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Predictive Role of Mindfulness and Emotion Regulation for Psychological Distress in Pakistani Medical Students

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Abstract

This research was intended to investigate the relationship between mindfulness, emotion regulation, and psychological distress in Pakistani medical students. It was also aimed to assess the predictive role of mindfulness and emotion regulation for psychological distress (depression, anxiety, stress). Correlational research design and purposive sampling techniques were used. The data was collected from both public and private medical colleges. The total sample comprised 216 participants (men; $n = 96$; women; $n = 120$). Mindful Attention Awareness Scale, Emotion Regulation Questionnaire, Depression, Anxiety, and Stress Scale (DASS-21) along with a demographic information sheet were used to assess the study variables. Results were analyzed through SPSS 21. Findings revealed a significant negative relationship of mindfulness and emotion regulation with psychological distress (depression, anxiety, and stress) in medical students. Furthermore, mindfulness and emotion regulation significantly predicted psychological distress (anxiety). The results of the present study will help clinical psychologists to devise improved training programs and therapeutic interventions for medical students for minimizing their distress so that medical students become able to perform better in their academic activities.

Keywords: anxiety, depression, emotion regulation, mindfulness, psychological distress, stress

Introduction

Mental distress has been well-identified in undergraduate medical students and is a matter of concern in both developed and developing countries. Young students, especially those who are pursuing higher professional education in a competitive setting are the most susceptible group of the population to stressful life events (Esmailinasab et al., [2016](#)).

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Several studies have found that medical education poses serious pressure on students' mental health (Jacob, [2004](#); Parto, [2010](#); Schutte & Malouff, [2011](#)). Psychological distress is defined as the psychic condition that any individual faces while handling upset and disappointing circumstances (Lovibond & Lovibond, [1995](#)). Studies have identified several causes of mental health issues in medical students, including stress, tension, social issues, sadness, burnout, and self-destructive ideation (Rehman et al., [2018](#)). According to Ma and Fang ([2019](#)), medical students are at greater risk of having psychiatric symptoms such as depression, anxiety, and stress as compared to students of different fields because of the higher academic stress load. Depression and anxiety in medical students may persist till their internship and residency stage which may, later on, affect their professional life as well (Qasim et al., [2022](#); Mirza et al., [2021](#)).

Mindfulness can be defined as an individual's ability to pay attention to the present experiences occurring at the moment while being aware of certain inputs from the environment or stimuli which may trigger any relevant sensations or stimulations (Brown & Ryan, [2003](#)). The majority of the problems relating to mental health originate because the individual focuses on events that happened in the past as well as fear of what will happen in the future. People who are depressed usually relate their mental situation to some past events and feel guilty whereas people with anxiety are worried about the events to happen in the future and the possible consequences of their actions (Baer, [2003](#)). Mindfulness helps individuals to emphasize what is happening right now and not get overwhelmed by the things that happened in the past, by remembering them just as thoughts and emotions without being judgmental about them (Teasdale et al., [2000](#)).

Emotion regulation can be defined as a process of both the conscious as well as unconscious nature used to modify a person's actual emotional response or its components which make up an emotion including their feelings, behaviors as well as bodily responses (Gross, [1999](#)). Researchers have provided pieces of shreds of evidence that individuals higher on mindfulness are more aware of their capabilities to fight the battle with their depression or anxiety, or possible stressors from the environment. It enables a person to positively evaluate situations that he would otherwise judge negatively (Bohlmeijer et al., [2010](#)). As the suicide rate among students is known for the fact that it is caused by clinical depression (Slonim et al., [2005](#)), the major aim of this current study was to assess the role of

mindfulness and emotion regulation which will help future to devise ways through which medical students can be more mindful to avoid depression and anxiety.

Rationale

Studying the influence of mindfulness on emotional regulation and psychological distress in medical students is currently needed for time. Students face certain academic, social, and psychological stressors which are existential during their tenure as medical students. Limited research has been done in Pakistan with these variables while most of the research done is in western culture. Medical students were less focused in previous studies and they needed to be studied because medical students face many emotional issues in their professional life like a failure in exams, and difficult studies, which leads them to depression, anxiety, and other psychological issues. Thus, the present study focused to find out the relationship between mindfulness, regulation of emotions, and psychological distress in medical students. The underlying role of regulation of emotional experiences between mindfulness as well as psychological distress is also aimed to be investigated.

Hypotheses

H1. There is a positive relationship between mindfulness and emotion regulation in medical students.

H2. There is a negative relationship between mindfulness and emotion regulation with psychological distress subscales (i.e. depression, anxiety, stress) in medical students.

