

Role of Narcissism, Mattering, and Social Support on Psychological Well-Being of Medical Students

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Abstract

Background: Medical students often experience a peak in intellectual and emotional stress, which can greatly affect their psychological well-being (PWB).

Objective: To determine the impact of narcissism, social support, and a sense of belonging on psychological well-being in medical students.

Methodology: In this cross-sectional study, we included a total of 368 medical students from different Medical Colleges in South Punjab, Pakistan, from September 2024 to February 2025. The research used the General Mattering Scale (GMS), the Multidimensional Scale of Perceived Social Support (MSPSS), the Ryff Scale of Psychological Well-being (PWB) scale, and the Narcissistic Personality Inventory (NPI) scale. Multiple regression analysis, together with correlation studies, served as statistical methods for evaluating PWB predictors. SPSS-26 was used for data analysis.

Results: Descriptive analysis revealed mean scores for PWB (87.92, SD = 11.40), NPI (5.03, SD = 2.90), MSPSS (4.75, SD = 1.17), and GMS (12.71, SD = 2.92). Correlation analysis indicated significant positive relationships between PWB and MSPSS ($r = 0.401$, $p < 0.001$), as well as GMS ($r = 0.351$, $p < 0.001$). Regression analysis showed MSPSS ($\beta = 0.319$, $p < 0.001$) and GMS ($\beta = 0.268$, $p < 0.001$) as significant predictors of PWB, while NPI was not significant ($\beta = -0.076$, $p = 0.104$).

Conclusion: The study data demonstrate that medical students achieve superior psychological well-being when they receive social support and feelings of belonging. Research experts suggest selected techniques to enhance social relationships and promote social attachment among people.

Keywords: Psychological Well-being, Narcissism, Social Support, Mattering, Medical Students

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Introduction

The capacity to sustain life goals, together with relationship connections and personal development, represents Psychological well-being for people who need this ability to handle challenges during medical school.¹ Academic stress and emotional strain faced by medical students increase their vulnerability to poor psychological well-being (PWB).¹ This results in developing stress, depression, and anxiety. The Social support that people perceive exists between others serves as a crucial factor in managing stress and improving mental health. According to the buffering hypothesis, social support works as an emotional and instrumental tool that shields individuals from negative stress effects.² Researchers widely employ the Multidimensional Scale of Perceived Social Support (MSPSS) to assess how individuals perceive the support they receive from their family, along with friends and significant others.³

A person recognizes their importance because others value their existence through the sense of mattering. The General Mattering Scale (GMS) measures this construct because it demonstrates critical significance to psychological health while decreasing social estrangement between people.⁴ The narcissistic personality traits that include grandiosity, along with the need for admiration and feelings of entitlement, extensively influence the relationship with PWB.⁵ The research shows moderate narcissism works to protect self-esteem, but high levels of the condition create relationship problems and weaken emotional strength in interpersonal settings.⁶ High levels of narcissism among medical students create challenges for them in achieving success through teamwork and support dynamics.⁷ No current research exists regarding the simultaneous influence of MSPSS, mattering, and narcissism on psychological well-being, particularly within the medical student

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population. This research investigates how the Multidimensional Scale of Perceived Social Support and mattering levels, along with narcissism, influence psychological well-being outcomes within medical student groups so as to generate data suitable for strategic intervention development.

Methodology

A comparative cross-sectional study methodology was used in this research to examine the connections between medical students' psychological well-being (PWB), social support, mattering, and narcissism. Cross-sectional designs are particularly effective in examining associations between variables within a specific population at a given time. The research was carried out at medical colleges/schools in Pakistan's South Punjab. There was adequate time for data collection, verification, and analysis because the research was carried out in six months from September 2024 to February 2025. Similar timeframes are commonly used in cross-sectional studies to balance thoroughness and feasibility. The initial estimated sample size was 384 when the values taken were 95% confidence level ($Z = 1.96$), expected proportion $p=0.50$, and margin of error $d=0.05$. A final sample size of 368 was achieved when a total population ($N=8,725$) of MBBS students at different public and private sector medical colleges of South Punjab was mentioned. After filtering the data, 368 valid responses were retained for analysis, as required by our sample size calculation using the WHO sample size calculator. The sample included MBBS students from first to final year, providing a homogenous sample of the medical student population. Convenience sampling was used to collect samples, as it is a realistic approach often adopted in research due to its accessibility.

The subjects were MBBS students from various medical colleges in South Punjab who consented to participate voluntarily. Students enrolled in programs other than MBBS were excluded to ensure sample homogeneity and focus only on the MBBS students. The following authentic Questionnaires were obtained from the respective organizations and implied after getting emailed permission:

1. Narcissistic Personality Inventory (NPI): Assessed narcissistic traits and tendencies.

2. General Mattering Scale (GMS): Indicated participants perceived significance to others.

3. The Ryff Scale of psychological well-being: Assessed six components of participants' psychological health, such as positive relationships, personal development, and autonomy.

