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MINDFULNESS, SELF-COMPASSION AND PERFECTIONISM AMONG DOCTORS IN PAKISTAN: A CROSS-SECTIONAL STUDY

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Abstract

Doctors work in clinical environments that require sustained attention, emotional regulation, and repeated exposure to human suffering. The present cross-sectional study examined the relationships among mindfulness, self-compassion, and perfectionism among doctors in the Hazara Division of Pakistan and explored differences across selected demographic variables. A convenience sample of 300 doctors completed a demographic sheet and three standardized self-report measures: the Mindful Attention Awareness Scale, the Self-Compassion Scale, and the Big Three Perfectionism Scale-Short Form. Internal consistency estimates were acceptable for mindfulness (alpha = .81), self-compassion (alpha = .71), and perfectionism (alpha = .87).

Pearson correlations indicated that mindfulness was positively associated with self-compassion ($r = .438$, $p < .01$) and negatively associated with perfectionism ($r = -.173$, $p < .01$). Self-compassion was positively associated with perfectionism ($r = .692$, $p < .01$), and age showed small positive associations with all three variables. Gender comparisons showed a small significant difference in mindfulness, with males reporting slightly higher mindfulness scores than females, while differences in self-compassion and perfectionism were small and non-significant. Descriptive comparisons by qualification suggested higher mindfulness and self-compassion among MBBS-qualified doctors, whereas FCPS-qualified doctors showed a slightly higher perfectionism mean. Findings highlight the importance of mindfulness and self-compassion as psychological resources for doctors and suggest the need for further research using larger multi-region samples and verified subgroup analyses.

Keywords:
Mindfulness, Self-Compassion, Perfectionism, Doctors, Physicians, Pakistan, Psychological Well-Being

1. Introduction

Clinical work requires doctors to make complex decisions under time pressure while responding to the emotional and physical suffering of patients. Long working hours, repeated exposure to distress, pressure to avoid mistakes, and organizational demands can increase stress, emotional exhaustion, compassion fatigue, and burnout among medical professionals (Dyrbye et al., 2005; Shanafelt et al., 2002). These difficulties are not only personal concerns; they may also influence quality of care, patient safety, professional performance, and doctor-patient relationships.

Mindfulness is commonly understood as receptive, present-moment awareness in which individuals attend to internal and external experiences with openness rather than automatic reactivity. In clinical settings, mindfulness may help doctors remain attentive, emotionally balanced, and less reactive during difficult encounters. By strengthening awareness and reducing automatic judgment, mindfulness can support clearer decision-making and healthier responses to occupational pressure (Kabat-Zinn, 2003; Shapiro et al., 2006).

Self-compassion refers to meeting personal difficulty with kindness, a sense of common humanity, and balanced awareness rather than harsh self-criticism, isolation, or over-identification. For doctors, self-compassion may be especially relevant because medical practice often involves uncertainty, heavy responsibility, and the emotional burden of patient suffering. A self-compassionate stance may help doctors acknowledge professional stress without turning it into destructive self-blame (Neff, 2003a, 2003b; Neff & Germer, 2013).

Perfectionism is also highly relevant in medical settings. Some degree of high standards may support careful practice, but rigid, self-critical, or socially pressured perfectionism can increase fear of failure, rumination, stress, and emotional vulnerability (Hewitt & Flett, 1991). In medical culture, where mistakes can have serious consequences, perfectionistic tendencies may become intensified. Therefore, understanding how perfectionism relates to mindfulness and self-compassion among doctors is important for both clinician well-being and patient care.

Although mindfulness, self-compassion, and perfectionism have been studied separately, fewer studies have examined these constructs together among doctors in Pakistan. Local healthcare settings often include heavy patient loads, uneven resources, and demanding work conditions. The present study addresses this gap by examining the relationships among mindfulness, self-compassion, and perfectionism among doctors in the Hazara Division of Pakistan and by exploring selected demographic differences.

2. Literature Review and Hypothesis Development

2.1 Mindfulness and Self-Compassion

Mindfulness and self-compassion are theoretically connected. Mindfulness allows individuals to notice painful thoughts and emotions without immediate avoidance or over-identification. Self-compassion then supports a kind and balanced response to those experiences. Previous research has shown that mindfulness is positively associated with self-compassion and psychological well-being (Baer et al., 2006; Neff & Germer, 2013).