H3. Mindfulness and emotion regulation predict psychological distress (with the subscales of depression, anxiety, and stress) in medical students.

Methods

Research Design

The research design was based on a correlational approach for this study.

Sample

Participants were recruited through the purposive sampling technique. The sample size was estimated using G-Power Analysis. A sample of 216

participants was chosen for the study based on inclusion as well as exclusion criteria. Participants' overall characteristics showed that most of the participants were Muslim and mostly lived in a hostel. Most of the participants were from private medical colleges. Most of the participants were living in a nuclear family system and unmarried.

Measures

The following tools were used in the current research;

Demographic Information Sheet

To gather demographic information from the participants, a separate sheet was created. It included age, gender, education, year of education, current year of MBBS, family system (nuclear or joint), marital status, and relationship with parents and siblings as well as some other relevant variables for this study.

Mindful Attention Awareness Scale

Mindful Attention Awareness Scale was translated into Urdu to assess mindfulness in medical students. Permission was sought from the original author for its usage and its translation. The scale comprises 15 relatively brief statements. The responses were recorded in a 6-point Likert-type instrument depending on the degree of agreeing or disagreeing with the statement where 1 means “almost always” and 6 means “almost never”. The mean values were already recorded and the instances of higher scores in the responses meant a higher level of mindfulness in the respondent (Brown & Ryan, 2003). The reliability of scale on the current study was $\alpha=.82$ which is quite in the acceptable range.

Emotion Regulation Scale

The scale used to assess emotional regulation is particularly designed to measure the differences among persons as per the two basic emotion regulation strategies. The scale had a total of 10 items measuring how an individual is capable of naturally regulating their stream of emotional responses. The responses were to be collected in a standard 7-point Likert-type instrument where 1 was (strongly disagree) and the highest value 7 was (strongly agree). The permissions were duly collected both from the original authors (Gross & John, 2013) as well as the person who translated it into the native language Urdu (Saeed & Rana, 2019). According to scoring

guidelines, individuals ranking higher scores on this scale are abler to regulate their emotions more than others. In this current study, the reliability score was measured through Cronbach's alpha which was 0.81.

DASS-21

This scale is a combination of three different scales measuring the emotional states of an individual on the more negative side including depression, anxiety, and stress using the self-reporting technique. Each scale has 7 items which are further divided into more subscales with somehow similar content types in it. The scores are measured by adding up the sums of all subscales already multiplied by 2 (Lovibond & Lovibond, [1995](#)). The Cronbach's alpha reliability for this study was 0.89 on the DASS-21 scale.

Procedure

The first step was to get institutional approval from the research committee at Riphah Institute of Clinical & Professional Psychology (RICPP), Lahore- Pakistan, for conducting research for the given variables. In addition to that, formal permission from the authors for using their tools and respective data collection sites in the current study was also sought.

Initially, a pilot study with 10 participants was conducted before starting data collection. These 10 participants of the pilot study did not report any problem in the research questionnaire related to language difficulty or anything else. The participants for the final study were approached and informed regarding the purpose of the research by giving an information sheet. Written consent of individuals before they participated in the study was made sure and they were duly informed regarding the right to withdraw from the study if they are not willing to continue and if they are not comfortable. Each participant was provided with questionnaires comprising a demographic information sheet and all assessment measures. Data were collected from 216 participants in approximately two months (Oct-Dec 2019). Each individual took 15-20 minutes to complete the assessment measures. Some of the difficulties faced during data collection because of getting late permission from the institutes and it was time taking to screen the participants because of their annual exams and students were in hurry. The response rate was satisfactory as no form was discarded.

Result

Table 1

Pearson Product Moment Correlation among Mindfulness, Emotion Regulation and Psychological Distress (depression, anxiety, stress) in medical students (N=216)

Variables	1	2	3	4	5	6	7	M	SD
1. Age	-	-.08	.01	-.02	.04	.07	.05	21.43	1.85
Mindfulness Emotional regulation									
2 MER		-	.15*	.18**	-.47**	-.49**	-.57**	60.30	12.50
3. ER-REAP			-	.65**	-.17**	-.22**	-.16**	27.55	7.24
4. ER-SUP				-	-.04	-.08	-.10	19.16	4.69
Psychological Distress									
5. Depression					-	.69**	.69**	12.52	8.18
6. Anxiety						-	.60**	11.50	7.85
7. Stress							-	15.65	8.88

Note. MER= Mindfulness Emotion Regulation ER-REAP= Emotion Regulation -Reappraisal, ER (SUP)= Emotion Regulation (Suppression).
 $p < .05^*$, $p < .01^{**}$

The results in table 1 showed a significant positive relationship between mindfulness and an individual's emotion regulation subscales reappraisal and suppression. This state that with higher mindfulness the regulation of emotional reappraisal and suppression increased as well.

