Relation between Mindfulness and Academic Procrastination among Nursing Students

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Abstract

Background: Addressing mindfulness in nursing education is essential for promoting a positive learning environment and ultimately decreases academic procrastination. **Aim of the study**: To assess the relation between mindfulness and academic procrastination among nursing students. **Subjects and Method: Research design**: Descriptive-correlational research design was used. **Setting**: The study was conducted in the Faculty of Nursing at Tanta University. **Subjects**: Stratified proportional randomized sampling (n=1085) of nursing students. **Tools**: Two tools were used to collect data; 1) Five-Facet Mindfulness Questionnaire and 2) Procrastination Assessment Scale. **Results**: About two-thirds (62.4%) of nursing students had a high perception regarding mindfulness as well as, the majority (80.1%) of them had a low level of overall procrastination. Institution-related factors were identified as the most significant factor causing procrastination while educator-related factors were the least significant factor. **Conclusion**: A negative statistically significant correlation was found among nursing students' perception of overall mindfulness and procrastination. **Recommendations**: develop and integrate structured mindfulness-based programs into the nursing curriculum to support students' emotional and cognitive well-being, and provide clear academic guidelines, timely feedback, and consistent communication to reduce uncertainty and academic stress.

Keywords: Academic procrastination, Mindfulness, Nursing students.

Introduction

Nursing education is a comprehensive and rigorous process designed to prepare individuals for the challenges of providing quality patient care in various healthcare settings **(Sumpter, Blodgett, Beard & Howard, 2022)**. It combines theoretical learning with practical experience, equipping students with a deep understanding of human biology, medical conditions, nursing theories, ethics, and clinical skills. The curriculum also emphasizes the development of problem-solving, critical thinking, mindfulness and communication skills, all essential for efficient patient assessment, decision-making, and collaboration within healthcare teams **(Tariq, 2024)**.

Mindfulness is described as the practice of maintaining awareness of the present moment with a nonjudgmental attitude. By fostering self-awareness, mindfulness helps nursing students recognize procrastinator behaviors and the emotions driving them, such as fear of failure or perfectionism **(Coleman, 2022)**. Additionally, mindfulness enhances emotional regulation and focus, enabling nursing students to approach tasks with greater clarity and purpose. For nursing students, cultivating mindfulness can be particularly beneficial, as it not only reduces procrastination but also equips them with skills to handle the emotional demands of their future profession **(Rani, 2023)**.

Mindfulness is associated with the enhancement of executive functioning, which refers to the mental processes that occur in the prefrontal region of the brain and allow a student to effectively plan, concentrate, remember instructions, and manage multiple tasks **(Coleman, 2022)**. It has been conceptualized as a multidimensional and multifaceted construct that encompasses five dimensions: observing, which is the capacity to identify and interpret internal or external stimuli. Description involves the act of labeling the living experience with words, acting with awareness like focusing attention on one's current activity, non-judging of inner experience, which involves experiencing thoughts and feelings without criticizing them, and non-reacting to inner experience, which is a means of accepting their existence and choosing not to react to them. Mindfulness has emerged as a promising strategy to combat procrastination. **(Matshaka, Downing & Ntshingila, 2022)**.

Academic procrastination is a common challenge faced by students, remarkably in demanding fields like nursing. It includes delaying academic tasks although knowing the potential negative consequences, often causes stress, reduced performance, and compromised learning outcomes. Nursing students, who juggle rigorous coursework, clinical practice, and personal responsibilities, are particularly vulnerable to procrastination **(Berdida, Lopez & Grande, 2023)**. This behavior is often linked to many factors such as poor time management, lack of motivation, and

difficulty managing academic pressure. Addressing procrastination is essential to ensure the emotional well-being and academic success of nursing students **(Elsayed, Mohamed, Hussein & Morsy, 2024)**.

Significance of the study

In the field of nursing education, where students often experience high levels of stress, heavy academic workloads, and rigorous clinical training. Academic procrastination is a common challenge between nursing students, potentially causing poor academic performance, compromised clinical readiness, and elevated anxiety levels **(Ghattas& El-Ashry, 2024)**. Mindfulness promotes present-moment awareness and emotional regulation, may serve as a protective factor against procrastination by helping students stay focused, manage academic pressures, and make intentional decisions. **(Portela et al.,2022)**. Mindfulness can teach nursing students how to be present and attentive not just in their studies, but also in their future patient care responsibilities **(Green & Kinchen ,2021)**.

From researcher's perspective, nursing students are under unique academic and emotional pressures, which make them particularly vulnerable to procrastination. Mindfulness has the potential to empower students by helping them develop greater self-awareness, reduce anxiety, and respond to academic challenges more effectively **(Roslan et al., 2022)**. Understanding relations between mindfulness and procrastination may reveal psychological factors that influence their academic behaviors, and well-being can contribute to the development of mindfulness. The findings of this study could be valuable to nursing educators, curriculum developers, and mental health professionals working in academic settings **(Luo, Ma & Hu, 2023)**.

Aim of the study

Assess the relation between mindfulness and academic procrastination among nursing students.

Research Questions

1. What are the levels of mindfulness among nursing students?
2. What are the levels of academic procrastination among nursing students?
3. What is the relation between mindfulness and academic procrastination among nursing students?

Subjects and Method

Research design:

Descriptive-correlational research design was used in the present study.

Study setting:

The current study was conducted in the Faculty of Nursing at Tanta University. which is affiliated with the Ministry of Higher Education and Scientific Research. It includes seven departments. Medical and Surgical nursing, Critical care and Emergency, Nursing obstetric, Pediatric nursing, Community health nursing, Psychiatric and Mental health nursing, and nursing Administration department. These departments offer comprehensive

programs designed to offer nursing students the necessary knowledge and skill to excel in their chosen nursing specialties. It obtained a certificate of accreditation in 2019.

The subjects:

The subjects of this study included a stratified proportional randomized sampling of undergraduate nursing students who are enrolled in different years of Bachelor of Science in nursing during the academic year 2023-2024 in the Faculty of Nursing. The technique for selecting the sample from the previously mentioned setting was proportional to the number of nursing students in each year. The sample size and power analysis were calculated using Epi-Info software statistical package. The criteria used for sample size calculation were as follows: Z=confidence level at 95% (1.96) and D=error proportion (0.05). The sample size will be as follows:

Table (A): Distribution of nursing students according to academic year

Academic year	Total number of nursing students	Stratified proportional sampling	%
First	600	235	39.2%
Second	1200	290	24.2%
Third	1050	280	26.7%
Forth	1037	280	27%
Total	3887	1085	100%

Tools of data collection:

The data of the study was collected using the following two tools:

Tool (I): Five-Facet Mindfulness Questionnaire (FFMQ)

It consisted of two parts:

Part (1): Nursing students' personal and studying related data

It included age, gender, academic year, residence, system of studying, participation in any university activities, and working while studying.

