Scientific Publications

World Journal of Nursing Research, 2025, 4, 1227
www.scipublications.com/journal/index.php/wjnr
DOI: 10.31586/wjnr.2025.1227

Article

Prevalence and determinants of mental health stress among nursing students in Bangladesh: A cross-sectional study

Tania Akter [1], Mst Habiba Benta Hasan [2], Most Nasrin Khatun [3], Abu Ansar Md Rizwan [4,*]

[1] Daffodil International University, Daffodil Smart City, Ashulia, Dhaka, Bangladesh
[2] Northern University Bangladesh (NUB), Sher Tower, Holding 13, Road 17, Banani C/A, Dhaka-1213, Bangladesh
[3] SQUARE College of Nursing, House 91/N, Dhanmondi 7/A (New), Dhanmondi, Dhaka, Bangladesh
[4] W A N Research & Consultancy, Dhaka, Bangladesh

* Correspondence: Abu Ansar Md Rizwan (aamdrizwan@gmail.com)

Abstract: **Background:** Nursing students are exposed to significant stress due to academic and clinical demands, which can adversely affect their mental health, academic performance, and future clinical competence. Despite the global acknowledgment of this issue, limited research has been conducted to explore the prevalence and determinants of stress among nursing students in Bangladesh. **Methods:** This cross-sectional study was conducted from December 2023 to February 2024 among 372 nursing students enrolled in selected nursing colleges in Bangladesh. A purposive sampling technique was used, and data was collected using a semi-structured questionnaire. The questionnaire assessed socio-demographic characteristics, academic challenges, and psychological symptoms, with mental health stress measured using a Likert scale. Descriptive statistics and Chi-square tests were used to analyze the data, with a 95% confidence interval applied to all analyses. **Results:** The findings revealed that 31.7% of nursing students experienced severe stress, 23.9% reported moderate stress, and 16.7% had mild stress. Age, academic semester, and course load difficulties were significantly associated with stress levels ($p < 0.05$). Psychological symptoms such as anxiety, difficulty concentrating, and loss of interest in activities were also significantly linked to higher stress levels. Notably, students in their first semester and those reporting harder course loads were more likely to experience stress. However, gender was not significantly associated with stress levels. **Conclusions:** This study underscores the high prevalence of stress among nursing students in Bangladesh, driven by academic and clinical challenges and psychological symptoms. The findings highlight the need for targeted interventions, such as stress management training, enhanced mental health support, and policies to alleviate academic pressures. Future research should explore longitudinal trends in stress and evaluate the effectiveness of interventions to support a resilient nursing workforce.

Keywords: Nursing education, Mental health, Stress prevalence, Academic and clinical challenges, Coping mechanisms

How to cite this paper:
Akter, T., Benta Hasan, M. H., Khatun, M. N., & Md Rizwan, A. A. (2025). Prevalence and determinants of mental health stress among nursing students in Bangladesh: A cross-sectional study. *World Journal of Nursing Research, 4*(1), 1227. Retrieved from https://www.scipublications.com/journal/index.php/wjnr/article/view/1227

Received: November 26, 2024
Revised: December 28, 2024
Accepted: January 12, 2024
Published: January 15, 2025

Highlights

What is Known on the Topic

1. Globally, nursing students report moderate to severe stress levels due to the dual demands of academic and clinical responsibilities.
2. Stress among nursing students has been linked to factors such as heavy workloads, fear of failure, and exposure to patient care challenges.
3. High stress levels negatively impact academic performance, decision-making, and clinical competence, potentially leading to attrition.

What This Paper Adds

1. Highlights the prevalence and determinants of stress specific to nursing students in Bangladesh, filling a critical research gap in the region.
2. Identifies unique stressors, such as semester enrollment and cultural factors, influencing mental health outcomes.
3. Proposes targeted interventions for improving the mental health resilience of nursing students in Bangladesh.

