response to eliciting events (Garnefski, Kraaij, & Spinhoven, 2001; Gross, 2001). It has 9 subscales in which self-blame, rumination, catastrophizing, others blame, acceptance, positive refocus, refocus planning, positive reappraisal and putting into other perspective etc. It is Likert type scale. Range It has value of Cronbach's alpha is .84.

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Procedure

Ethics of the research was followed in the current study. After taking permission letter from the institution then approached medical students in the college and universities then Informed Consent was taking from the participants by verbally and by taking signature on the informed Consent form. It was also debriefing about the research. If the participants did not agree to participate in the whole research they had free of choice to leave the research.

Their dignity was considered and confidentially was maintained. Data collected from the university medical students after taking from their informed Consent in which briefing about the research and taking permission from them when they were agreeing to take participate in the research data collected from them. Data was collected through survey method and community base by visiting medical university and medical

college. Ethics of research was strictly followed in the whole research. After collecting data, Questionnaire form screened out and those forms were discarded which partially filled and those forms were also discarded in which response bias occur after screening out of questionnaire forms then data was analyze in the SPSS software by applying Descriptive statistics, normality analysis, Correlation analysis, Regression analysis, and t test.

Ethical Considerations

In order to conduct the research ethical considerations were strictly followed. Permission were taken from the authors in order to using questionnaire. The participants were informed that collecting information only used for research purpose. They had rights of withdrawal from research at any point and their confidentiality and dignity was maintained. It was also considered that nobody was harm by physically, emotionally and psychologically. Further that researcher provided the counselling to participants if needed, after filling the questionnaire. Moreover, therapeutic recommendation was devised to the participants accordingly.

Results

The present study conducted on Psychological distress, Borderline Personality Features and Cognitive Emotion Regulation among medical students to assess the relationship between variables. Then data was collected from medical students then analyzed on SPSS-26 version then results and its interpretation was briefly explained below.

Descriptive

Summary of demographic characteristics of the sample (N=500).

Table 1

Frequency of demographic characteristics (N=500)

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Demographics	*n*	*%*
Gender		
Male	260	51.4%
Female	240	48.6%
Age		
18-23	290	62.2%
24-30	210	38%
Marital Status		
Single	350	87.1%
Married	150	12.9%
Current Semester		
2	60	14%
3	83	15.2%

4	157	26%
5	200	44%
Mothers Education		
Educated	367	95%
Uneducated	133	5%
Mothers occupation		
Working	177	24%
Housewife	323	76%
Fathers Education		
Educated	453	97%
Uneducated	47	3%
Fathers occupation		
Business	295	58.6%
Employee	175	35.2%
Retired	25	5.2%
Not working	5	1.0%
Area		
Urban	440	87.6%
Rural	60	12.4%
Socioeconomic Status		
Upper Class	45	9.0%
Middle Class	450	91.0%
Lower Class	5	5.2%
Income		
50,000-500000	450	90%

500001-1200000	50	10%
Residence		
Hostel	365	73.3%
With Family	135	26.7%

Reliability Analysis

There are following psychometric properties of scales

Table 2

Psychometric properties of scale (N=500)

Scale	M	SD	Range	α
PDAS	73.50	17.89	38-152	.93
BPDS	78.99	22.16	32-160	.94
CERQ	93.50	24.77	36-180	.94

Hypothesis Testing

There are following formulated hypothesis and its findings with interpretation.

Hypothesis 1

It was hypothesized that Borderline personality features would predict psychological distress among medical students.

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Table 3

Summary of Linear Regression of Borderline personality features as a predictor of Psychological distress (N= 500)

Variable	Model		
	B	**B**	***S.E***
Constant	27.064**		3.147
Borderline personality features	.588	.728	.038
R^2	.530		
ΔR^2	.528		

***P>.01, *p>.05*

Simple linear regression was carried out and findings were 72% of variance (Table3) which indicated that there was a significantly relationship Borderline personality features were significantly predict Psychological distress among medical students (F (1,208) = 234, p =.000). interpreted that 53% change in borderline personality features also causes change in psychological distress. It was also found that

Hypothesis 2

It was hypothesized that Cognitive emotion regulation (Self-blame, rumination, catastrophizing and others blame) would predict psychological distress among medical student

Table 4

Summary of Linear Regression of Maladaptive Strategies (N= 500)

Variable	Model		
	B	**B**	**S.E**
Constant	49.82**		3.16
Self-blame	2.46	.484**	.308
R^2	.484		
ΔR^2	.231		
Constant	47.13**		3.14
Rumination	2.63	.526**	.296
R^2	.526		
ΔR^2	.273		
Constant	51.95**		2.87
Catastrophizing	2.45	.489**	.303
R^2	.489		
ΔR^2	.236		
Constant	56.08**		3.3
Other's Blame	2.021	.364**	.359
R^2	.364		
ΔR^2	.128		