Furthermore, mindfulness and depression also were observed to have a significant negative correlation with each other which means that as the level of mindfulness increased the level of depression decreased. As expected, a substantial negative correlation was found between mindfulness and anxiety which means that as the level of mindfulness increases the level of anxiety decreased. The negative correlation between mindfulness and stress was significant as well which means that as the level of mindfulness increased the level of stress decreased in medical students.

Reappraisal (emotion regulation) and suppression (emotion regulation) were positively correlated and the link was significant which means that due to higher emotion regulation dimension reappraisal the emotion regulation's suppression factor is increased. Their negative correlation also to be known

as significant as per the p-value between emotion regulation reappraisal and depression which means that due to higher emotion regulation (reappraisal) depression is significantly decreased. There negative correlation between emotion regulation (reappraisal) and the individual’s anxiety was significant as per hypothesized relationship which means that due to higher emotion regulation reappraisal the anxiety decreased.

For establishing directions of cause and effect in the study, the Multiple Linear Regression Analysis (Enter Method) was run by taking Mindfulness and Emotion Regulation as predictors of an individual’s level of Depression, Anxiety as well as Stress. For this, the strategy was implemented to conduct multiple linear regression analyses on three different occasions.

Table 2

Multiple Linear Regression Analysis (Enter Method) Model predicting Depression by Mindfulness and Emotion Regulation in Medical Students (N=216).

Predictors	Depression	
	β	SE
Constant	34.06	2.84
Mindfulness	-.46***	0.04
Emotion Regulation –Reap	-.10***	0.06
R^2	.23	
F	33.43***	

Note. R^2 = R square, β =Standardized Co-efficient

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2 revealed that emotion regulation (reappraisal) was found to be a significantly negative strong predictor of depression. It means that if the level of emotion regulation (reappraisal) decreased it can cause depression. The whole theoretical framework accounted for 23.9 variances in depression where mindfulness was discovered as a strongly significant negative antecedent of depression. It means that if the level of mindfulness decreased it can cause depression.

Table 3

Multiple Linear Regression Analysis (Enter Method) Model predicting Anxiety by Mindfulness and Emotion Regulation in Medical Students (N=216).

Predictors	Anxiety	
	β	SE
Constant	33.73	2.69
Mindfulness	-.46 ^{***}	0.03
Emotion Regulation –Reap	-.15 ^{**}	0.06
R^2	.263	
F	37.93 ^{***}	

Note. R^2 = R square, β =Standardized Co-efficient
^{*} $p < .05$. ^{**} $p < .01$. ^{***} $p < .001$.

Table 3 revealed that emotion regulation (reappraisal) was found to be a significantly negative strong predictor of anxiety. It means that if the level of emotion regulation (reappraisal) decreased it can cause anxiety. Results for the entire model accounted for 26.3 variances in anxiety where mindfulness was found to be a significant negative predictor of anxiety. It means that if the level of mindfulness decreased it can cause anxiety.

Table 4

Multiple Linear Regression Analysis (Enter Method) Model predicting Stress by Mindfulness and Emotion Regulation in Medical Students (N=216).

Predictors	Stress	
	β	SE
Constant	42.55	2.87
Mindfulness	-.56 ^{***}	0.04
Emotion Regulation –Reap	-.07 ^{**}	0.06
R^2	.341	
F	54.99 ^{***}	

Note. R^2 = R square, β =Standardized Co-efficient
^{*} $p < .05$. ^{**} $p < .01$. ^{***} $p < .001$.

Table 4 revealed that emotion regulation (reappraisal) was found to be a significant negative predictor of stress. It means that if the level of emotion regulation (reappraisal) decreased it can cause stress. Results for the entire model accounted for 34.1 variances in stress where Mindfulness was found to be a significantly negative strong predictor of stress. It means that if the level of mindfulness decreased it can cause stress.

Discussion

Medical education requires persistent attention and obligation of students to attain learning outcomes crucial to be a skilled professional health worker. Students face huge stressors in light of huge responsibilities and scholastic requirements that are needed during their long course of examination (Bohlmeijer et al., [2010](#)). Intense learning encounters coming into medical students' life may possibly lead to psychological distress among students. This mental distress affects their personal, relational, and academic life (Hill et al., [2018](#)). The current research study aimed to examine the relationship between mindfulness and emotion regulation with medical students' depression, anxiety, and stress.