Part (2) Five-Facet Mindfulness Questionnaire

It was developed by Baer et al. (2006) and used by Williams, Karl and Kuyken (2014), and modified by the researcher guided by the related literature Harrison, Buckley, Ross, Witte and Thompson (2024), to assess the nursing students' level of mindfulness. This tool consists of 34 items categorized into five dimensions as follows:

- **Observation:** included 8 items.
- **Describing:** included 6 items.
- **Acting with awareness:** included 6 items.
- **No judging of inner experience:** included 8 items.
- **Non reactivity to inner experience:** included 6 items.

Scoring system:

Nursing students' responses measured by five points Likert Scale ranging from very rarely true (1) to always true (5) (1= very rarely true, 2=rarely true, sometimes true, 4=often true, 5=always true). The total responses of mindfulness were determined according to statistical cutoff points as follows:

- High level of mindfulness >75% (equal 127)
- Moderate level of mindfulness "60-75%" (126-102)
- Low level of mindfulness <60% (equal 101)

Tool (II) : Procrastination Assessment Questionnaire

It included 2 parts :

Part (1) : Procrastination Assessment questionnaire

This tool was developed by Solomon and Rothblum (1988), The scale showed good reliability and construct validity through exploratory and confirmatory factor analyses when used by Mortazavi, Mortazavi and Khosrorad (2015) and modified by the researcher guided by the related literature (Kooren, Paas & Van, 2024), to assess the level of procrastination in six academic domains (each domain included 3 items):

- **Writing an academic assignment**.
- **Studying for an exam**.
- **Keeping up with weekly studying lectures**.
- **Performing administrative tasks**.
- **Attending meetings**.
- **Performing academic tasks in general**.

Scoring system:

The items of frequency for each task procrastination scored on a 5-points Likert Scale according to the degree to which they procrastinate on the task, the degree to which procrastination on the task is a problem for them and the extent to which they want to decrease their procrastination behavior on each academic task. (1=never, 2=almost never, 3=sometimes, 4=nearly always, 5=always) The total level of task procrastination frequency determined according to cutoff points as the following:

- High level of procrastination > 75% (equal>68).
- Moderate level of procrastination "60- 75%" (equal 68-54).
- Low level of procrastination <60% (equal< 54).

Part (2): Identify the factors that cause procrastination among nursing students. It contained 26 items categorized into 5 sub-dimensions as follows.

- **Student-related factors:** included 6 items.
- **Educator-related factors**: included 7 items.
- **Assignment characteristic-related factors**: included 5 items.
- **Institution-related factors**: included 3 items.
- **Nursing work-related factors**: included 5 items.

Scoring system:

While reasons of tasks procrastination scored on a 3-points Likert Scale ranged from 1-3 where (1=disagree, 2=neutral and 3=agree). The items of procrastination factors summed up and the total score ranked.

- The highest rank indicated the most important factor.
- While the lowest indicated the least important factor.

Methods:

1. An official permission was obtained from the Dean of Faculty of Nursing.
2. **Ethical considerations:**

- Approval was obtained from the Nursing Scientific Research Ethical Committee before conducting the study with code 391-2-2024.
- The researcher introduced herself to the participants, a full explanation of the aim and method of the study done to obtain acceptance and cooperation.
- The nature of the study didn't cause

harm to the entire participants.

- Informed consent obtained from nursing student after explanation of the study's aim.
- Confidentiality and privacy maintained regarding data collection and the participants have the right to withdrawal from the study at any time.

3. Tools I and II were adapted and translated from English to Arabic to ensure that they are comprehensible and culturally relevant for the participant. This translation process followed a standard translation and the back -translation procedure:
   - **Initial Translation**: The tools were translated into Arabic by a qualified translator fluent in both English and Arabic and familiar with the culture nuances of both languages.
   - **Back-Translation**: Different translator, who was not involved in the initial translation and is also fluent in both languages, was independently translating the Arabic version back into English. This step helped to check for consistency and accuracy in the translation.
   - **Comparison and revision**: The original English version and the back translated. English versions were compared. Any discrepancies were discussed and resolved by a panel of experts including translators and researchers, to finalize the Arabic version of the tools.
4. Tools (I, II) presented to jury of five experts in the area of specialty to check their content validity and the clarity of the questionnaire. The experts were three professors and two assistant professors of nursing administration from the Faculty of Nursing at Tanta University.
5. The experts' responses were presented in four points rating scale ranging from (4-1): 4=strongly relevant, 3=relevant, 2=little relevant and 1=not relevant. Necessary modifications were made including clarification, omission of certain items, adding others and simplifying work-related words. The face validity value of tool (I) Five facet mindful questionnaire was 97.75%, tool (II) part (1) Procrastination assessment questionnaire was 98.33% & part (2) reason for academic procrastination questionnaire was 98.4%.
6. A pilot study was carried out on 10% of subject (n=108) after the development of the tools. The aim of pilot study was to test the sequence of items, clarity, applicability and relevance of question. Simple modifications were made, including changing some words and clarifying some items. The subjects of pilot study were excluded from the main study sample.
7. Reliability of tools was tested using Cronbach Alpha Coefficient test. The reliability value of tool (I) Five-Facet Mindfulness Questionnaire (FFMQ) was 0.773 and for tool (II) Procrastination Assessment Scale, Part (1): level of procrastination was 0.874, Part (II): causes of procrastination among nursing students was 0.910.
8. **Data collection phase:** The data were collected from nursing students by the researcher. The researcher met nursing students in a small group in the Faculty of Nursing to distribute the questionnaire. The subjects

recorded their answers in the presence of the researcher to ascertain that all questions were answered and return them back.

9. The data was collected over a period of three months, starting from the first of April 2024 until the end of June 2024.

Statistical analysis of data

The statistical analysis of the data was performed using IBM SPSS software version 20.0 (Armonk, NY: IBM Corp, released 2011). Categorical data were summarized as numbers and percentages. For continuous data, normality was assessed using the Kolmogorov-Smirnov test. Quantitative data were described using range (minimum and maximum), mean, and standard deviation. The significance of the results obtained was judged at the 5% level. The tests used were Chi-square test: for categorical variables, to compare between different groups, Fisher's Exact: Correction for chi-square when more than 20% of the cells have expected count less than 5, Student t-test: For normally distributed quantitative variables, to compare between two studied groups, F-test (ANOVA): For normally distributed quantitative variables, to compare between more than two groups and Pearson coefficient to correlate between two distributed quantitative variables.