Key findings

1. The study identifies a high prevalence of mental health stress among nursing students in Bangladesh, with 31.7% experiencing severe stress.
2. Academic challenges, including course load difficulties, and psychological symptoms like anxiety and difficulty concentrating, are significantly associated with stress levels.
3. Provides evidence-based recommendations for stress management interventions tailored to the needs of nursing students.

1. Introduction

Stress is a common phenomenon in daily life, particularly for individuals pursuing nursing education and careers, where academic and clinical demands are significant contributors. Lazarus and Folkman (1987) [1] define stress as a situation where internal and external demands exceed an individual's coping resources, leading to psychological, emotional, and physical challenges. In nursing education, stress stems from academic and clinical responsibilities, such as adjusting to the role of a nurse, meeting performance demands, and managing the uncertainties of the profession (Gorostidi et al., 2007) [2]. Globally, nursing students experience moderate to severe levels of stress compared to students in other programs (Al-Zayyat & Al-Gamal, 2016; Stecker, 2004) [3,4]. Academic stressors include examinations, heavy workloads, and interactions with instructors (Tully, 2004; Burnard et al., 2008; Labrague, 2013) [5,6,8]. Clinical stressors, which are often more intense, involve fear of failure, unfamiliar clinical environments, patient care responsibilities, lack of professional skills, and exposure to death and dying (Pulido-Martos et al., 2012; Labrague, 2013; Sheu et al., 2002) [7-9]. Other stressors include financial strain (Anwar et al., 2023) [10], negative interactions with instructors and clinical staff, and poor peer relationships (Tully, 2004; Nolan & Ryan, 2008) [5,11]. Evidence suggests that unmanaged stress adversely impacts learning, decision-making, and academic performance, and can even lead students to leave nursing programs (Watson et al., 2008) [12]. A study conducted in Spain among nursing students showed that 47.92% of nursing students experienced moderate levels of stress, with senior students perceiving higher stress levels than their novice counterparts (Onieva-Zafra et al., 2020) [13]. Another longitudinal study of nursing students in Hong Kong revealed that stress levels increased over their 5-year training, peaking during the second year (mean = 3.33, $p = 0.006$) and psychological distress was highest in the third year (sum score = 18.47, $p = 0.002$) (Cheng et al., 2023) [14]. A meta-analysis of 27 cross-sectional studies involving 7,116 subjects found that the prevalence of low-level, middle-level, and high-level stress among nursing students was 24%, 35%, and 10%, respectively. Subgroup analysis revealed variations in stress levels based on gender, diagnostic criteria, publication year, and geographic region (Zheng et al., 2022) [15]. Bangladeshi nursing students face similar challenges, yet there is limited research contextualizing the sources and impacts of their stress (Kusum et al., 2023) [16]. During the COVID-19 pandemic, more than 60% of university students, including nursing students, in Bangladesh reported symptoms of anxiety and depression (Islam et al., 2020) [17]. Additionally, 41% of nursing students in Bangladesh experience mild stress, and 22% report moderate stress (Perveen et al., 2021) [18]. Despite this, the specific stressors and coping mechanisms used by Bangladeshi nursing students remain

underexplored. Unmanaged stress among nursing students has far-reaching implications for their academic success, mental health, and future clinical competence. Stress in clinical environments, including fear of making mistakes, caring for unfamiliar patients, and a lack of professional knowledge, exacerbates anxiety and can impede skill development (Kim, 2003; Pulido-Martos et al., 2012) [7,19]. In Bangladesh, the lack of targeted research into the contextual stressors faced by nursing students limits the ability to develop effective interventions to support their well-being. Understanding the prevalence, sources, and impacts of stress among nursing students in Bangladesh is critical to developing evidence-based interventions that support resilience and mental health. Coping mechanisms, classified as problem-based and emotion-based strategies, play a crucial role in mitigating stress (Anwar et al., 2023) [10]. Research shows that problem-solving approaches are the most effective for nursing students, while emotion-based coping strategies can be detrimental to their health and performance (Labrague, 2013; Chang et al., 2007) [8,20]. This study aims to fill the knowledge gap by identifying the key stressors and coping mechanisms among nursing students in Bangladesh, contributing valuable insights to the global discourse on nursing education and mental health. By addressing the cultural and systemic factors influencing stress, the findings will inform the development of tailored strategies to foster resilience and well-being among nursing students, ensuring the cultivation of a skilled and mentally healthy nursing workforce in Bangladesh and beyond.