***P>.01, *p>.05*

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Simple linear regression of self -blame as a predictor of psychological distress was carried out and findings were 48% of variance (Table 4). which indicated that there was a significantly relationship interpreted that 23% change in score of self-blame also causes change in psychological distress It was also found that self-blame was significantly predict psychological distress among medical students (F (1,208) = 63.61, p =.000.). Simple linear regression of Rumination as a predictor of psychological distress was carried out and findings were 52% of variance (Table 4) which indicated that there was a significantly relationship interpreted that 27.6% change in score of rumination also causes change in psychological distress. It was also found that rumination was significantly predict psychological distress among medical students (F (1,208) = 79.3, p =.000). Simple linear regression of catastrophizing as a predictor of psychological distress was carried out and findings were 48% of variance (Table 4) which indicated that there was a significantly relationship interpreted that 23.9% change in score of catastrophizing also causes change in psychological distress. It was also found that catastrophizing was significantly predict Psychological distress among medical students (F (1,208) = 65.4, p=.000). Simple linear regression of others blame as a predictor of psychological distress was carried out and findings were 36.4% of variance (Table 4) which indicated that there was a significantly relationship interpreted that 13% change in score of others blame also causes change in psychological distress. It was also found that others blame was significantly predict borderline personality features among medical students (F(1,208) = 42.2, p =.000)

Hypothesis 3

It was hypothesized that there will be a gender difference on the variable of Borderline Personality features among medical students.

Table 5

Independent sample t-test for gender differences in Borderline personality feature (N=500)

Variable	Male		Female		t	P	Cohen's *d*
	M	SD	M	SD			
Borderline Personality Feature	76.30	19.92	81.84	24.08	1.82	.009	0.7

Independent sample t-test was carried out to explore the borderline personality features in gender differences. Then findings were interpreted that female had significantly borderline personality features greater than male (Female, M=81.84 > Male, M= 76.30, p=.009) Table 5. So it was confirmed that there was gender difference on the variable of borderline personality features and female had greater borderline personality features than male.

Discussion

The present study was conducted to examine the relationship between psychological distress, borderline personality features, and cognitive emotion regulation among medical students. Specifically, the study investigated whether borderline personality features and maladaptive cognitive emotion regulation strategies (self-blame, rumination, catastrophizing, and other-blame) predict psychological distress. The mediating role of cognitive emotion regulation in the relationship between borderline personality features and psychological distress was also examined. Additionally, the study explored whether maladaptive cognitive emotion regulation strategies predict borderline personality features and whether gender differences exist in borderline personality features among medical students.

The findings of the current study revealed that borderline personality features significantly and positively predicted psychological distress among medical students. The regression analysis revealed that the overall model was statistically significant ($F = 234$, $df = 1$, $p < .001$), and borderline personality features and borderline personality features attributed to 72% of the variance in psychological distress. These findings propose that students exposing higher levels of emotional instability, impulsivity and interpersonal dysfunction are more likely to experience anxiety, depression, and stress. This result is aligned with previous study. For example, Garba Habib et al. (2016) identified that psychological distress is particularly high in medical students due to academic stressors, which can lead to burnout, anxiety, and depressive symptoms. Similarly, McDuff et al. (2016) concluded that precedent borderline personality features aggravate psychological distress in medical students.

The findings are further supported by Bebbington et al. (2013), who showed that higher levels of borderline personality features associated with greater psychological distress over time. Their study highlighted that emotional dysregulation and interpersonal instability contribute significantly to distress outcomes. Correspondingly, Gluschkoff, Dinger, and Rabung (2018) analyzed that self-criticism and interpersonal problems more likely predicted psychological distress and maladaptive emotional regulation strategies.

Interpersonal theories of Borderline Personality Disorder furnish further explanation for these findings. Sanislow et al. (2002) proposed that interpersonal dysfunction is a main feature of borderline pathology. Individuals with borderline features often report relationship problems, fear of abandonment, and heightened sensitivity to rejection. Bouchard et al. (2009) similarly revealed that individuals with borderline personality features experience greater interpersonal difficulties compared to healthy controls. Such interpersonal dysfunction often results in loneliness, perceived rejection, and emotional dysregulation, which are strongly associated with anxiety and depression.

A study found that patient with borderline personality disorder had greater psychosocial problems including poor social adjustment Skodol, Gunderson, McGlashan, et al. (2002) that can lead to loneliness Bates et al .,(2009) and feeling of rejection which are the common feature of psychological distress mainly depression (Bates et al ., 2009). it was concluded that it was supported that borderline personality features ($F=234.8$, $df=1,208$, $p<.01$) predicts psychological distress.