Results

Table (1): Shows the distribution of nursing students according to their personal and studying-related data. Over half (51.2%) of nursing students are relatively young and aged between 18 and 20 years. The gender distribution shows that nursing students in this study are predominantly female, comprising 66.2% of the sample. The data also indicated a fairly balanced distribution across academic years, with a slight increase in the second, third, and fourth years (each around one quarter) compared to first-year students, who make up 21.7%. Regarding living arrangements, a substantial portion of students (57.4%) live at home, in terms of academic systems, majority (91.8%) of nursing students follow the credit hour model. Additionally, more than half (55.6%) of the students participate in extracurricular or university activities. Lastly, the nearly split between working (48.2%) and non-working students (51.8%) raises important considerations.

Table (2): Displays the mean scores, standard deviation and ranking of nursing students' perception about mindfulness dimensions. As noticed, the nonjudgmental inner experience was ranked as the highest dimension of mindfulness. While the aware action was ranking the lowest dimension of mindfulness.

Table (3): Shows mean scores, standard deviation and ranking of nursing students about levels of procrastination dimensions. Keeping up with studying lectures dimension ranked the highest level of procrastination, followed by studying for an exam dimension. While attending meetings ranks the last dimension reflecting the least common procrastination behavior.

Table (4): Presents mean scores, standard deviation and ranking of nursing students perceived factors causing procrastination. Institution-related factors were identified as the most significant factor. Following closely are nursing work-related factors. While educator-related factors were the least significant factor.

Figure (1): Show that more than two-thirds (62.4%) of nursing students had a high perception level regarding mindfulness, more than one third (37.1%) of nursing students had a moderate perception level regarding to mindfulness while only 0.5% had a low perception level regarding to mindfulness.

Figure (2): Show that the majority (80.1%) of nursing students had a low level of overall procrastination, while only 0.8% had a high level of procrastination.

Figure (3): Illustrate that a negative statistically significant correlation was found among nursing students' perception of overall mindfulness and procrastination (r=0.139, p=0.001).

Figure (4): Illustrate a statistically significant negative correlation was found among nursing students' perception of overall mindfulness and their reported causes of procrastination (r=0.496) at(p=0.001).

Table (5): Presents relations between nursing students' perception about mindfulness and their personal and studying related data. There was a statistically significant relation between nursing students' perception about overall mindfulness and their personal and studying related data except their participation in university activities and working while studying where p> 0.05.

Table (6): Presents the relation between nursing students' perception about procrastination and their personal and work-related data. There was a statistically significant relation between nursing students' perception about procrastination and their all personal and studying-related data at p≤ 0.05.

Table (7): Presents relation between factors that cause procrastination and Nursing students' personal and studying related data. There was no statistically significant relation between nursing students' reported causes of procrastination and their personal and studying related data except academic year, residence and working while studying where p≤ 0.05.

Table (1): Distribution of nursing students according to their personal and studying-related data (n = 1085)

Personal and studying-related data	No.	%
Age		
18 – 20	555	51.2
20 – 22	335	30.8
22 – 25	195	18.0
Mean ±SD (Range) = 20.43 ± 1.69 (18-25)		
Sex		
Male	367	33.8
Female	718	66.2
Academic year		
First	235	21.7
Second	290	26.7
Third	280	25.8
Forth	280	25.8
Residence		
University housing	253	23.3
Private housing	209	19.3
At home	623	57.4
System of studying		
Traditional	89	8.2
Credit hours	996	91.8
Participation in university activities		
Yes	603	55.6
No	482	44.4
Working while studying		
Yes	523	48.2
No	562	51.8

Table (2): Mean scores, standard deviation and ranking of nursing students' perception about mindfulness dimensions (n = 1085)

Five-Facet Mindfulness Questionnaire (FFMQ) Subscales	Score Range	Total score		Average Score	Rank
		Min. –Max.	Mean ± SD.	Mean ± SD.	
Observation	**(8 – 40)**	8.0 – 40.0	32.52 ± 4.20	4.06 ± 0.53	**3**
Description	**(6 – 30)**	7.0 – 30.0	23.77 ± 3.50	3.96 ± 0.58	**4**
Aware action	**(6 – 30)**	14.0 – 30.0	22.83 ± 3.41	3.81 ± 0.57	**5**
Nonjudgmental to inner experience	**(8 – 40)**	24.0 – 40.0	34.67 ± 2.89	4.33 ± 0.36	**1**
Non reactivity to inner experience	**(6 – 30)**	20.0 – 30.0	25.62 ± 1.82	4.27 ± 0.30	**2**
Total score	**(34 – 170)**	100.0 – 170.0	139.4 ± 9.23	4.10 ± 0.27	**-**

Table (3): Mean scores, standard deviation and ranking of nursing students about levels of procrastination dimensions (n = 1085)

Measure the level of procrastination	Score Range	Total score		Average Score	Rank
		Min. – Max.	Mean ± SD.	Mean ± SD.	
Writing an academic assignment	**(3 – 15)**	3.0 – 14.0	7.76 ± 2.60	2.59 ± 0.87	**4**
Studying for an exam	**(3 – 15)**	3.0 – 15.0	7.95 ± 2.82	2.65 ± 0.94	**2**
Keeping up with studying lectures	**(3 – 15)**	3.0 – 15.0	8.42 ± 2.73	2.81 ± 0.91	**1**
Performing administrative tasks	**(3 – 15)**	3.0 – 15.0	7.71 ± 2.63	2.57 ± 0.88	**5**
Attending meetings	**(3 – 15)**	3.0 – 15.0	7.64 ± 2.80	2.55 ± 0.93	**6**
Performing academic tasks in general	**(3 – 15)**	3.0 – 15.0	7.84 ± 2.75	2.61 ± 0.92	**3**
Overall	**(18 – 90)**	**18.0 – 86.0**	**47.33 ± 13.73**	**2.63 ± 0.76**	–

Table (4): Mean scores, standard deviation and ranking of nursing students perceived factors causing procrastination (n = 1085)