2. Methodology

This cross-sectional study was conducted from December 2023 to February 2024 among nursing students enrolled in selected nursing colleges in Bangladesh. The study aimed to assess the prevalence of mental health stress and its association with various socio-demographic, academic, and psychological factors. A purposive sampling technique was employed to select 372 participants, with the sample size determined using the formula ($n = z^2pq/d^2$), where $z = 1.96$ (95% confidence interval), $p = 0.41$(prevalence of mental health stress among nursing students), $q = 1-p = 0.59$, and $d = 0.05$ (margin of error). Inclusion criteria included being a nursing student and willingness to participate in the study, while students from other departments or those with severe illnesses were excluded. Data collection was performed using a semi-structured questionnaire developed under the supervision of subject matter experts. The questionnaire included both structured and unstructured questions to address the study objectives, focusing on socio-demographic characteristics, academic challenges, and psychological symptoms. Mental health stress was assessed using a Likert scale developed by Rensis Likert (Kampen, 2019) [21]. The questionnaire was initially developed in English, translated into Bangla, and then retranslated into English to ensure translation accuracy. The Bangla version was used for data collection to enhance understanding, while the English version was used for data entry and analysis. Prior to data collection, the questionnaire was field-tested to refine the questions and improve reliability (Howie & Bagnall, 2017) [22]. Data collection was conducted through in-person interviews with participants. The collected data were verified, coded, and SPSS software was used for analysis. Descriptive statistics were used to summarize the data, and Chi-square ($\chi 2$) tests were performed to examine the association between mental health stress and various socio-demographic, academic, and psychological factors. Stress levels were considered the dependent variable, while socio-demographic and academic characteristics were treated as independent variables. A 95% confidence interval (CI) was used for all analyses. Ethical approval for the study was obtained from the Research Ethics Committee of the Faculty of Health and Life Sciences, Daffodil International University. Administrative permissions were secured from the authorities of the participating institutions. Written informed consent was obtained from all participants prior to data collection, and strict measures were taken to ensure anonymity and confidentiality. Data collection and analysis were conducted in

adherence to ethical principles, ensuring the protection of participants' rights throughout the study.

3. Results

Table 1 presents the socio-demographic characteristics of the respondents (*N* = 372). Most of the respondents (69.1%) were aged 20-21 years, followed by 25.5% aged 18-19 years, and 5.4% aged 22 years or older, with a mean age of 20.08 ± 0.83 years. The sample was predominantly female, comprising 83.6% of the respondents, while males accounted for 16.4%. Most participants (84.1%) were in their first semester, and the remaining 15.9% were in their second semester.

Table 1. Socio-demographic characteristics of the respondents (*N*=372)

Socio-demographic variables	No. of respondents	Percentage
Age group		
18-19	95	25.5%
20-21	257	69.1%
22+	20	5.4%
Mean age ± SD	20.08 ± 0.83	
Sex		
Male	61	16.4%
Female	311	83.6%
Semester		
1st	313	84.1%
2nd	59	15.9%

Table 2 illustrates the distribution of stress levels and associated psychological symptoms among newly admitted students (*N* = 372). Among the respondents, 31.7% experienced severe stress, 23.9% reported moderate stress, 16.7% had mild stress, and 27.7% exhibited normal stress levels. Regarding symptoms such as anxiety, restlessness, or difficulty concentrating, 47.6% of the students experienced these symptoms sometimes, 32.0% frequently, and 20.4% rarely. Most of the students (58.6%) reported no difficulty relaxing and sleeping, while 41.4% experienced such difficulties. More than half (55.4%) had difficulty concentrating and completing tasks, whereas 44.6% did not. Additionally, 42.7% of respondents indicated losing interest in activities they used to enjoy, while 57.3% did not. Lastly, 31.7% of students felt discouraged and considered giving up, while 68.3% did not report such feelings.

