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Examining the Psychosocial Factors of Mental Health Well-being Among Medical University Students: Gender-based Analyses

Geng Yao[1,2], *Aziz Jamal[3, 4], Mohd Zulkifli Abdullah[3], Mohd Redhuan Dzulkipli[3], Nurizzati Jamil[2,5]
[1]Ningxia Medical University, China
[2]Department of Postgraduate and Professional Studies, Faculty of Business and Management, Universiti Teknologi MARA, Shah Alam, Malaysia
[3]Health Administration Program, Department of International Business & Management, Faculty of Business & Management, University Teknologi MARA Puncak Alam Campus, Malaysia
[4]Business & Consumer Health Sciences Research Interest Group, Faculty of Business & Management, Universiti Teknologi MARA Puncak Alam Campus, Selangor Malaysia
[5]Department of Nursing Administration, Sunway Medical Center, Subang Jaya Selangor, Malaysia
geng_yao@163.com, *azizabduls.jamal@gmail.com, m_zulkifli@uitm.edu.my, redhuan49@uitm.edu.my, nurizzatij@sunway.com.my
Corresponding Author: Aziz Jamal

Abstract: The mental health of university students is a major concern due to the various stressors they face, including academic pressures, social dynamics, and personal development challenges. Previous studies have shown that gender differences significantly impact how students perceive and express psychological distress. This study aimed to identify these differences in the context of academic stress, social support, self-esteem, academic motivation, and family functioning, and their association with psychological distress. The study involved 2206 medical students in a cross-sectional study at a medical university in Ningxia, western China. The data analysis revealed significant gender differences in scores for academic stress, social support, and academic motivation. Academic stress, social support, and family functioning were found to be significantly associated with psychological distress for both genders. However, academic motivation was found to significantly influence psychological distress only among male students, while self-esteem had an impact on female students. These findings highlight the need for tailored mental health services in universities to address gender-specific needs, such as providing counseling services that focus on coping with academic stress and strengthening social and familial support networks to improve student well-being.

Keywords: *Mental health, psychological, well-being, university, students, medical, stress, depression, anxiety, family, social support, China*

1. Introduction and Background

The mental health of university students has become a critical area of concern, particularly in light of the multifaceted stressors they face, including academic pressures, social dynamics, and personal development challenges. Academic stress is a predominant factor influencing psychological distress among students, often exacerbated by high expectations, workload, and fear of failure (Hussain et al., 2023; Jiang, 2024).

Medicine is considered one of the most stressful academic disciplines due to the intense academic demands, high expectations, and personal challenges faced by students. Studies conducted in multiple countries have reported that a significant number of medical students experience psychological distress (Wang et al. 2023; Liao et al., 2022; Rtbey et al., 2022; Raduan et al. 2022; Gebremedhin et al., 2020; Sahu et al., 2020). If not addressed, this issue could negatively impact their academic performance and overall well-being.

Research indicates that high levels of perceived stress correlate with increased symptoms of depression, anxiety, and hopelessness, underscoring the need for effective stress management interventions (Padmanabhanunni et al., 2023; Li et al., 2003). Social support emerges as a crucial protective factor, significantly mitigating the adverse effects of stress and enhancing overall well-being. Studies have shown that social support directly reduces psychological distress and positively influences life satisfaction and academic well-being (Zayed et al., 2024; Dadandi & Citak, 2023).

Furthermore, self-esteem plays a vital role in buffering against stress, with higher self-esteem linked to lower levels of psychological distress (Terry & Abdullah, 2023). Academic motivation and self-efficacy are also

pivotal, as they foster resilience and a positive academic experience, thereby reducing stress and enhancing academic performance (Hussin et al., 2023). Family functioning, including the quality of family relationships and support, significantly impacts students' mental health, with strong family support correlating with lower levels of depression, anxiety, and stress (Newhart, 2023).