Identify the factors that cause procrastination	Score Range	Total score		Average Score (1 – 3)	Rank
		Min. –Max.	Mean ± SD.	Mean ± SD.	
Student related factors	**(6 – 18)**	6.0 – 18.0	10.96 ± 2.87	1.83 ± 0.48	**3**
Educator related factors	**(7 – 21)**	7.0 – 21.0	12.06 ± 3.70	1.72 ± 0.53	**5**
Assignment characteristic-related factors	**(5 – 15)**	5.0 – 15.0	8.93 ± 2.58	1.79 ± 0.52	**4**
Faculty related factors	**(4 – 12)**	4.0 – 12.0	7.60 ± 2.35	1.90 ± 0.59	**1**
Nursing work related factors	**(4 – 12)**	4.0 – 12.0	7.43 ± 1.92	1.86 ± 0.48	**2**
Overall	**(26 – 78)**	26.0 – 78.0	46.99 ± 11.68	1.81 ± 0.45	

SD: Standard deviation

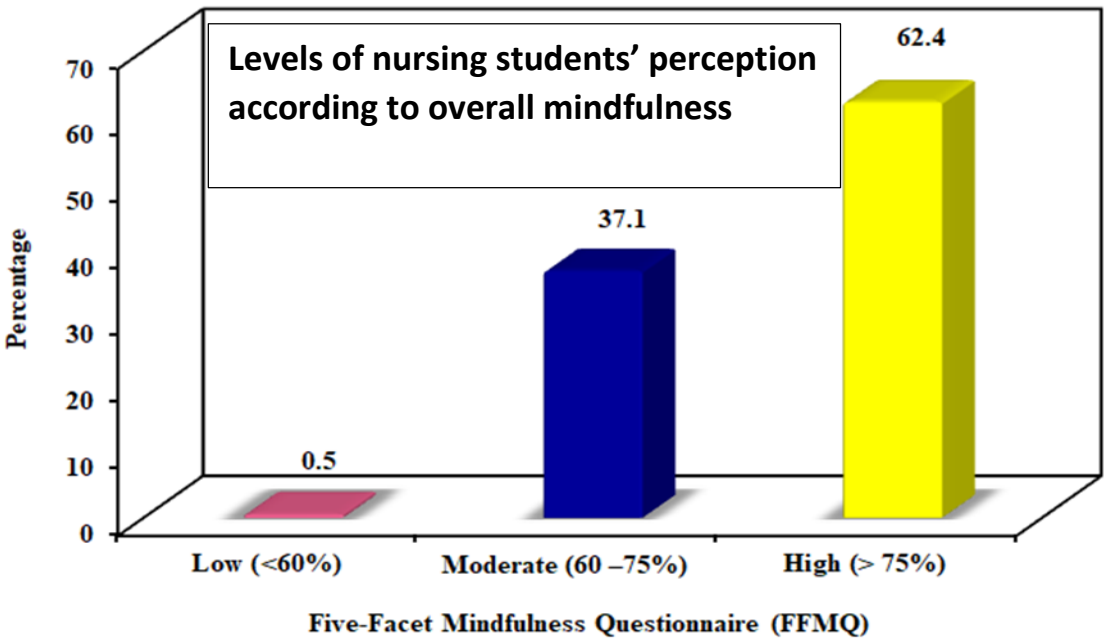

Figure (1): Levels of nursing students' perception according to overall mindfulness (n = 1082)

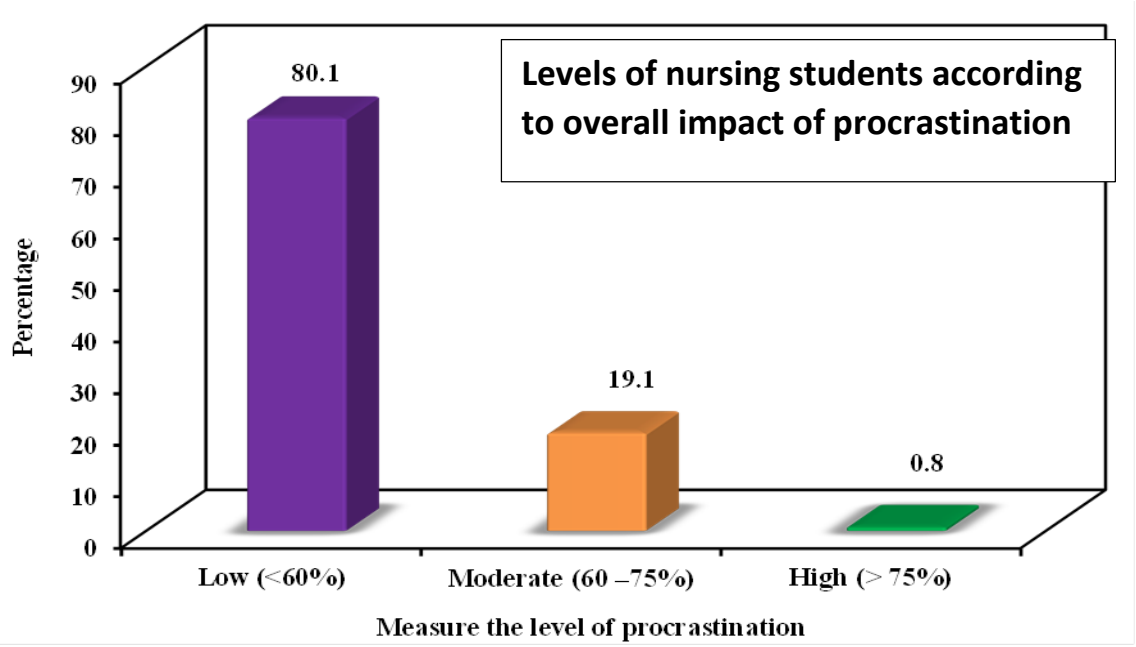

Figure (2): Levels of nursing students according to overall impact of procrastination (n = 1082)