For doctors, mindful awareness may create space between stress and reaction. This can make it easier to respond to personal limitations, clinical uncertainty, and professional pressure with less self-criticism and more emotional steadiness. Therefore, doctors with higher mindfulness are expected to report higher self-compassion.

H1: Mindfulness will be positively associated with self-compassion among doctors.

2.2 Mindfulness and Perfectionism

Mindfulness is expected to be negatively related to maladaptive perfectionistic tendencies because mindfulness involves flexible awareness and reduced automatic judgment, whereas maladaptive perfectionism involves rigid standards, fear of mistakes, and excessive self-evaluation. Although high professional standards are essential in medicine, self-critical perfectionism may reduce psychological flexibility and increase emotional burden.

H2: Mindfulness will be negatively associated with perfectionism among doctors.

2.3 Self-Compassion and Perfectionism

The relationship between self-compassion and perfectionism is complex. Theoretical work generally suggests that self-compassion should reduce the harmful effects of self-critical perfectionism because it encourages kindness and balanced awareness after failure. However, when perfectionism is measured as a broad total score, it may include both standards-based and self-critical elements. This means the direction and strength of the association may depend on how perfectionism is operationalized.

H3: Self-compassion will be significantly associated with perfectionism among doctors.

2.4 Demographic Differences

Age, gender, and level of medical qualification may influence mindfulness, self-compassion, and perfectionism. Older doctors may develop greater emotional regulation through professional experience, while gender and qualification differences may reflect socialization, workload, training demands, and career-stage pressures. Because previous findings are mixed, demographic differences were explored in the present study.

H4: Mindfulness, self-compassion, and perfectionism will differ according to age, gender, and level of medical qualification.

3. Method

3.1 Research Design

The study used a quantitative, cross-sectional survey design. Data were collected through standardized self-report questionnaires and a demographic sheet.

3.2 Participants and Sampling

The sample consisted of 300 doctors from hospitals located in the Hazara Division of Pakistan. Participants were selected through convenience sampling. The sample included 180 male doctors and 120 female doctors. The mean age of the total sample was 31.43 years (SD = 6.62). The study also considered level of medical qualification, including MBBS and FCPS.

3.3 Measures

Demographic sheet. Participants reported demographic information including age, gender, and level of medical qualification.

Mindfulness. Mindfulness was assessed using the Mindful Attention Awareness Scale-State form. The scale included five items scored on a 6-point Likert-type response format. Items were scored so that higher total scores reflected higher mindfulness. In the present sample, Cronbach's alpha was .81.

Self-compassion. Self-compassion was measured using the Self-Compassion Scale developed by Neff (2003a). The scale included 26 items rated on a 5-point Likert-type scale. Negatively worded subscale items were reverse scored before computing the total score. In the present sample, Cronbach's alpha was .71.

Perfectionism. Perfectionism was assessed using the Big Three Perfectionism Scale-Short Form. The scale included 16 items rated on a 5-point response scale. Higher scores reflected higher perfectionism. In the present sample, Cronbach's alpha was .87.

3.4 Procedure and Ethical Considerations

Data were collected from doctors in different hospitals in the Hazara Division. Participants were informed about the purpose of the study and were asked to provide informed consent before completing the questionnaires. Confidentiality and privacy of participant responses were assured. Participation was voluntary, and no identifying information is reported in this manuscript.

3.5 Statistical Analysis

Descriptive statistics were calculated for the main study variables. Internal consistency was examined using Cronbach's alpha. Pearson correlation coefficients were used to test associations among mindfulness, self-compassion, perfectionism, and age. Independent-samples t-tests were used where group sample sizes and descriptive statistics were available. For qualification-based comparison, descriptive statistics are reported because subgroup sample sizes were not available in the dataset summary.

4. Results

The results are presented in four parts: reliability analysis, correlations among the main study variables, gender differences, and qualification-related descriptive comparisons.