The interplay between these variables—academic stress, social support, self-esteem, academic motivation, and family functioning—creates a complex dynamic that influences psychological distress among university students. For instance, social competence and family functioning have been identified as significant predictors of mental well-being, with social competence being the largest predictor, followed by perceived social support and family functioning (Newhart, 2023). Additionally, digital resilience and social support have been found to predict academic well-being, highlighting the importance of these factors in managing digital stress and promoting academic success (Zayed, 2024). The COVID-19 pandemic has further amplified these issues, with containment measures leading to increased social isolation and perceived stress, thereby heightening psychological distress among students (Padmanabhanunni et al., 2023; Ntoiti et al., 2024). Negative coping strategies, such as substance use, have also been linked to poor academic performance and increased mental distress, emphasizing the need for positive coping mechanisms and support systems (Ntoiti et al., 2024).

Gender differences significantly influence the perception and expression of psychological distress among students, as evidenced by various studies. Female students report higher levels of emotional distress compared to their male counterparts, with findings indicating that 11.7% of females experienced emotional distress versus 3.8% of males, influenced by factors such as stigma and isolation (Tzeng et al., 2024). Additionally, while both genders experience stress, females reported significantly higher stress levels in emotional and social domains (Dheerendra et al 2023). Interestingly, a study on self-perceived gender typicality found that gender did not directly influence psychological distress, suggesting that self-esteem mediates this relationship (Chuku, 2017). Furthermore, research on medical students revealed that males exhibited better resilience and lower psychological distress compared to females (Suresh & Nair, 2023). Lastly, while no overall gender differences in psychological distress were found among treatment-seeking university students, interactions between gender and ethnic identity highlighted the complexity of these experiences (Sorkhou et al., 2022). These findings underscore the necessity for gender-sensitive approaches in mental health interventions for students.

Overall, the existing literature underscores the multifaceted nature of psychological distress among university students and the critical role of social support, self-esteem, academic motivation, and family functioning in mitigating these challenges. This research aims to explore these interrelationships further, providing insights into effective gender-based interventions and support mechanisms to enhance university students' mental health and academic success.

2. Research Methodology

Study design

This quantitative study was designed as a cross-sectional study, aiming to examine the influence of Academic stress (AS), Social Support (SS), Self-esteem (SE), Academic Motivation (AM), and Family Functioning (FF) on the psychological well-being (psychological distress) of a public university's medical students in Ningxia, Western China.

Population and sample size determination

The study's population refers to 10,760 medical-related students aged ≥ 18 at one public medical university in Ningxia, Western China. These students consist of those who were studying in allied health programs (e.g., nursing, pharmacy), bachelor's degree medical programs, or postgraduate degree programs. The sample size was determined using the following formula:

$$\frac{Z_{1-\alpha/2} * pq}{\delta^2}$$

Where p = the expected present-day rate, q = 1 - p, and $z_{1-\alpha/2}$ were the significant test statistics and the allowable error. Sample size calculation was performed using PASS software with the parameters set at α =.05, for p of 10-30%, tolerance error δ=2%. Considering the possibility of non-response (20%), the minimum sample size

was determined to be 1143. In this study, convenience sampling was used. The selection is justified due to its practicality and efficiency, particularly in contexts where time and resources are limited. This method allows researchers to gather data quickly and at a lower cost, making it particularly useful in fields like social and psychological sciences. A total of 2206 questionnaires were purposely distributed, which far exceeded the minimum sample size required, giving the researchers more confidence in sampling power.

Definition of Study Variables and Instrument Development

Academic stress (AS) refers to the student's psychological state resulting from continuous social and self-imposed pressure in a school environment that depletes the student's psychological reserves (Misra et al., 2000). In this study, academic stress is measured using the Perceived Academic Stress Scale (PASS) developed by Bedewey & Gabriel, (2015). This *18*-item scale was later translated into Chinese language. The alpha coefficient suggests that the instrument used in this study is highly reliable (α = 0.89)

Social support (SS) has been described as the provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors. The level of social support received by the students was measured using the Social Support Rating Scale (SSRS), which consists of 10 items measuring subjective support, objective support, and support-seeking behavior (Xiao, 1994). The internal consistency of the SSRS scale in this study was high (α = 0.98)