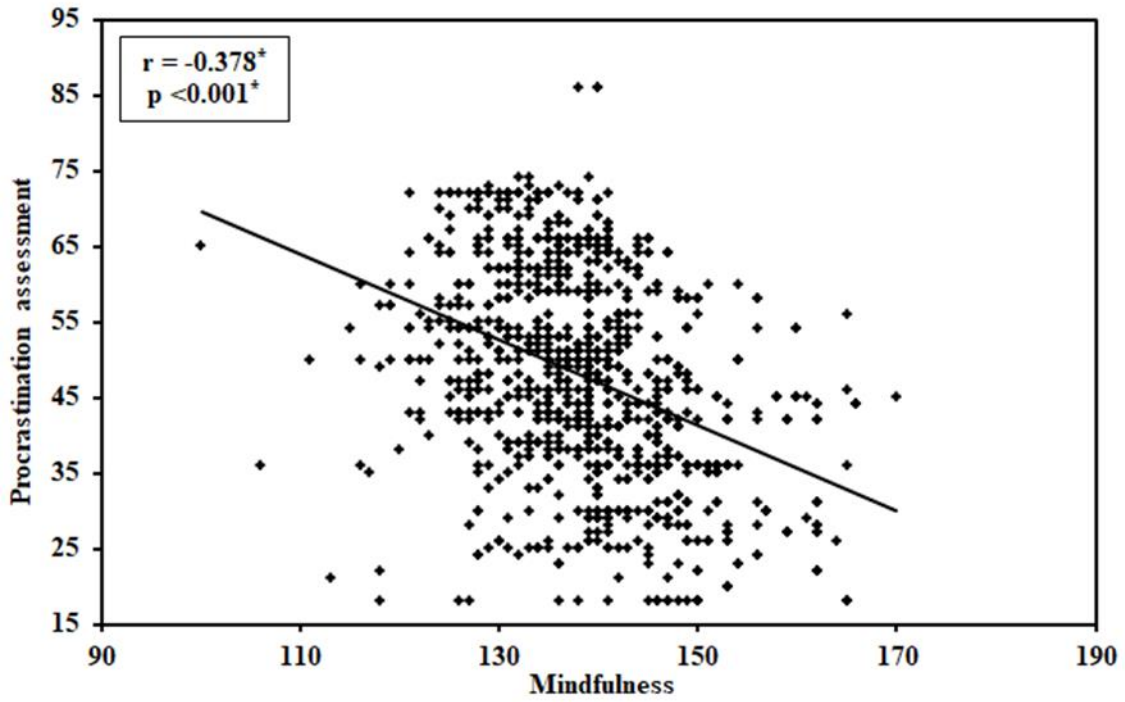

Figure (3): Correlation between nursing students' perception of overall mindfulness and their procrastination (n = 1082)

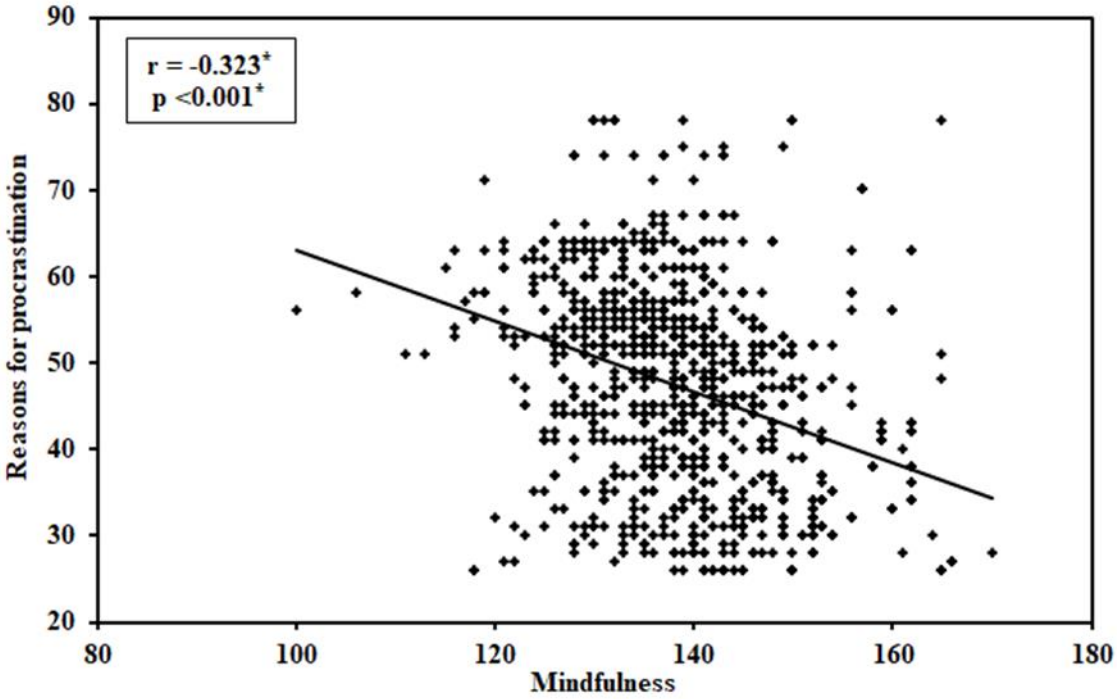

Figure (4): Correlation between nursing students' perception of overall mindfulness and perceived causing factors of procrastination (n = 1082)

Table (5): Relation between nursing students' mindfulness and their personal and studying related data (n = 1085)

Factors	No	Total score of Five-Facet Mindfulness Questionnaire	Test of sig.	P
		Mean ±SD.		
Age (years)				
17 – 20	**555**	138.9 ± 10.24	F= 4.176*	0.016*
20 – 22	**335**	139.3 ± 7.65		
22 – 25	**195**	141.1 ± 8.50		
Sex				
Male	**367**	138.4 ± 10.11	t= 2.477*	0.014*
Female	**718**	139.9 ± 8.70		
Academic year				
First	**235**	137.3 10.25	F= 6.053*	<0.001*
Second	**290**	140.5 9.39		
Third	**280**	139.4 8.87		
Fourth	**280**	140.1 8.22		
Residence				
University housing	**253**	138.72 8.54	F= 5.223*	0.006*
Private housing	**209**	141.23 8.45		
At home	**623**	139.09 9.67		
System of studying				
Traditional	**89**	133.6 ± 11.55	t= 5.075*	<0.001*
Credit hours	**996**	139.9 ± 8.81		
Participation in any university activities				
Yes	**603**	139.8 ± 8.86	t= 1.527	0.127
No	**482**	138.9 ± 9.66		
Working while studying				
Yes	**523**	139.3 ± 9.27	t= 0.523	0.601
No	**562**	139.6 ± 9.19		

SD: Standard deviation t: Student t-test F: F for One way ANOVA test
p: p value for comparison between the studied categories
*: Statistically significant at $p \leq 0.05$

Table (6): Relation between nursing students' perception about overall procrastination and their personal and studying related data (n = 1085)