4. The Multidimensional Scale of Perceived Social Support (MSPSS): Evaluated how supportive friends, family, and significant others were perceived to be.

Questionnaires were distributed through a Google survey form among MBBS students across five academic years. The research objectives were disclosed to the participants, and it was made clear that participation was purely voluntary. Clear instructions ensured accurate responses and high-quality data collection. Participants independently completed the questionnaires, providing insights into their experiences with narcissism, social support, mattering, and Psychological Well-being.

The study received ethical approval from the Institutional Review Board (IRB) (Ref. No. 1253/NMU, Dated: 07-08-2024) of Nishtar Medical University, Multan. Research adherence to the values of beneficence, justice, and respect is guaranteed by ethical monitoring. The collected data were entered in and analyzed using SPSS software (version 26). Statistical tests, including descriptive statistics, correlation analysis, and multiple regression, were performed to explore relationships between variables and identify significant predictors of PWB.

Results

A total of 368 medical students were included in this study. The descriptive statistics for the General Mattering Scale (GMS), the Multidimensional Scale of Perceived Social Support (MSPSS), the Ryff Scale of Psychological Well-being (PWB) scale, and the Narcissistic Personality Inventory (NPI) scale are shown in Table-I.

Table-I: Descriptive statistics for study variables (n=368)

Variable	Mean	Standard Deviation
Psychological Well -being (PWB) scale	87.92	11.4
Narcissistic Personality Inventory (NPI) scale	5.03	2.9
Multidimensional Scale of Perceived Social Support (MSPSS)	4.75	1.17
General Mattering Scale (GMS)	12.71	2.92

These evaluations are important because they make sense and assess the psychological traits of medical students who are frequently under academic pressure. Table-II details correlation coefficients for variables and their interplay of significant relationships between variables.

Table-II: Correlation Coefficients for Variables (n=368)

Variable	PWB	NPI	MSPSS	GMS
PWB	1.000	-0.087	0.401	0.351
NPI	-0.087	1.000	-0.090	0.066
MSPSS	0.401	-0.090	1.000	0.278
GMS	0.351	0.066	0.278	1.000

Table-III provides a breakdown of how much influence several independent variables (NPI, MSPSS, GMS) have on the dependent variable (PWB). A multiple regression analysis was conducted to predict PWB based on NPI, MSPSS, and GMS scores. The model explained 22.8% of the variance in PWB ($R^2 = 0.228$) and was statistically significant ($F = 35.95, p < 0.001$).

Table-III: Regression Coefficients for Predictors of PWB (n=368)

Predictor	Unstandardized Coefficients	St. Error (SE)	Beta (β)	T-value	Significance (P)
(Constant)	61.417	2.961	-	20.739	< 0.001
NPI	-0.297	0.182	-0.076	-1.630	0.104
MSPSS	3.100	0.468	0.319	6.621	< 0.001
GMS	1.044	0.188	0.268	5.559	< 0.001

Figure-I: Histogram of regression-standardized residuals (PWB: dependent variable).

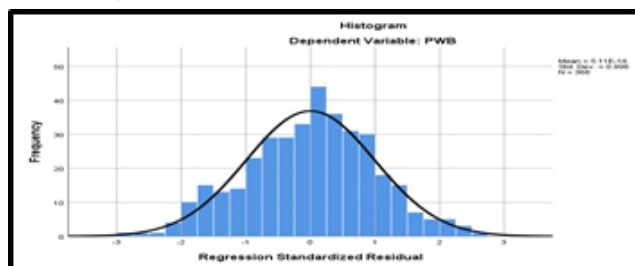
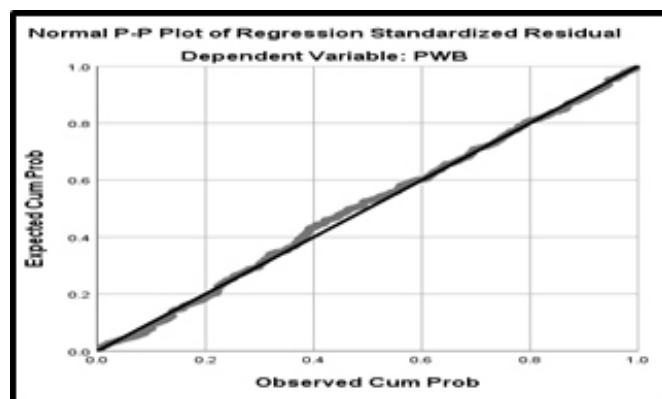


Figure-I illustrates the histogram of regression-standardized residuals (PWB: dependent variable). The mean ($5.11E-16$) and standard deviation (0.996) are almost ideal. Figure-II emphasizes the normal P-P plot of the regression-standardized residuals of the dependent variable PWB. The plot confirms the normal distribution of

the residuals and thus supports the validity of our regression system.