Self-esteem (SE) refers to one's positive or negative attitude toward oneself and one's evaluation of one's thoughts and feelings overall about oneself. This psychological aspect is measured using the self-esteem scale (SES) that was originally developed by Rosenberg in 1965 (Rosenberg, 1965). The Chinese-translated version of SES was used in this study that maintains all 10 items as originally proposed (Yang & Wang, 2007). Scale reliability analysis showed this instrument is highly reliable (α = 0.93)

Academic Motivation (AM) is defined as an internal process that stimulates and maintains individual learning activities and makes learning behaviors toward certain goals. This process is measured using a 16-item academic motivation scale that Wan-W (2006) developed. Preliminary findings indicate that this instrument has a high reliability (α = 0.94).

Family functioning (FF) refers to the state where the family environment allows for clear communication, affective regulation, defined roles, and cohesion. The degree of compliance with APGAR basic parameters, which include adaptation, participation, gain or growth, affection and resources, will be used to identify the state of family functioning (Smilkstein, 1978). The 5-item family APGAR questionnaire, which was previously translated by Lu et al. (1999), was used in the current study. The scale is considered highly reliable, as suggested by the alpha coefficient (α = 0.90).

Psychological distress (PD) encompasses painful mental and physical symptoms associated with normal mood fluctuations in most individuals. Many self-reported measures of depression and anxiety are believed to assess this condition. In the context of the current study, psychological distress, as the outcome variable, is measured using The Depression, Anxiety, Stress Scale (DASS). The translated version of the DASS scale containing 21 items was used in this study (Gong et al., 2010). Alpha coefficients are reported as follows: Depression (α = 0.90), Anxiety (α = 0.86), and Stress (α = 0.88). According to the DASS manual, scores> 9 for depression, > 7 for anxiety, and > 14 for stress indicate the presence of symptoms associated with psychological distress (Lovibond & Lovibond, 1995). A complete guideline for scoring and its interpretation can be found at https://www2.psy.unsw.edu.au/dass/

Data collection process

Before data collection was initiated, a request for permission to collect the data was forwarded to the university's authority by submitting the research protocol, questionnaires, and informed consent form. Upon ethics approval, the counselling center issued online and offline notices notifying participant recruitment. Interested students who met the study inclusion criteria and responded to the recruitment notices were contacted by telephone and email.

A set of questionnaires was provided to the participants, and sufficient time was allocated to complete the questionnaire and return it to the researchers. A total of 2205 students completed the questionnaire and

returned it to the researchers, translating to a 100% response rate.

Data Analysis

The descriptive statistics for categorical variables were expressed in numerical values and percentages. Scores based on instruments measuring AS, SS, SE, AM, FF, and PD (i.e., Depression, Anxiety, and Stress) were computed, and the statistics were presented using means and standard deviations. The normality distribution was statistically checked by examining skewness and kurtosis values, as well as the results of the Anderson-Darling test (Anderson & Darling, 1954). In this study, all scores were found to be distributed normally. Independent sample *t*-tests were conducted to determine if the scores varied statistically between gender groups. The homogeneity of variance was checked, and if the assumption was violated, estimates based on Welch's *t* and *d* were calculated to determine the significant differences and the equivalent effect sizes. The influence of AS, SS, SE, AM, and FF on PD was analyzed using structural equation modeling (SEM), where a latent variable for PD was created to contain three measurement dimensions, namely Depression, Anxiety, and Stress. Standardized regression estimates were obtained by simultaneously regressing AS, SS, SE, AM, and FF with the outcome variable (PD). Sub-group analyses were also performed to compare the estimates between male and female students. To address issues with model convergence, we allowed the error terms of the measurement model to correlate between Depression and Anxiety and between Anxiety and Stress. Models' fitness was assessed using a chi-squared test (model vs saturated), Root mean squared error of approximation (RMSEA), Comparative fit index (CFI), Tucker-Lewis Index (TLI), Standardize root mean squared residual (SRMR) and coefficient of determination (CD). All reported *p*-values were 2-tailed, and the significance level was set at $p < 0.05$. Stata statistical software: Release 17 (StataCorp LP, College Station, TX), R Statistical Software (v4.3.3; R Core Team 2021), and Lavaan—an R package for structural equation modeling, were used to analyze the data.