Table 2. Distribution of stress levels and associated psychological symptoms among the respondents (*N*=372)

Stress-related information	No. of respondents	Percentage
Level of stress		
Normal	103	27.7%
Mild	62	16.7%
Moderate	89	23.9%
Severe	118	31.7%
Experienced symptoms such as anxiety, restlessness, or difficulty concentrating		
Rarely	76	20.4%
Sometimes	177	47.6%
Frequently	119	32.0%
Had difficulty relaxing and sleeping		
No	218	58.6%
Yes	154	41.4%
Had difficulty concentrating and completing tasks		
No	166	44.6%
Yes	206	55.4%
Lost interest in activities used to enjoy		
No	213	57.3%
Yes	159	42.7%
Feel discouraged and think of giving up		
No	254	68.3%
Yes	118	31.7%

Table 3 presents the association of sociodemographic characteristics, academic challenges, and psychological symptoms with stress among newly admitted students. Age showed a significant association with stress levels ($\chi^2 = 8.4$, $p = .01$). Students aged 18-19 years experienced higher levels of stress (19.6%) compared to those aged 20-21 years (50.3%) and 22+ years (2.4%). Sex was not significantly associated with stress ($\chi^2 = 0.43$, $p = .50$), although a larger proportion of females (61.0%) reported stress compared to males (11.3%). Semester enrollment had a significant association with stress ($\chi^2 = 11.44$, $p = .00$). Students in their first semester were more likely to report stress (63.7%) compared to those in their second semester (8.6%). Similarly, perceived course load difficulty was significantly associated with stress ($\chi^2 = 12.31$, $p = .00$). Students with harder course loads reported higher stress levels (25.0%) compared to those with medium (39.2%) and easy (8.1%) course loads. Psychological symptoms also showed significant associations with stress. Students who frequently experienced anxiety, restlessness, or difficulty concentrating were more likely to report stress (26.3%) compared to those who experienced these symptoms sometimes (32.8%) or rarely (13.2%) ($\chi^2 = 9.33$, $p = .00$). Difficulty relaxing and sleeping was also significantly associated with stress ($\chi^2 = 10.29$, $p = .00$), with students reporting such difficulties more likely to experience stress (33.6%) than those who did not (38.7%). Students who had difficulty concentrating and completing tasks showed significantly higher levels of stress (46.2%) compared to those without such difficulties (26.1%) ($\chi^2 = 28.8$, $p = .00$). Additionally, losing interest in previously enjoyable activities was significantly associated with stress ($\chi^2 = 24.24$, $p = .00$), with 36.6% of students reporting stress in this group compared to 35.8% who did not.

Finally, students who felt discouraged or considered giving up were significantly more likely to experience stress (27.2%) compared to those who did not (45.2%) (χ^2 = 15.22, p = .00).

Table 3. Association of sociodemographic characteristics, academic challenges, and psychological symptoms with stress among the respondents