The research study conducted by Basri et al .,(2021) revealed that due to work load during medical practice burn out occur the maladaptive coping strategies play a role of risk factor in developing psychological distress among medical students. So it was concluded that due to work load at medical practice burn out occur that affect Cognitive emotion regulation maladaptive coping strategies and it promote psychological distress.

Similarly, Patricia et al., (2014) studied on medical college students suggested that stressors: peer pressure, financial and social support leads to using maladaptive coping strategies to individual revealed that they had symptoms of psychological distress and seeking help from others which leads to psychological distress in the students that study.

A study found gave by Mohammad khani et al.,(2018) studied that self-compassion negatively associated maladaptive strategies of cognitive emotion regulation which are self blame, Rumination, catastrophizing and others blame. Similarly, Salehi, Mazaheri, Aghajani, and Jahanbazi (2015) also found that among the cognitive emotion regulation strategies, catastrophizing, acceptance, refocus on planning, and rumination along with current stress had an impact on depression and significantly revealed low self-compassion predicted maladaptive cognitive emotion regulation strategies which are promoted depression, anxiety and stress.

The study also analyzed gender differences in borderline personality features. Results of the independent samples t-test indicated a significant gender difference, with female students ($M = 81.4$, $SD = 24.08$, $p < .01$) on borderline personality features compared to male students ($M = 76.30$, $SD = 19.92$, $p < .01$). This finding is consistent with prior research.

Carron et al ., (2002) studied in which Affect regulation is the defining feature of borderline personality feature and that study was concluded that female had higher emotional intensity and sensitive to emotional stimuli as compare to male. Micheal H.Stone (2019) studied that individual with borderline personality disorder had higher mood instability, inappropriate anger, impulsivity and suicidal thoughts, further findings revealed that female had higher inappropriate anger and suicidal thoughts that is related to sensitivity in their personality as it all are the features of borderline personality disorder so it was supported that female had greater borderline personality features than male.

Consequently, the results of the current study emphasize the significant role of borderline personality features and maladaptive cognitive emotion regulation strategies in predicting psychological distress in medical students. Medical education is actually highly demanding in intellectual capacity, and students with pre-existing vulnerabilities and ineffective emotion regulation strategies are at higher risk of anxiety, depression, and stress.

Strengths and Limitations

There are numerous strengths of the currents study as it was conducted through using validated scales to measure psychological distress, borderline personality features and cognitive emotion regulation among medical students. In addition,

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Sufficient and valid data collected. Moreover, Multivariable analysis was conducted through statistical analysis software that enhances the robustness and interpretability of the findings. Furthermore, it was conducted in a structural way by following all research ethics.

However, there are several limitations of the study should be considered that were data sample of the study was inadequate to represent the whole population of the medical students. Another limitation in selecting the representative sample was reluctance of the participants to participate due to stigma attached with psychology since it was a delicate issue for the student's mental health. In addition, uncooperative behavior and restriction of authority of medical colleges and universities in collecting data. Furthermore, restricted sample and population instead of including diverse population.

Implications

These findings have important practical implications. Before admission Psychological screening programs in medical colleges could be helpful identify students at risk. In addition, interventions based seminars and workshops would be helpful for their strong emotional regulation strategies. It would be helpful in spreading awareness related to importance of mental health. It would be contributing in devising policy maker's policies to modify their syllabus by addition psychological issues management course. By addressing both personality vulnerabilities and maladaptive coping strategies, mental health outcomes among medical students can potentially be improved.

Conclusion

The present study was aim to investigate the relationship between variables, to find out relationship between borderline personality features and psychological distress, further it was also aim that investigated relationship between maladaptive cognitive emotion regulation strategies with psychological distress and to find out gender differences on the variable of borderline personality features.

The findings of the present study examined that Borderline personality feature was present in medical students which predicts psychological distress in medical students. Further findings revealed that maladaptive cognitive emotion regulation strategies (Self-blame, Rumination, Catastrophizing and others blame) significantly positively predicts psychological distress in medical students and it was also explored that there were gender differences was present on the variable of borderline personality features due to some factors.

So it the current study highlighted the importance of the mental health in the medical students by analysis that medical students are vulnerable to psychological distress due to the existence of borderline personality features which may be triggered due to their strict medical training and other external factors like peer pressure, lack of social support and poor self-esteem etc. Then due to predicting psychological distress by borderline personality features students used maladaptive cognitive emotion regulation strategies to managing their psychological distress but problems got worse so it was suggested that there should be some group therapy, stress management based intervention and mindfulness based modalities should be devised to control the problems in medical students.

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