3. Results

Profile of Respondents: The total number of respondents is 2206, of which 645 are males (29.20%) and 1561 are females (70.80%). Sixty percent of college students are from rural areas (n = 1327), and the remaining 40% are from urban areas (n = 879). Regarding academic program enrolment, the most frequently reported was bachelor's degree programs (n = 1,486, 67.36%), followed by college diploma programs (n = 565, 25.61%) and postgraduate programs (n = 155, 7.03%).

Descriptive Statistics: The raw scores were summarized using mean and standard deviation and subsequently compared between male and female students. A statistically significant difference in student's responses regarding perceived academic stress (t = 2.98, p = 0.002, d =.14), social support (t = -4.72, p <.001, d =-.23), and academic motivation (t = -2.70, p = 0.006, d = -.13) was observed with small to medium effect sizes. In particular, female students had a higher social support and academic motivation score than male students. Whereas, male students had a higher academic stress score when compared to female students. Interpreting the scores based on relevant manuals and research works for the use of DASS, Family APGAR, PASS, SES, and SSRS, the students were mostly characterized as having a highly functional family, receiving a high level of social support, and having a normal range of self-esteem level. Likewise, the students did not show any signs of depression or significant levels of stress (either caused by academic or psychological). However, the mean score for anxiety indicated that the respondents, on average, showed a mild level of anxiety. Table 1 summarizes the data showing the mean and standard deviations for scores of studied variables.

Table 1: Summary of mean analyses performed on studied variables

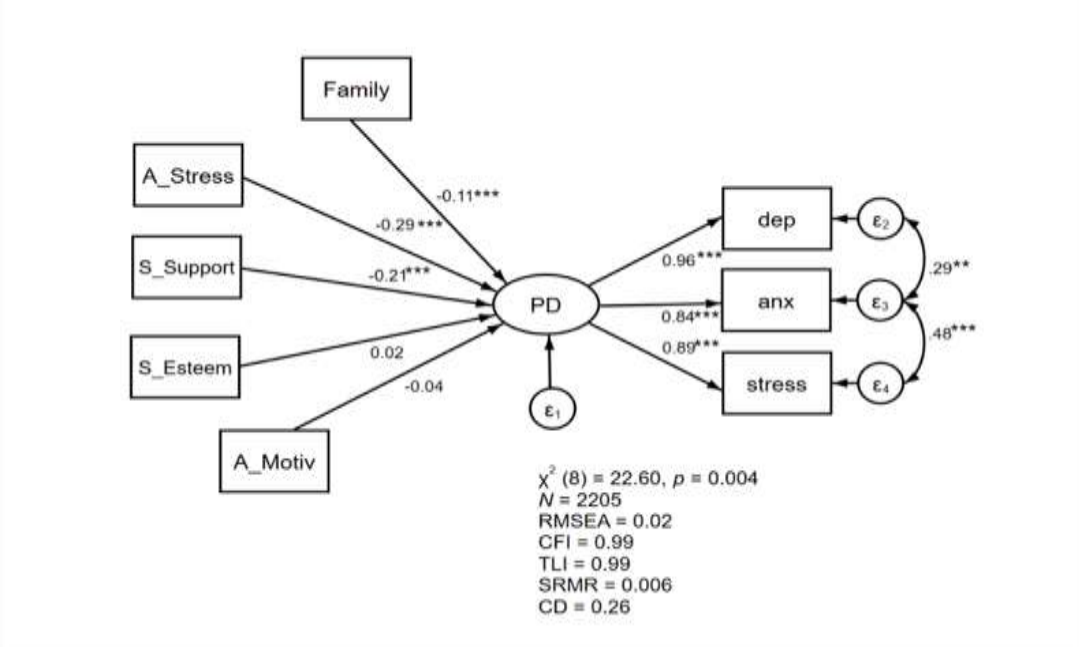
	All (N = 2205)		Male (n = 646)		Female (n = 1559)		*t*-test	
Variable	***M***	***SD***	***M***	***SD***	***M***	***SD***	***t***	***p***
Academic stress	60.80	11.33	61.95	11.86	60.33	11.08	2.98*	0.002
Social Support	65.81	14.19	63.55	14.80	66.75	13.83	-4.72*	<.001
Self-esteem	29.36	7.17	29.26	7.54	29.40	7.03	-0.41	0.679
Academic motivation	62.64	11.73	61.58	12.06	63.09	11.57	-2.70*	0.006
Family Apgar	7.47	2.56	7.40	2.61	7.50	2.55	-0.79	0.428
Depression	6.66	7.81	6.98	8.03	6.52	7.72	1.26	0.207