Variables	No. of respondents		Level of stress				χ^2 value	p value
	n	%	Normal (103, 27.7%)		Have any sort of stress (Mild/moderate/severe) (269, 72.3%)			
			n	%	n	%		
Age group								
18-19	95	25.5%	22	5.9%	73	19.6%	8.4	.01
20-21	257	69.1%	70	18.8%	187	50.3%		
22+	20	5.4%	11	3.0%	9	2.4%		
Sex								
Male	61	16.4%	19	5.1%	42	11.3%	0.43	.50
Female	311	83.6%	84	22.6%	227	61.0%		
Semester								
1st	313	84.1%	76	20.4%	237	63.7%	11.44	.00
2nd	59	15.9%	27	7.3%	32	8.6%		
Course load difficulties								
Easy	48	12.9%	18	4.8%	30	8.1%	12.31	.00
Medium	214	57.5%	68	18.3%	146	39.2%		
Hard	110	29.6%	17	4.6%	93	25.0%		
Experienced symptoms such as anxiety, restlessness, or difficulty concentrating								
Rarely	76	20.4%	27	7.3%	49	13.2%	9.33	.00
Sometimes	177	47.6%	55	14.8%	122	32.8%		
Frequently	119	32.0%	21	5.6%	98	26.3%		
Had difficulty relaxing and sleeping								
No	218	58.6%	74	19.9%	144	38.7%	10.29	.00
Yes	154	41.4%	29	7.8%	125	33.6%		
Had difficulty concentrating and completing tasks								
No	166	44.6%	69	18.5%	97	26.1%	28.8	.00
Yes	206	55.4%	34	9.1%	172	46.2%		
Lost interest in activities used to enjoy								
No	213	57.3%	80	21.5%	133	35.8%	24.24	.00
Yes	159	42.7%	23	6.2%	136	36.6%		
Feel discouraged and think of giving up								
No	254	68.3%	86	23.1%	168	45.2%	15.22	.00
Yes	118	31.7%	17	4.6%	101	27.2%		

4. Discussion

This study examined the prevalence of stress and its associated factors among nursing students in Bangladesh, revealing that 31.7% of students experienced severe stress, 23.9% reported moderate stress, and 16.7% experienced mild stress. These findings are consistent with global evidence suggesting that nursing students face higher stress levels compared to students in other disciplines due to the dual demands of academic and clinical responsibilities (Al-Zayyat & Al-Gamal, 2016; Labrague, 2013) [3,8]. In a meta-analysis of 27 cross-sectional studies, the prevalence of moderate stress among nursing

students was 35%, with 10% experiencing high-level stress (Zheng et al., 2022) [15], which aligns with the current study's findings. These results underscore the substantial burden of stress faced by nursing students in both global and local contexts. Age was significantly associated with stress, with students aged 18-19 years and 20-21 years experiencing higher levels of stress compared to older students. This aligns with findings from Onieva-Zafra et al. (2020) [13], where senior students reported higher stress levels than their novice counterparts. This could be attributed to increased academic and clinical expectations as students' progress through their training. Similarly, a longitudinal study in Hong Kong found that stress levels peaked during the second year of training (*mean* = 3.33, $p = 0.006$), likely due to heightened academic and clinical demands during this period (Cheng et al., 2023) [14]. The results highlight the need for targeted support strategies tailored to students at different stages of their nursing education. Gender was not significantly associated with stress in this study, although females reported slightly higher stress levels than males. This finding contrasts with previous studies that identified gender differences in stress responses, with females often reporting higher levels of perceived stress due to academic pressures and clinical challenges (Pulido-Martos et al., 2012) [7]. The lack of significant gender differences in this study could reflect unique sociocultural factors in Bangladesh that merit further exploration. Academic challenges such as course load difficulties were significantly associated with stress. Students with harder course loads reported higher stress levels, consistent with studies by Burnard et al. (2008) and Labrague (2013) [6,8], which identified heavy assignments and workloads as major stressors in nursing education. Similarly, clinical stressors, including difficulty concentrating, loss of interest in activities, and feelings of discouragement, were significantly linked to higher stress levels. These findings align with Pulido-Martos et al. (2012) and Sheu et al. (2002) [7,9], who reported that fear of failure, unfamiliar environments, and patient care responsibilities were key contributors to stress among nursing students. Psychological symptoms such as anxiety, restlessness, and difficulty relaxing were also strongly associated with stress in this study. These findings are in line with Onieva-Zafra et al. (2020) [13], who found a significant correlation between perceived stress and state anxiety ($r = 0.463$, $p < .000$) among nursing students. The current study further highlights the interconnectedness of psychological symptoms and stress, emphasizing the need for comprehensive mental health support systems in nursing education. The findings of this study also resonate with the broader global discourse on stress management in nursing education. Coping mechanisms play a critical role in mitigating stress, with problem-solving and cognitive restructuring identified as effective strategies in previous studies (Labrague, 2013; Chang et al., 2007) [8,20]. While this study did not explicitly examine coping mechanisms, the high prevalence of stress reported by Bangladeshi nursing students underscores the urgency of integrating stress management training and support services into nursing curricula.