Figure-II: Normal P-P plot of the regression-standardized residuals of the dependent variable PWB.



Discussion

This study aimed to determine the relationships among narcissism, social support, mattering, and psychological well-being (PWB) of medical students. This highlights the important role mattering and social support can have in mitigating negative mental health issues within this group. Meanwhile, the impact of narcissism on Psychological well-being is context-based.⁸ MSPSS presented a strong positive association with PWB, supporting the previous studies that proposed social connections buffer the effects of stress, helping with emotional resilience.^{1,2} Mattering also proved to be a top predictor of psychological well-being, whereby students who feel valued by others are more physically and emotionally resilient in managing academic and life challenges.^{3,4} Interestingly, narcissism (NPI) was not a significant predictor of PWB.

The high mean values for PWB (mean = 87.92), MSPSS (mean = 4.75), and GMS (mean = 12.71) showed that most students were satisfied with their psychological health, perceived social support, and sense of importance to others. Although not to a great extent, narcissism (NPI mean = 5.03) is evident in the sample. PWB, on the other hand, varied somewhat ($SD = 11.40$), suggesting that some students felt much better than others. There was significant variation in the NPI ($SD = 2.90$), highlighting the fact that some students had low levels of narcissistic tendencies while others had larger levels. According to MSPSS ($SD = 1.17$), most students' experiences with perceived social

support were fairly similar. Variability in GMS (SD = 2.92) highlighted that not everyone in society feels equally significant.

Correlation analysis conferred that students who feel more socially supported and feel that they matter to others are more likely to have better psychological well-being, according to the moderately favorable and significant correlations that MSPSS and GMS demonstrated with PWB ($r = 0.401$ and $r = 0.351$, respectively). Although there is a statistically significant association ($p=0.048$) and a negligible effect, NPI and PWB ($r=-0.087$) indicate that narcissistic students may feel worse. The same is true for the NPI and MSPSS ($r=-0.09$), which similarly show a weak negative connection that suggests narcissistic students may feel less supported by others. These findings also correlate with many previous studies conducted.^{9,10,11} Medical students with narcissistic traits might have high ambitions and might set unrealistic goals, which leads to chronic stress and dissatisfaction.⁷ The fact that MSPSS and GMS have a weakly positive connection ($r=0.278$) highlights the tendency for those who feel supported to also feel important in society, as evidenced in previous literature.^{12,13} There is no significant correlation between narcissism and feeling important, as indicated by the very minimal positive connection between NPI and GMS (0.0066). In conclusion, social belonging and perceived social support are critical components of psychological wellness. Although there is no significant correlation between narcissism and any of the variables, under certain situations, it may lower psychological well-being and perceived support.

The results of the sample's multiple regression analysis were comparable to those of the correlation analysis, which further intensified the idea that the best predictor of PWB is perceived social support ($\beta = 0.319$, $p = <0.001$). Similarly, GMS was also shown to be an effective predictor of PWB ($\beta = 0.268$, $p = <0.001$). These findings correlate with previous studies.^{12,13} However, NPI ($\beta = -0.076$, $p = 0.104$) is not a significant predictor of PWB, indicating that narcissism does not significantly influence an individual's psychological health when they feel socially liked and supported (When MSPSS and GMS are under control) as shown by a published study.¹⁴ Some research has suggested that some narcissistic features, such as self-confidence, could be

protective of mental health, while chronic narcissism hampers relationships and disrupts emotional balance among individuals, which corroborates the findings of a study.¹⁵ When these lofty aspirations are not achieved and self-expectations are not met, it can greatly diminish self-esteem and overall well-being. Thus, these findings underscore the need for medical students to cultivate social support systems and a sense of mattering. Peer mentoring, family support initiatives, and inclusive practices within academic institutions could positively influence student well-being, similar to a study.¹⁶ Further research is necessary since the insignificant value of narcissism suggests that its effects on well-being may differ based on the particular environment or personality dynamics.

Future research should look at different study designs to investigate how PWB evolves over time and examine other variables like socioeconomic status that may have an impact on mental health. All things put together, this study emphasizes how important mattering and social support are for fostering medical students' psychological well-being. The results provide a foundation for creating focused interventions to help this vulnerable group's mental health. Even though this study offers insightful information, there are several limitations to take into account including because the convenience sampling approach may not fully represent the larger population of medical students, the results may not be as generalizable and because it is an analytical cross-sectional study, it does not take into consideration how PWB may be impacted by longitudinal changes or by outside variables like socioeconomic status or academic stress.

Conclusion

In medical students, social support and a sense of belonging socially greatly improve psychological well-being, highlighting the necessity of focused interventions. Future studies ought to clarify the part narcissism plays in this situation. Medical students experience better psychological well-being due to strong social support networks and social connections, which warrants specific interventions. Additional research should define how narcissism affects this scenario.

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Acquisition and Analysis of data, **MM:** Design of work, Acquisition and Analysis of data and revising.

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