Anxiety	7.10	7.52	7.16	7.67	7.08	7.46	0.22	0.824
Stress	8.34	8.24	8.70	8.56	8.19	8.11	1.30	0.194

**Estimates were obtained from the parametric Welch t-test*

Inferential Statistics: Based on the analysis of all data, the statistics indicate academic stress (β = -.29, 95% CI =-.33 to -.25, *p* <.001), social support (β = -.21, 95%CI = -.26 to -.16, *p* <.001), and family functioning (β = -.11, 95% CI = -.15 to -.06, *p* <.001) significantly associated with psychological distress which was measured by depression, anxiety, and stress scores. Figure 1 shows the diagrammatic presentation of the study findings.

Figure 1: Diagrammatic Presentation of regression analysis containing all responses of the study sample (N= 2205).



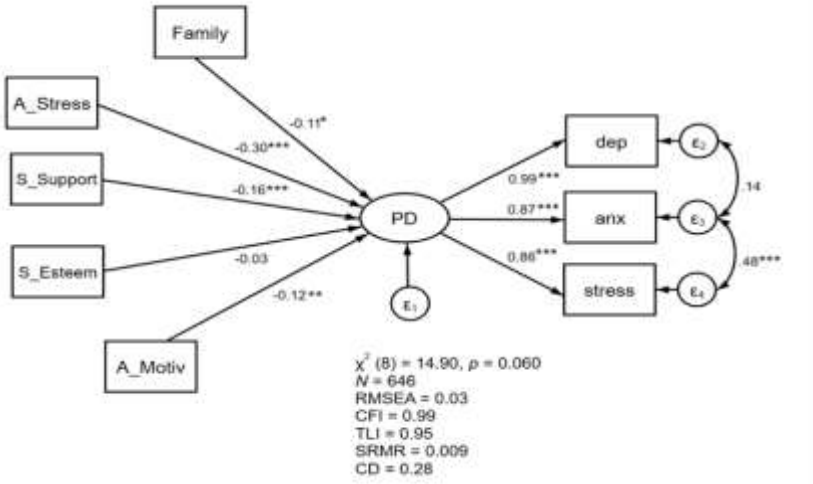
The diagram shows the standardized path coefficients and their statistical significance.

The results of sub-group analyses identified academic motivation score (β =-.12, 95% CI = -.19 to -.04, *p* = .002), along with academic stress(β = -.30, 95% CI = -.37 to -.22, *p* <.001), social support (β = -.16, 95% CI = -.25 to -.07, *p* =.001), and family functioning (β = -.11, 95% CI = -.19 to -.02, *p* =.010), significantly associated with psychological distress among male students. Such a significant effect of academic motivation, however was not seen among female student, but self-esteem score (β =-.05, 95% CI = -.00 - .09, *p* = .047), along with academic stress (β = -.29, 95% CI = -.34 to -.25, *p* <.001), social support (β = -.23, 95% CI = -.29 to -.17, *p* <.001), and family functioning (β = -.10, 95% CI = -.16 to -.04, *p* =.001), had emerged as significant predictors for psychological distress.