Table 1: *Descriptive Statistics and Internal Consistency of Study Measures (N = 300)*

Variable	Items	alpha	M	SD	Potential range	Actual range	Skewness	Kurtosis
MF	5	.81	18.84	5.62	5-30	5-30	-.112	-.391
SC	26	.71	79.00	13.36	26-130	36-130	-.170	2.19
PF	16	.87	42.96	10.73	16-80	21-80	-.052	.330

Note. MF = mindfulness; SC = self-compassion; PF = perfectionism; alpha = Cronbach's alpha; M = mean; SD = standard deviation.

As shown in Table 1, the three measures demonstrated acceptable internal consistency. The highest reliability was observed for perfectionism (alpha = .87), followed by mindfulness (alpha = .81) and self-compassion (alpha = .71).

Table 2: *Pearson Correlations among Mindfulness, Self-Compassion, Perfectionism, and Age (N = 300)*

Variable	1	2	3	4	M	SD
1. MF	—	.438**	-.173**	.146*	18.84	5.62
2. SC		—	.692**	.138**	78.42	14.99
3. PF			—	.152**	42.79	10.73
4. Age				—	31.43	6.62

*Note. MF = mindfulness; SC = self-compassion; PF = perfectionism. * p < .05. ** p < .01.*

Table 2 shows that mindfulness had a moderate positive association with self-compassion and a small negative association with perfectionism. Age was weakly but positively associated with mindfulness, self-compassion, and perfectionism. Self-compassion showed a strong positive association with perfectionism, a finding that requires careful interpretation because broad perfectionism scores may include both standards-based and self-critical elements.

Table 3: *Gender Differences in Mindfulness, Self-Compassion, and Perfectionism*

Variable	Male M	Male SD	Female M	Female SD	t(298)	p	95% CI	Cohen's d
MF	19.83	6.49	18.44	4.58	2.03	.043	0.04, 2.74	0.24
SC	75.70	16.17	78.30	13.73	-1.45	.149	-6.14, 0.94	-0.17
PF	44.44	9.39	42.83	11.93	1.30	.193	-0.82, 4.04	0.15

Note. MF = mindfulness; SC = self-compassion; PF = perfectionism. Male n = 180; female n = 120. CI = confidence interval for the mean difference.

The gender comparison showed a small but statistically significant difference in mindfulness, with male doctors reporting slightly higher mindfulness scores than female doctors. Female doctors had a higher mean score for self-compassion, and male doctors had a higher mean score for perfectionism, but these differences were small and not statistically significant.

Table 4: *Descriptive Comparison by Medical Qualification*

Variable	MBBS M	MBBS SD	FCPS M	FCPS SD	Direction of mean difference
MF	19.58	5.40	17.95	5.79	Higher in MBBS group
SC	80.11	5.79	76.51	16.30	Higher in MBBS group
PF	42.58	11.10	43.13	10.20	Slightly higher in FCPS group

Note. MF = mindfulness; SC = self-compassion; PF = perfectionism. Qualification-group sample sizes were not available in the dataset summary; therefore, inferential statistics are not reported for this comparison.

The descriptive comparison indicated that MBBS-qualified doctors had higher mean scores for mindfulness and self-compassion, whereas FCPS-qualified doctors had a slightly higher mean score for perfectionism. These qualification-related differences should be interpreted cautiously because subgroup sample sizes were not available for inferential testing.

5. Discussion

The present study examined the relationships among mindfulness, self-compassion, and perfectionism among doctors in the Hazara Division of Pakistan. Overall, the findings suggest that mindfulness and self-compassion are meaningfully connected psychological resources among doctors, while perfectionism shows a more complex pattern of association.

The first key finding was that mindfulness was positively associated with self-compassion. This result is theoretically consistent because mindful awareness may help doctors notice distressing thoughts and emotions without immediately judging themselves. Such awareness can create space for a more compassionate response to stress, uncertainty, or perceived professional failure. This finding is consistent with previous research showing close links between mindfulness, self-compassion, and psychological well-being (Baer et al., 2006; Neff & Germer, 2013).

The second key finding was that mindfulness was negatively associated with perfectionism. Although the effect was small, the direction supports the idea that mindful attention may reduce rigid and self-critical patterns of thinking. In medical settings, carefulness

and high standards are necessary; however, rigid perfectionism can increase fear of mistakes and emotional strain. Mindfulness may help doctors distinguish between responsible professional standards and harmful self-criticism.