Personal and studying related data	No	Total score Measure the level of procrastination Mean ±SD.	Test of sig.	P
Age (years)				
17 – 20	**555**	46.22 ± 14.33	F= 3.774*	0.023*
20 – 22	**335**	48.39 ± 12.41		
22 – 25	**195**	48.68 ± 13.92		
Sex				
Male	**367**	50.55 ± 15.67	t= 5.186*	<0.001*
Female	**718**	45.69 ± 12.31		
Academic year				
First	**235**	45.83 ± 15.54	F= 4.558*	0.004*
Second	**290**	48.60 ± 14.17		
Third	**280**	45.64 ± 11.52		
Fourth	**280**	48.97 ± 13.40		
Residence				
University housing	**253**	54.13 ± 15.12	F= 50.434*	<0.001*
Private housing	**209**	48.06 ± 11.62		
At home	**623**	44.33 ± 12.75		
System of studying				
Traditional	**89**	44.63 ± 11.89	t= 2.208	0.029*
Credit hours	**996**	47.58 ± 13.86		
Participation in any university activities				
Yes	**603**	49.81 ± 14.36	t= 6.909*	<0.001*
No	**482**	44.23 ± 12.22		
Working while studying				
Yes	**523**	50.60 ± 14.29	t= 7.738	<0.001*
No	**562**	44.29 ± 12.44		

SD: Standard deviation t: Student t-test F: F for One way ANOVA test
p: p value for comparison between the studied categories
*: Statistically significant at $p \leq 0.05$

Table (7): Relation between nursing students' reported causes of procrastination and their personal and studying related data (n = 1085)

Factors	No	Total scores identify the factors that cause procrastination	Test of sig.	P
		Mean ±SD.		
Age (years)				
17 – 20	**555**	46.55 ± 11.45	F= 2.474	0.085
20 – 22	**335**	46.73 ± 11.81		
22 – 25	**195**	48.66 ± 12.03		
Sex				
Male	**367**	46.23 ± 12.73	t= 1.458	0.145
Female	**718**	47.37 ± 11.10		
Academic year				
First	**235**	46.07 ± 12.28	F= 7.208*	<0.001*
Second	**290**	45.18 ± 12.15		
Third	**280**	47.13 ± 9.87		
Fourth	**280**	49.49 ± 11.97		
Residence				
University housing	**253**	50.13 ± 12.23	F= 15.615	<0.001*
Private housing	**209**	47.83 ± 11.31		
At home	**623**	45.43 ± 11.31		
System of studying				
Traditional	**89**	46.60 ± 10.37	t= 0.330	0.742
Credit hours	**996**	47.02 ± 11.80		
Participation in any university activities				
Yes	**603**	46.90 ± 11.76	t= 0.278	0.781
No	**482**	47.10 ± 11.59		
Working while studying				
Yes	**523**	48.48 ± 12.38	t= 4.080	<0.001*
No	**562**	45.59 ± 10.82		

SD: Standard deviation t: Student t-test F: F for One way ANOVA test
p: p value for comparison between the studied categories
*: Statistically significant at $p \leq 0.05$

Discussion

The life of a nursing student is filled with numerous tasks and assignments. Academic procrastination is a significant concern in nursing education, where students are often faced with demanding coursework, clinical responsibilities, and high expectations for academic and professional performance. Procrastination in this context can lead to increased stress, poor academic outcomes, and reduced confidence. Mindfulness in nursing education is the practice of cultivating focused, non-judgmental awareness of the present moment, which can help in managing the unique stresses and demands of nursing education. ultimately affecting students' readiness for clinical practice **AlSubai et al. (2024)**.

Regarding the current study, more than two-thirds of nursing students had high perception level of overall mindfulness. From the viewpoint of the researcher, this result might be explained by that nursing education often emphasizes self-awareness, reflection, and emotional regulation, core components of mindfulness (observation, description, aware action, non-judging of inner experience and non-reactivity to inner experience) which may naturally enhance students' mindfulness levels. These results are supported by **Kurt, Gündoğan and Uslu (2024)** who reported that most nursing student's perception of mindfulness fell in moderate ranges. contrasting results are reported by **Liu, Lee, and Wu (2024)** who found baseline mindfulness levels among nursing students were low.

Nonjudgmental inner experience was ranked as the highest, aware action was ranked as the lowest among all dimensions. These findings may be explained by the students' greater capability to accept their internal emotions and thoughts without criticism or reaction, possibly due to increased exposure to emotional challenges throughout their academic journey. The results conflicted with those of **Tzelepi et al. (2023)**, who found that non-reactivity was not consistently associated with improved academic outcomes under high stress conditions among university students.

Regarding the current study, the majority of nursing students had a low level of overall procrastination. This finding may be explained by those students' motivation to meet academic and clinical deadlines; nursing programs often emphasize the importance of timely task completion due to the critical nature of patient care. This result aligns with **Catacutan et al. (2024**) who reported low procrastination levels among university students. However, this result contrasts with the findings of **Tahir et al. (2022)** who found that more than one half of students fell in high procrastination.

Keeping up with studying lectures was ranked as the highest area of procrastination. This may be attributed to the perceived repetitiveness and lack of immediate accountability associated with lecture reviews. These findings are

supported by **Zhang et al. (2024)** who found that nursing students are more likely to procrastinate on tasks lacking immediate consequences or those that require sustained focus over time. However, **Budury et al. (2022),** who reported that clinical duties, rather than academic tasks, were the primary source of procrastination among nursing students.

As regards nursing students' causes of procrastination, the current study revealed that among the five examined dimensions, faculty-related factors were ranked as the highest contributor to procrastination. This result may be explained by organizational issues such as lack of timely feedback, unclear communication, on the other hand, educator-related factors were ranked the lowest, suggesting that most students may not perceive their instructors' behavior as a primary cause of procrastination. From the researcher's perspective, these results highlight the importance of faculty engagement and workload balance in reducing academic procrastination. The findings are reliable with the conclusions of **Bhatt (2023)** who clarified that the faculty-related factors were identified as external contributors to academic procrastination. These organizational shortcomings can demotivate students and lead to delays in academic task completion. In the other hand, **Santelli, Larson, and Humphrey (2020)** found that students often attributed delays to personal time management and life stressors, not faculty behavior.

Correlation between nursing students' mindfulness and their procrastination

The recent study's results showed a negative statistically significant correlation among nursing students' overall perception of mindfulness and their level of procrastination. This result may be interpreted by the notion that higher mindfulness is associated with lower tendencies to procrastinate, as mindfulness fosters self-awareness, present-moment focus, and emotional regulation factors that directly counteract the avoidance behaviors characteristic of procrastination.