Judging from the standardized coefficients, academic stress and social support contribute most to the prediction. The influence of academic stress on psychological distress is, however, comparatively stronger in male than female students. On the contrary, the perceived social support score had a greater influence on female students than on male students.

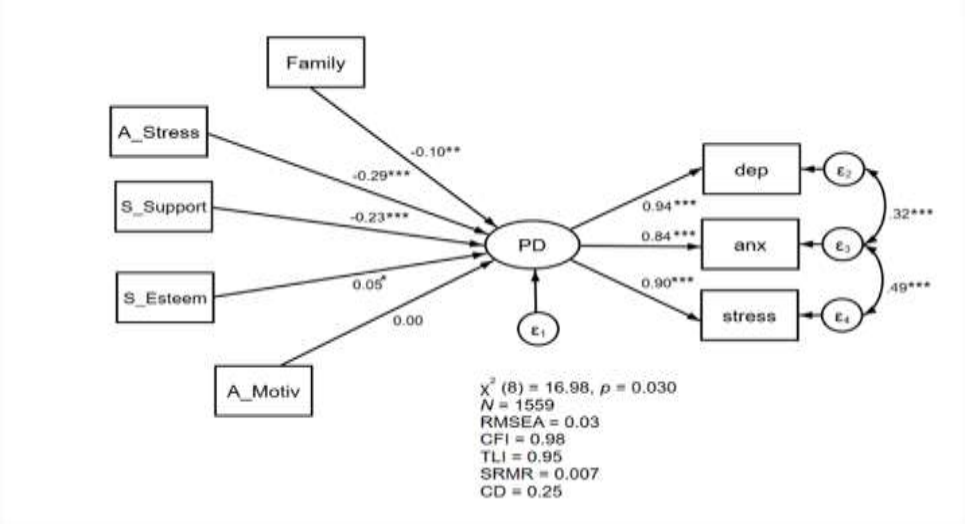
Negative coefficients signify an inverse relationship between variables. Simply put, the higher the score of predictor variables, the lower the score of psychological distress as measured by depression, anxiety, and stress, is predicted. Figure 2 and Figure 3 illustrate the relationship of variables.

Figure 1: Diagrammatic presentation of regression analysis containing responses of male respondents (n = 646).



The diagram shows the standardized path coefficients and their statistical significance.

Figure 3: Diagrammatic presentation of regression analysis containing responses of female respondents (n = 1559).



The diagram shows the standardized path coefficient and their statistical significance.

The models developed in this study showed an acceptable goodness of fit. Although the chi-square statistics for model 1, which included responses of all study participants, and model 3, which included responses of female participants, were statistically significant, signifying a discordance between the model and population estimates, several researchers pointed out that the chi-squared test provides the least useful metric for model fit because of its sensitivity to sample size (Hu & Bentler, 1999; Schumacker & Lomax, 2010). In a study with a large sample size, it is typical to see such a chi-squared test to be significant. Therefore, other indicators such as RMSEA, CFI, and TLI should be used for model fitness. In the current study, those indicators showed acceptable values compared to established cutoffs or benchmarks. Table 2 summarizes the results of analyses along with the models' fit statistics.

Table 2

Results of structural equation modelling on factors associated with psychological distress among medical students