The positive correlation between self-compassion and perfectionism was unexpected when perfectionism is understood mainly as self-critical or maladaptive. One possible explanation is that the total perfectionism score may include achievement-oriented or standards-based components that are not identical to self-criticism. In medical professionals, high standards may coexist with self-compassion when individuals are motivated to perform well while still maintaining a balanced attitude toward personal difficulty. Future studies should examine perfectionism subscales separately to clarify this relationship.

Age was positively associated with all three variables, although the correlations were small. This suggests that older doctors may report slightly greater mindfulness and self-compassion, possibly due to professional maturity, repeated exposure to clinical situations, and improved emotional regulation over time. The positive association between age and perfectionism may reflect increasing professional responsibility or internalized expectations with experience.

Gender-related findings were generally small. Male doctors reported slightly higher mindfulness than female doctors. Female doctors showed a higher mean self-compassion score, and male doctors showed a higher mean perfectionism score, but these latter differences were not statistically significant. Therefore, gender-based interpretations should be made carefully and should not be overstated.

Qualification-related comparisons showed that MBBS-qualified doctors had higher descriptive means for mindfulness and self-compassion, while FCPS-qualified doctors had a slightly higher mean score for perfectionism. Because qualification-group sample sizes were not available for inferential testing, these findings should be treated as descriptive. Future research should examine career stage, workload, specialty, and training pressure more directly.

6. Practical Implications

The findings support the value of psychological skills training for doctors. Mindfulness-based and self-compassion-oriented training may help doctors manage emotional strain, reduce automatic self-criticism, and sustain professional functioning under pressure. Such

interventions may be useful in hospitals, postgraduate medical training, and continuing professional development programs.

Hospitals and medical training institutions may also benefit from addressing unhealthy perfectionism. Training that normalizes learning from error, encourages supervision, and distinguishes professional excellence from destructive self-criticism may support healthier clinical practice. These steps can help doctors maintain high standards without damaging their psychological well-being.

7. Limitations and Future Directions

Several limitations should be considered. First, the study used a cross-sectional design, so causal relationships cannot be inferred. Second, the sample was selected through convenience sampling from hospitals in one region of Pakistan, which limits generalizability. Third, the study relied on self-report measures, which may be influenced by social desirability or response bias. Fourth, the perfectionism results should be interpreted with caution because total scores may conceal important differences between adaptive high standards and maladaptive self-critical perfectionism. Fifth, qualification-related inferential comparisons could not be reported because subgroup sample sizes were not available in the dataset summary.

Future research should use larger multi-region samples, report subscale-level results, and examine whether mindfulness and self-compassion mediate or moderate the relationship between perfectionism and occupational stress among doctors. Longitudinal studies would also help clarify whether mindfulness and self-compassion protect doctors from burnout over time.

8. Conclusion

This study contributes to the understanding of mindfulness, self-compassion, and perfectionism among doctors in Pakistan. Mindfulness was positively associated with self-compassion and negatively associated with perfectionism, suggesting that mindful awareness may support healthier emotional self-regulation in clinical professionals. Age showed small positive associations with the main study variables. Demographic comparisons suggested some mean-level differences, but these should be interpreted cautiously. Overall, the findings highlight the importance of strengthening mindfulness and self-compassion among doctors and suggest

that perfectionism should be studied in a more detailed and multidimensional way in future medical psychology research.

Declarations

Ethics approval: The study followed informed-consent and confidentiality procedures. Formal institutional ethics approval information was not reported in the available dataset summary and should be confirmed by the authors according to the target journal's policy.

Consent to participate: Informed consent was obtained from all participants before data collection.

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Conflict of interest: The authors declare no conflict of interest.

Data availability: The anonymized data may be made available from the corresponding author on reasonable request, subject to institutional and ethical approval.

Author contributions: Adnan Haider contributed to the conceptualization, methodology, manuscript writing, and final review. Haiqa Khan contributed to manuscript development, literature review, data interpretation, editing, and correspondence. Both authors reviewed and approved the final manuscript.

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