This finding is supported by **Shi, Zhang and Wang (2023)** who confirmed that increased mindfulness among nursing students significantly reduced academic procrastination through enhanced self-control and emotional clarity. In the other hand, **Eltayeb (2021)** emphasized that although a negative correlation was observed, it was not strong or consistent across all student groups. Some students with high mindfulness still reported high procrastination, suggesting other moderating factors. However, directly opposing studies that show a positive correlation between mindfulness and procrastination are rare.

The current study's results revealed a negative statistically significant correlation between nursing students' perception of overall mindfulness and their reported causes of procrastination. This result may be interpreted by the understanding that students who

exhibit higher mindfulness tend to experience fewer internal and external factors that trigger procrastination, such as stress, poor time management, or lack of motivation. Mindfulness enhances students' ability to remain focused, regulate emotions, and respond thoughtfully to academic demands, thereby reducing the influence of both student-related and environment-related procrastination factors.

In agreement with the current findings, **Schutte and del Pozo de Bolger (2020)** who demonstrated that greater trait mindfulness is linked to less procrastination. The study also found that attention mediates this relationship meaning mindfulness improves attention, which in turn reduces procrastination. However, contrasting evidence was presented by **Tarman and Sari (2023)** who found that while mindfulness partially facilitated the relationship between social anxiety and procrastination, it did not fully eliminate procrastination behaviors.

The relation between nursing students' mindfulness and procrastination and their personal and studying-related data

The data analysis of the recent study clarifies that there was a statistically significant relation between nursing students' perception of overall mindfulness and their personal data, except for their participation in university activities and working while studying. This finding indicated that certain demographic factor as age, academic level, and possibly marital status may influence how students perceive and practice mindfulness. These results may be related to the idea that personal and academic maturity, life experience, and varying levels of academic pressure can shape an individual's mindfulness disposition.

This finding is consistent with the results of **Sanyal (2025)** who emphasized that socio-demographic factors, including age and educational exposure, play a critical role in shaping students' mindfulness. They argued that older and more academically advanced students were more likely to engage in reflective practices and emotional regulation. In contrast, **Tarman and Sari (2023)** found no significant influence of demographic factors like age or academic year on mindfulness levels. Instead, psychological traits (e.g., anxiety levels) were more predictive.

The recent study findings demonstrated a statistically significant relation between nursing students' perception of procrastination and all their personal and studying-related data. These results could be interpreted by the idea that students' backgrounds and daily responsibilities shape how they manage academic demands and prioritize tasks.

This result aligns with the findings **Li, Su, Zhao, Wang and Wang (2023)** who found that future time perspective and mindfulness both directly and indirectly influenced procrastination levels highlighting the relevance of demographic and personal characteristics in shaping

time management and task prioritization, In contrast, **George (2024)** found no significant relations between procrastination and personal data such as age, gender, religion, or year of study.

The analysis of the recent study revealed that there were no statistically significant relations between nursing students' reported causes of procrastination and their personal and studying-related data, except for academic year, place of residence, and working while studying. This finding suggested that in general, demographic and employment variables may not substantially influence the underlying reasons for procrastination. From a researcher's viewpoint, this may be explained by the fact that students in different academic years face varying academic demands and levels of adjustment. For instance, junior students may struggle with adapting to the academic workload, while senior students might face burnout or clinical responsibilities. In alignment with these findings is **Salihu and Abdulkareem (2024)**, who found no significant difference in procrastination by gender or age, but employed students showed lower procrastination than unemployed.

Conclusion

Regarding the findings of the existing study, it was concluded that about two-thirds of nursing students had a high perception regarding mindfulness. Also, the majority of nursing students had a low level of overall procrastination and Institution-related factors were identified as the most significant factor causing procrastination, educator-related factors were the least significant factor. In addition to that, there was a negative statistically significant correlation found among nursing students' perception of overall mindfulness and procrastination**.**

Recommendations

Faculty of Nursing:

- Provide clear academic guidelines, timely feedback, and consistent communication to reduce uncertainty and academic stress.
- Offer workshops or seminars on time management, self-regulation, and effective study strategies.
- Upgrade Access to Academic Search Facilities, Clearly Communicate Assignment Expectations and Evaluation Criteria and Offer Constructive, Individualized Feedback.

Nursing Students:

- Engage in mindfulness practices as breathing exercises, meditation, or reflective journaling to improve concentration and reduce procrastination.
- Attend training sessions or workshops focused on academic planning, prioritization, time management skills and self-confidence and coping strategies.
- Seeking peers or faculty mentoring when facing academic challenges to maintain motivation and accountability.

Further Studies need to:

- Conduct longitudinal research to examine the sustained influence of mindfulness on procrastination over time among nursing students

and reasons behind procrastination.
- Expand research across multiple nursing faculties and universities to validate and generalize findings.
- Investigate other psychological variables (e.g., stress, burnout, motivation) and their interaction with mindfulness and procrastination.

Referencies

Alhasani, M., & Orji, R. (2025). Promoting stress management among students in higher education: Evaluating the effectiveness of a persuasive time management mobile app. *International Journal of Human–Computer Interaction*, *41*(1), 219-241.

AlSubaie, A. A., Bajawi, Z. A., Majrashi, N. H., Shabani, K. M., Shafai, A. I., Alsanani, N. M., ... & Aldossary, M. M. (2024). Integrating mindfulness-based interventions into mental health nursing: A review of evidence, biochemical mechanisms, and implementation challenges. *Journal of Medicinal and Chemical Sciences, 7*(12), 1861-1871.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*(1),27–45.

Berdida, D. E., Lopez, V., & Grande, R. N. (2023). Nursing students' perceived stress, social support, self-efficacy, resilience, mindfulness and psychological wellbeing. *International Journal of Mental Health Nursing*, *32*(5), 1390-1404.

Bhatt, T. (2023). Understanding the factors influencing academic procrastination: A comprehensive review. *Journal of Namibian Studies, 33*.

Budury, S., Sari, D. E., Widiharti, W., Pramesti, T. A., & Hasina, S. N. (2022). Academic procrastination of undergraduate nursing students: A cross-sectional study. *Open Access Macedonian Journal of Medical Sciences*, *10*(E), 592-595.

Catacutan, S. M., Ortiz, M. J., Mangadlao, T. D., Mission, R. J., Nonong, R. G., & Obenza, D. M. (2024). The relationship between procrastination and academic stress among university students. *International Journal of Multidisciplinary Studies in Higher Education*, *1*(1), 12-21.

Coleman, R. (2022). The presents of the present: Mindfulness, time and structures of feeling. *Distinktion: Journal of Social Theory*, *23*(1), 131-148.