	All students (N = 2205)				Male students (*n* = 646)				Female Students (*n* = 1559)			
	Coef.	SE	95% CI	*p*	Coef.	SE	95% CI	*p*	Coef.	SE	95% CI	*p*
Structural												
Psychological Distress												
Academic stress	-.29	.021	[-.33, -.25]	<.001	-.30	.039	[-.37, -.22]	<.0001	-.29	.024	[-.34, -.25]	<.001
Social Support	-.21	.026	[-.26, -.16]	<.001	-16	.047	[-.25, -.07]	0.001	-.23	.030	[-.29, -.17]	<.001
Self-esteem	.02	.019	[-.02, .06]	0.24	-.03	.034	[-.09, .03]	0.410	.05	.023	[.00, .09]	0.047
Academic motivation	-.04	.022	[-.07, .01]	0.11	-.12	.038	[-.19, -.04]	0.002	.00	.027	[-.04, .06]	0.884
Family	-.11	.025	[-.15, -.06]	<.001	-.11	.043	[-.19, -.02]	0.010	-.10	.029	[-.16, -.04]	0.001
Measurement												
Depression	.95	.010	[.93, .97]	<.001	.99	.019	[.95, 1.02]	<.001	.94	.013	[.92, .97]	<.001
Anxiety	.84	.017	[.81, .88]	<.001	.87	.029	[.81, .92]	<.001	.84	.021	[.79, .88]	<.001
Stress	.88	.010	[.86, .91]	<.001	.86	.019	[.82, .89]	<.001	.90	.013	[.87, .92]	<.001
Var (e. Depression)	.08	.021	[.04, .13]		.019	.038	[.00, 1.06]		.11	.025	[.07, .17]	
Var (e. Anxiety	.29	.029	[.23, .35]		.249	.052	[.17, .37]		.30	.036	[.24, .38]	
Var (e. Stress)	.21	.019	[.18, .26]		.260	.033	[.20, .34]		.19	.024	[.15, .25]	
Var (e. Psych. Distress)	.74	.016	[.71, .77]		.721	.029	[.66, .78]		.75	.018	[.71, .79]	
Cov (e. Dep, e. Anx)	.28	.092	[.11, .47]	0.002	.13	.413	[-.67, .95]	0.738	.32	.090	[.14, .50]	<.001
Cov (e. Anx, e. Stress)	.48	.041	[.40. .56]	<.001	.48	.062	[.36 - .61]	<.001	.49	.053	[.39, .60]	<.001
Fit Indices												
Chi2 (df.)	22.60	(8)		0.004	14.90	(8)		0.060	16.98	(8)		0.030
RMSEA	.029		[.02, .04]		.030		[.01, .05]		.030		[.01, .05]	
CFI/TLI	.998	.995			.998	.995			.998	.995		
SRMR	.006				.009				.007			
CD	.256				.279				.250			

Abbreviation: Coef. = (standardized) coefficient, SE = Standard Error, CI = Confidence Interval, Var = Variance, Cov. = Covariance, Dep = Depression, Anx = anxiety, df. = degree of freedom, RMSEA =Root Mean squared error approximation, CFI/TLI = Comparative Fit Index/Tucker-Lewis Index, SRMR = Standardized Mean Squared Residual, CD = Coefficient of Determination.

4. Discussion

Our findings highlight the significant association between academic stress, social support, family functioning and psychological distress. Such significant findings were consistent with the findings of recent studies. Numerous studies have established a significant association between academic stress and mental health issues among university students. For instance, a systematic review highlighted that stressful academic environments can lead to mental health problems, emphasizing the need for educational institutions to foster holistic well-being (Garces Garces et al., 2024). Another study found a negative correlation between mental health issues, such as anxiety and depression, and academic performance, underscoring the importance of socio-emotional skills in mitigating these effects (Saidi et al., 2024). Furthermore, research specifically focused on undergraduate students revealed that academic stress is a significant predictor of mental health issues, indicating a direct impact on students' psychological well-being (Kashif et al., 2024).

Research consistently highlights the significant association between social support and mental health among university students. A study in Malaysia found that higher levels of social support were linked to lower levels of psychological distress, including anxiety, stress, and depression, indicating a protective effect against suicidal ideation (Tarmizi et al., 2024). Similarly, research conducted in Pakistan demonstrated that social support positively influenced students' mental well-being, with a strong mediation effect from parent-child relationships (Jameel et al., 2024). Furthermore, a study on Chinese university students revealed that perceived social support significantly enhanced psychological resilience, with positive coping styles mediating this relationship (Hou et al., 2024). Collectively, these findings underscore the importance of fostering social support systems within university environments to enhance students' mental health and resilience, while also suggesting the need for targeted mental health education initiatives.