4.1. Implication for practice

This study underscores the necessity of integrating mental health support into nursing education to enhance student well-being and clinical competence. Practical applications include:

1. Establishing dedicated counseling services and stress management programs for nursing students.
2. Revising academic schedules and reducing workload intensity to alleviate stress among first-year students.
3. Training faculty and clinical staff to create a more supportive learning environment that addresses student stressors effectively.

4.2. Limitations and recommendations

This study has several limitations. The cross-sectional design restricts the ability to determine causality between stressors and mental health outcomes. Additionally, reliance on self-reported data may introduce response bias. Future research should:

1. Conduct longitudinal studies to examine stress trajectories over nursing education.
2. Incorporate qualitative methodologies to explore students' lived experiences and coping strategies.
3. Evaluate the effectiveness of intervention programs tailored to reduce stress and enhance resilience among nursing students.

5. Conclusion

This study highlights the significant prevalence of stress among nursing students in Bangladesh, with severe and moderate stress levels affecting a substantial portion of the population. Academic challenges, clinical demands, and psychological symptoms emerged as key contributors, reflecting trends observed in global research. The findings underscore the urgent need to address mental health stress in nursing education to support students' academic success, clinical competence, and overall well-being. To mitigate stress, nursing institutions should integrate stress management training, provide access to mental health resources, and foster supportive academic and clinical environments. Additionally, tailored interventions addressing the specific needs of students at different stages of their training should be implemented, alongside faculty development programs to improve instructor-student relationships. Future research should explore longitudinal trends in stress and evaluate the effectiveness of implemented interventions to enhance the mental resilience of nursing students.

Acknowledgment

Tania Akter, Mst Habiba Benta Hasan, and Most Nasrin Khatun conceptualized and designed the study. Tania Akter, Mst Habiba Benta Hasan, Most Nasrin Khatun and Abu Ansar Md Rizwan were responsible for data analysis and interpreting the results. The initial draft of the manuscript was written by Tania Akter and Abu Ansar Md Rizwan with significant revisions and contributions from Mst Habiba Benta Hasan and Most Nasrin Khatun to finalize the document. All authors have read and approved the final manuscript. We extend our gratitude to W A N Research & Consultancy for their expert consultancy in designing the study and evaluating the outcomes.

Funding statement

This study did not receive any specific grant or financial support from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of interest disclosure

The authors declare there are no conflicts of interest related to this study.

Consent for publication

All authors have provided their consent for the publication of this manuscript.

Ethical approval statement

This study was conducted in accordance with ethical guidelines and received approval from the Research Ethics Committee of the Faculty of Health and Life Sciences, Daffodil International University.

Informed consent statement

Written informed consent was obtained from all participants prior to their inclusion in the study.

References

[1] Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*(3), 141–169.

[2] Gorostidi, X. Z., Egilegor, X. H., Erice, M. J. A., Iturriotz, M. J. U., Garate, I. E., Lasa, M. B., & Cascante, X. S. (2007). Stress sources in nursing practice. Evolution during nursing training. *Nurse Education Today, 27*(7), 777–787.

[3] Alzayyat, A., & Al-Gamal, E. (2016). Correlates of stress and coping among Jordanian nursing students during clinical practice in psychiatric/mental health course. *Stress and Health, 32*(4), 304–312.

[4] Stecker, T. (2004). Wellbeing in an academic environment. *Medical Education, 38*(5), 465–478.

[5] Tully, A. (2004). Stress, sources of stress and ways of coping among psychiatric nursing students. *Journal of Psychiatric and Mental Health Nursing, 11*(1), 43–47.