Elsayed A. S., Mohamed S. Y., Hussein R. and Morsy, S. (2024). Relationship between academic procrastination behavior and self-regulation among nursing students. *Alexandria Scientific Nursing Journal*, *26*(2), 63-77.

Eltayeb, F. (2021). Mindfulness and its relation to academic procrastination among university students. *Universal Journal of Educational Research, 9*(5), 917-

927.

George, S. (2024). Assessment of Procrastination Levels and Demographic Associations Among Nursing Students in Bengaluru Colleges. Preprints.

Ghattas, A. S., & El-Ashry, A. M. (2024). Perceived academic anxiety and procrastination among emergency nursing students: the mediating role of cognitive emotion regulation. *BMC nursing*, *23*(1), 670.

Green, A. A., & Kinchen, E. V. (2021). The effects of mindfulness meditation on stress and burnout in nurses. *Journal of Holistic Nursing*, *39*(4), 356-368.

Harrison, R. J., Buckley, E. A., Ross, N. J., Witte, C. E., & Thompson, W. L. (2024). Multi-modal mindfulness training and well-being for healthcare students. *Currents in Pharmacy Teaching and Learning*, *16*(1), 49-57.

Kooren, N. S., Van Nooijen, C., & Paas, F. (2024). The influence of active and passive procrastination on academic performance: A meta-analysis. *Education Sciences*, *14*(3), 323.

Kurt, D., Gündoğan, E. P., & Uslu, B. (2024). Mindful awareness and perceived stress in nursing students. *Assessment*, *4*(3) 181-187.

Li, S., Su, J., Zhao, D., Wang, J., & Wang, G. (2023). Future time perspective and academic procrastination among nursing students: The mediating role of mindfulness. *Nursing Open*, *10*(6), 3737-3743.

Liu, Y. L., Lee, C. H., & Wu, L. M. (2024). A mindfulness-based intervention improves perceived stress and mindfulness in university nursing students: A quasi-experimental study. *Scientific Reports*, *14*(1), 13220.

Luo, X., Ma, J., & Hu, Y. (2023). Dynamic and bidirectional relation between mindfulness and procrastination among female college students. *Mindfulness*, *14*(9), 2265-2275.

Matshaka, L., Downing, C., & Ntshingila, N. (2024). Facilitating holistic nursing through the development of mindfulness: A model for student nurses. *Journal of Holistic Nursing*, *42*(40), 409-419.

Mortazavi, F., Mortazavi, S. S., & Khosrorad, R. (2015). Psychometric properties of the procrastination assessment scale-student (PASS) in a student sample of Sabzevar University of Medical Sciences. *Iranian Red Crescent Medical Journal*, *17*(9), e28328.

Portela Dos Santos, O., Melly, P., Hilfiker, R., Giacomino, K., Perruchoud, E., Verloo, H., & Pereira, F. (2022). Effectiveness of educational interventions to increase skills in evidence-based practice among nurses: The EDIT care systematic review. *In Healthcare*, *10*(11), 2204.

Rani, K. (2023). A study on mindfulness and anxiety among young adults. *International Journal of Interdisciplinary Approaches in Psychology*, *1*(4), 36-88.

Roslan, S., Ismail, M., Zaremohzzabieh, Z., Ahmad, N., Mohamad, Z., Der Jiun Ooi, N. A. I., & Qamaruzzaman, F. (2022). The ecopsychological, spiritual, physiological health and mood benefits of zikr meditation and nature for Muslim university students. *International Journal of Academic Research in Business & Social Sciences, 12*(9), 1929-1949.

Salihu, N. O., & Abdulkareem, H. B. (2024). Demographic factors influencing academic procrastination among postgraduate students. *Jurnal Pedagogi dan Pembelajaran, 7*(3).

Santelli, B., Robertson, S. N., Larson, E. K., & Humphrey, S. (2020). Procrastination and delayed assignment submissions: Student and faculty perceptions of Late Point Policy and Grace within an online learning environment. *Online Learning, 24*(3), 35-49.

Sanyal, N. (2025). *Mindfulness in Academics: The Catalyst to Foster Well-Being Among Students. In Handbook of Positive Psychology and Indian Thought Systems: Transforming Education for Well-being and Happiness* (pp. 249-259). Singapore: Springer Nature Singapore.

Schutte, N. S., & del Pozo de Bolger, A. (2020). Greater mindfulness is linked to less procrastination. *International Journal of Applied Positive Psychology, 5*(1), 1-12.

Shi, H., Zhang, X., & Wang, Y. (2023). The impact of mindfulness on academic procrastination in nursing students: A mediating role of self-control. *Nurse Education Today, 123*, 105773.

Solomon, L. J., & Rothblum, E. (1988). Procrastination assessment scale students. *Dictionary of Behavioral Assessment Techniques*, 358-360.

Sumpter, D., Blodgett, N., Beard, K., & Howard, V. (2022). Transforming nursing education in response to the future of nursing 2020–2030 report. *Nursing Outlook, 70*(6), S20-S31.

Tariq, M. U. (2024). Enhancing students and learning achievement as 21st-century skills through transdisciplinary approaches. *Transdisciplinary Approaches to Learning Outcomes in Higher Education, 4*(12), 220-257.

Tahir, M., Yasmin, R., Butt, M. W. U., Gul, S., Aamer, S., & Naeem, N. (2022). Exploring the level of academic procrastination and possible coping strategies among medical students. JPMA. *The Journal of the Pakistan Medical Association, 72*(4), 629-633.

Tarman, G. Z., & Sari, B. A. (2023). The mediating role of mindfulness on social anxiety and procrastination. *International Journal of Mental Health and Addiction, 21*(2), 1013-1024.

Tzelepi, I., Bacopoulou, F., Chrousos, G. P., Sotiropoulou, L., Vlachakis, D., & Darviri, C. (2023). Mindfulness and academic performance of college

and university students: A systematic review. In G. P. Chrousos, A. Tsatsoulis, & G. Mastorakos (Eds.), *Advances in Experimental Medicine and Biology, 1425,* 207–215. Springer.

Williams, M. J., Dalgleish, T., Karl, A., & Kuyken, W. (2014). Examining the factor structures of the five facet mindfulness questionnaire and the self-compassion scale. *Psychological Assessment, 26*(2), 407.

Zhang, Y., Guo, H., Ren, M., Ma, H., Chen, Y., & Chen, C. (2024). The multiple mediating effects of self-efficacy and resilience on the relationship between social support and procrastination among vocational college students: A cross-sectional study. *BMC Public Health, 24*(1), 1958.