Also, research indicates a significant association between family functioning and mental health among university students. A study by del Carmen et al. (2024) found that positive family relationships were linked to better mental health outcomes, with stronger associations observed during the COVID-19 pandemic, highlighting the protective role of family dynamics in stressful times. Similarly, Shon & Lee (2004) demonstrated that family dysfunction negatively impacted perceived mental health, with family communication serving as a mediating factor. Furthermore, Osman et al (2024) reported that dysfunctional family environments correlated with increased mental health risks, emphasizing the importance of effective coping strategies. Qi et al. (2024) also noted that better family functioning predicted lower depressive symptoms and social media addiction, suggesting that family dynamics influence various aspects of mental health. Collectively, these studies underscore the critical role of family functioning in shaping mental health outcomes among university students, advocating for interventions that enhance family relationships and communication skills.

Our study observed a significant association between self-esteem and psychological distress in male students, and between academic motivation and psychological distress in female students. These significant associations were however absent when all data were analyzed together. This phenomenon, perhaps, could be explained by the inherent differences in perceptions that were documented across the literature. Research indicates notable gender differences in academic motivation and self-esteem among university students. Female students generally exhibit higher self-esteem compared to their male counterparts, as evidenced by findings from a study in South Punjab, which reported that female participants had significantly higher self-esteem levels despite no significant differences in academic performance between genders (Perveen et al., 2022). Conversely, another study highlighted that self-esteem positively influenced academic performance for females but not for males, suggesting that female students' perceptions significantly impact their academic outcomes (Subair, 2022). Additionally, self-efficacy, a related construct, was found to be lower in female students compared to males, although females demonstrated a greater motivation for learning compliance (Xiao & Song, 2022). This suggests that while females may possess higher self-esteem, their self-efficacy could be a barrier to academic motivation. Overall, these findings underscore the complexity of gender dynamics in academic settings, indicating that interventions aimed at enhancing self-esteem and self-efficacy could be beneficial, particularly for female students.

The findings in this study might be further complicated by gender differences in self-reported mental health

among university students. Women generally report poorer mental health outcomes compared to men, as evidenced by studies showing that female students experience higher levels of anxiety, depression, and self-harm behaviors (Faradiba & Rahmatullah, 2023). In contrast, men tend to perceive their overall health more positively and report fewer limitations in daily activities (Garcia-Campanario et al., 2024). However, men are less likely to recognize or seek help for mental health issues, often due to stigma and societal expectations surrounding masculinity (Wolstenholme, 2024). These findings, therefore, emphasize the need for tailored, gender-based mental health intervention.

This study is limited due to its cross-sectional design. While cross-sectional studies are useful for generating hypotheses and initial insights, their limitations require careful interpretation and often warrant follow-up studies to confirm findings. Researchers interested in similar studies should consider using a longitudinal design. Longitudinal designs offer several advantages over cross-sectional designs, primarily because they can track changes over time and establish causal relationships. This dynamic approach allows researchers to observe the evolution and interactions of variables, providing deeper insights into phenomena.

5. Managerial Implications and Recommendations

Understanding the mental health needs of students can significantly inform the practices of university counselling service centers. The findings presented in the study highlight the necessity for university counselling service centers to develop specialized, inclusive services that cater to diverse student populations. University counselling service centers should consider barriers to access and explore innovative staffing solutions to meet the growing demand for mental health services. Additionally, the findings underscore the importance of integrating mental health support into academic frameworks, as mental health disorders can adversely affect students' academic performance (Putra & Mudjiran, 2023). Overall, these insights can guide university counselling service centers in enhancing service delivery and addressing the evolving mental health landscape in higher education.

Conclusion

The research concludes that there is a significant relationship between academic stress, social support, family functioning, and psychological distress among university students. High levels of academic stress are closely associated with increased psychological distress, while strong social support and healthy family functioning play protective roles in mitigating these effects. As predictor variables, academic motivation is only statistically significant among male students, whereas the significant effect of self-esteem is only significant among female students. These findings suggest the importance of tailored mental health services in universities that consider gender-specific needs. By addressing these gender differences, institutions can develop more effective support systems, such as counselling services that focus on building coping mechanisms for academic stress and strengthening social and familial support networks, thereby improving overall student well-being.

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