It was hypothesized that there would be a significant positive relationship between mindfulness and emotion regulation in medical students. The findings of the current study were in accordance with the hypotheses; a significant positive relationship was found between mindfulness and emotion regulation and its subscale. The result of the present study is consistent with previous literature (Qasim et al., [2022](#); Schutte & Malouff, [2011](#)) as many studies have observed a connection between emotion regulation, mindfulness as well as interpretation of an individual's well-being. Studies have proposed that the higher-order trait aspect of emotion regulation was associated with levels of positive affect, lower levels of negative effect, as well as higher levels of characteristic (Guendelman et al., [2017](#); Keng et al., [2011](#)).

Previous literature supported the present findings as a study was conducted on university students in South Africa that when an individual is exposed to emotional experiences, he is more likely to regulate his emotions more healthily, and being mindful of the events occurring in the presence would enhance the well-being of individual in so many ways because the person would be better equipped to regulate his self (Erisman & Roemer et al., [2010](#)). Another research was conducted on adults to find out the

association between mindfulness and regulating emotions as a response, and the results revealed a significant positive relationship between mindfulness and emotion regulation reappraisal and suppression (Iani et al., [2019](#)).

The findings of the present study also indicated a significant but negative correlation between mindfulness, emotion regulation, and psychological distress (depression, anxiety, stress). The result of previous literature supported that the degree of mindfulness, as well as emotion regulation, higher the level of depression, and lower anxiety and stress in students (Ma & Fang, [2019](#); Qasim et al., [2022](#)). Research done by Falkenstrom ([2010](#)) stated that mindfulness helps individuals to emphasize what is happening right now and not get overwhelmed by the things that happened in the past, by remembering them just as thoughts and emotions without being judgmental about them another study by Jacob ([2004](#)) found out that mindfulness results in the development of pro-social values, increase positive emotional experiences and life satisfaction, decreases negative emotional experiences.

In the current study, mindfulness and emotion regulation were found to be the strong antecedents of psychological distress (as its three considered dimensions are: depression, anxiety, and stress). Previous literature supports the current study result that as mindfulness increases the psychological symptoms of depression, anxiety and stress would be decreased. Consequently, the individual experience more positive emotions and the level of psychological distress decreased (Slonim, [2015](#)).

The results from several studies suggest that mindfulness not only has a direct impact on mental well-being but also impacts mental well-being through several mediating mechanisms including, depression, aggression, and tension (Marlatt et al., [2002](#)).

It has been observed that the mental well-being of individuals is linked with mindfulness which in turn enhances self-happiness. Another study stated that a person's ability to regulate negative feelings was meditating on the relationship between mindfulness and psychological distress (Coffey et al., [2010](#)). Research conducted by Parto ([2010](#)) also found that Mindfulness correlated negatively with mental distress.

Limitations and Implications of the Study

The study has some limitations as well such as data was only collected from a few government or public sector medical colleges of Lahore due to

the lengthy permission-taking process. Furthermore, collecting data from 216 medical student participants was a challenge as most of the colleges were giving exams and viva, and students remained busy with their studies, so this may affect their responses. It is suggested for future to conduct qualitative research to gain in-depth knowledge of the variables and collect data from government institutes as well. Medical students face powerful stressors throughout their training tenure as medical professionals including academic, psychological, social as well as existential stressors. Mindfulness-based stress reduction is a mode of psychological intervention in educational psychology which could be beneficial for them to decrease psychological distress in students. The results of this study will be beneficial for medical students to make them understand mindful-based strategies and apply those strategies in daily life to overcome stress. The finding of the present study should be implemented in the student population to resolve their problematic behaviors.

References

- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, 10(2), 125-143. <https://doi.org/10.1093/clipsy.bpg015>
- Bohlmeijer, E., Prenger, R., Taal, E., & Cuijpers, P. (2010). The effects of mindfulness-based stress reduction therapy on mental health of adults with a chronic medical disease: A meta-analysis. *Journal of Psychosomatic Research*, 68(6), 539-544. <https://doi.org/10.1016/j.jpsychores.2009.10.005>
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822-848. <https://doi.org/10.1037/0022-3514.84.4.822>
- Coffey, K. A., Hartman, M., & Fredrickson, B. L. (2010). Deconstructing mindfulness and constructing mental health: Understanding mindfulness and its mechanisms of action. *Mindfulness*, 1, 235-253. <https://doi.org/10.1007/s12671-010-0033-2>
- Erisman, S., & Roemer, L. (2010). A preliminary Investigation of the effects of experimentally induced mindfulness on emotion responding to film clips. *Emotion*, 10 (1), 72-82. <https://doi.org/10.1037/a0017162>