[6] Burnard, P., Edwards, D., Bennett, K., Tothova, V., Baldacchino, D., Bara, P., & Mytevelli, J. (2008). A comparative, longitudinal study of stress in student nurses in five countries: Albania, Brunei, the Czech Republic, Malta and Wales. *Nurse Education Today, 28*(2), 134–145.

[7] Pulido-Martos, M., Augusto-Landa, J. M., & Lopez-Zafra, E. (2012). Sources of stress in nursing students: A systematic review of quantitative studies. *International Nursing Review, 59*(1), 15–25.

[8] Labrague, L. J. (2013). Stress, stressors, and stress responses of student nurses in a government nursing school. *Health Science Journal, 7*(4), 424.

[9] Sheu, S., Lin, H. S., & Hwang, S. L. (2002). Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: The effect of coping behaviors. *International Journal of Nursing Studies, 39*(2), 165–175.

[10] Anwar, A., Yadav, U. N., Huda, M. N., Das, S., Rosenbaum, S., Ali, A. M., ... & Mistry, S. K. (2023). Anxiety and stress related to COVID-19 among the community dwelling older adults residing in the largest refugee camp of the world. *Community Mental Health Journal, 59*(6), 1181-1192.

[11] Nolan, G., & Ryan, D. (2008). Experience of stress in psychiatric nursing students in Ireland. *Nursing Standard, 22*(43), 35–43.

[12] Watson, R., Deary, I., Thompson, D., & Li, G. (2008). A study of stress and burnout in nursing students in Hong Kong: A questionnaire survey. *International Journal of Nursing Studies, 45*(10), 1534–1542.

[13] Onieva-Zafra, M. D., Fernández-Muñoz, J. J., Fernández-Martínez, E., García-Sánchez, F. J., Abreu-Sánchez, A., & Parra-Fernández, M. L. (2020). Anxiety, perceived stress, and coping strategies in nursing students: A cross-sectional, correlational, descriptive study. *BMC Medical Education, 20*, 1–9.

[14] Cheng, W. L. S., Chow, P. P. K., Wong, F. M. F., & Ho, M. M. (2023). Associations among stressors, perceived stress, and psychological distress in nursing students: A mixed methods longitudinal study of a Hong Kong sample. *Frontiers in Psychology, 14*, 1234354.

[15] Zheng, Y. X., Jiao, J. R., & Hao, W. N. (2022). Prevalence of stress among nursing students: A protocol for systematic review and meta-analysis. *Medicine, 101*(31), e29293.

[16] Kusum, RA., Miah, MS., Salahuddin, M., Muna, TR., Mousume, MSA., Tuli, KN. & Rizwan, AAM. (2023). Demographic insights into COVID-19 preventative practices: A study among nursing personnels in Bangladesh. *World Journal of Pharmaceutical Research, 12* (21), 943-955. DOI: 10.20959/wjpr202321-30404.

[17] Islam, M. A., Barna, S. D., Raihan, H., Khan, M. N. A., & Hossain, M. T. (2020). Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLOS ONE, 15*(8), e0238162.

[18] Perveen, N., Mondal, S., & Afrose, S. (2021). Stress among nursing students during initial clinical practice in Bangladesh. *OIRT Journal of Scientific Research, 1*(2), 29–35.

[19] Kim, K. H. (2003). Baccalaureate nursing students' experiences of anxiety-producing situations in the clinical setting. *Contemporary Nurse, 14*(2), 145–155.

[20] Chang, E. M., Bidewell, J. W., Huntington, A. D., Daly, J., Johnson, A., Wilson, H., & Lambert, C. E. (2007). A survey of role stress, coping and health in Australian and New Zealand hospital nurses. *International Journal of Nursing Studies, 44*(8), 1354–1362.

[21] Kampen, J. K. (2019). Reflections on and test the metrological properties of summated rating, Likert, and other scales based on sums of ordinal variables. *Measurement, 137*, 428–434.

[22] Howie, P., & Bagnall, R. (2017). A methodology for field-testing concepts through expert practitioner engagement. *International Journal of Social Research Methodology, 20*(4), 401–410.