- Esmailinasab, M., Andami, K. A., & Makhmali, A. (2016). Emotion regulation and life satisfaction in university students: *Gender Differences*, 798-809. <https://doi.org/10.15405/epsbs.2016.11.82>
- Falkenström, F. (2010). Studying mindfulness in experienced meditators: a quasi-experimental approach. *Personality and Individual Differences*, 48, 305-310. <http://dx.doi.org/10.1016/j.paid.2009.10.022>
- Gross, J. J. (1999). *Emotion regulation: Past, present, future. Cognition and Emotion*, 13(5), 551-573. <https://doi.org/10.1080/026999399379186>
- Gross, J. J. (Ed.). (2013). *Handbook of emotion regulation*. Guilford publications.
- Guendelman, S., Medeiros, S., & Rampes, H. (2017). Mindfulness and emotion regulation: Insights from neurobiological, psychological, and clinical studies. *Frontiers in Psychology*, 8, 220. <https://doi.org/10.3389/fpsyg.2017.00220>
- Hill, M. R., Goicochea, S., & Merlo, L. J. (2018). In their own words: Stressors facing medical students in the millennial generation. *Medical Education Online*, 23(1), e1530558. <https://doi.org/10.1080/10872981.2018.1530558>
- Iani, L., Lauriola, M., Chiesa, A., & Cafaro, V. (2019). Associations between mindfulness and emotion regulation: The key role of describing and nonreactivity. *Mindfulness*, 10(2), 366-375.
- Jacob, J., Jovic, E., & Brinkerhoff, M. (2004). *Mindfulness, Spirituality and Subjective Well-Being: A survey of ecological sustainability movement participants* [Paper presentation]. Sixth International Society of Quality of Life Studies (ISQOLS) Conference.
- Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: a review of empirical studies. *Clinical Psychology Review*, 31(6), 1041-1056. <https://doi.org/10.1016/j.cpr.2011.04.006>
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335-343. [https://doi.org/10.1016/0005-7967\(94\)00075-u](https://doi.org/10.1016/0005-7967(94)00075-u)

- Ma, Y., & Fang, S. (2019). Adolescents' mindfulness and psychological distress: The mediating role of emotion regulation. *Frontiers in psychology, 10*, e1358. <https://doi.org/10.3389/fpsyg.2019.01358>
- Marlatt, G. A. (2002). Buddhist philosophy and the treatment of addictive behavior. *Cognitive and Behavioral Practice, 9*, 44-50. [https://doi.org/10.1016/S1077-7229\(02\)80039-6](https://doi.org/10.1016/S1077-7229(02)80039-6)
- Mirza, A. A., Baig, M., Beyari, G. M., Halawani, M. A., & Mirza, A. A. (2021). Depression and anxiety among medical students: A brief overview. *Advances in Medical Education and Practice, 12*, 393–398. <https://doi.org/10.2147/AMEP.S302897>
- Qasim, N., Rana, H., & Ashraf, R. (2022). Mindfulness and Psychological Distress in Medical Students: Mediating Role of Emotion Regulation. *Pakistan Journal of Medical and Health Sciences, 16*(7), 568–571. <https://doi.org/10.53350/pjmhs22167568>
- Parto, M. (2010). *Mindfulness, resilience and drug use among at risk adolescents: Assessing the explanatory model of mediating variables and mechanisms* [Ph.D. thesis]. University of Tehran.
- Rehman, R., Zafar, A., Mohib, A., Hussain, M., & Ali, R. (2018). Self-reported academic performance in relation to health behaviours among Bahria University students. *JPMA. The Journal of the Pakistan Medical Association, 68*(2), 195–199.
- Saeed, F., & Rana, H. (2019). *Emotional Regulation, Conflict Regulation and Quality of Life in Doctors* (Unpublished master thesis). University of Lahore, Pakistan.
- Schutte, N. S., & Malouff, J. M. (2011). Emotional intelligence mediates the relationship between mindfulness and subjective well-being. *Personality and Individual Differences, 50*(7), 1116-1119. <https://doi.org/10.1016/j.paid.2011.01.037>
- Slonim, J., Kienhuis, M., Di Benedetto, M., & Reece, J. (2015). The relationships among self-care, dispositional mindfulness, and psychological distress in medical students. *Medical Education Online, 20*(1), e27924. <https://doi.org/10.3402/meo.v20.27924>
- Teasdale, J. D., Segal, Z. V., & Williams. M. G. (2003). Mindfulness training and problem formulation. *Clinical Psychology: Science and Practice, 10*(2), 157-160. <https://doi.org/10.1093/clipsy.bpg017>