

The relationship between student satisfaction with the nursing program and emotional status among undergraduate nursing students. A cross-sectional study

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Abstract

It is widely known that nursing students can face emotional challenges due to various factors. However, it is important to investigate how satisfied nursing students are with their program and how it relates to their emotional well-being. This study aims to identify the nursing students' satisfaction level with the nursing program and explore its relationship with their emotional state, a cross-sectional correlation methodology, comprising 273 students from the Faculty of Nursing. The Depression, Anxiety, and Stress Scale-42 items, alongside the Students' Satisfaction with the Nursing Program Questionnaire, were employed to evaluate their emotional status. The level of satisfaction with the nursing program is low ($M=2.19$, $SD=1.18$), and the emotional state disturbance is mild to moderate. There is a positive and statistically significant correlation between students' satisfaction with the nursing program and their emotional status measured by the Depression, Anxiety, and Stress Scale -42, where the Pearson correlation coefficient value was (0.879). The study revealed that students' satisfaction with the nursing program positively correlated with their emotional status in terms of depression, anxiety, and stress. This finding is alarming regarding the importance of decreasing the risk of depression, anxiety, and stress among nursing students.

Keywords: Student's satisfaction with the nursing program, emotional status.

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العلاقة بين رضا الطلاب عن برنامج التمريض والحالة العاطفية لدى طلاب التمريض الجامعيين. دراسة ارتباط مقطعية

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ملخص

الخلفية: من الثابت أن طلاب التمريض قد يتعرضون لاضطرابات عاطفية لأسباب عديدة. ومع ذلك، هناك حاجة لفحص العلاقة بين رضا طلاب التمريض عن برنامج التمريض وحالتهم العاطفية في برنامج تمريض معين.

الهدف: تحديد مستوى رضا طلاب التمريض عن برنامج التمريض وتقصي العلاقة بين رضا طلاب التمريض عن برنامج التمريض وحالتهم العاطفية.

الأساليب: تم استخدام تصميم دراسة الارتباط المقطعي لتشمل 372 طالبًا من كلية التمريض تم اختيارهم لتمثيل طلاب التمريض الأردنيين. تم استخدام مقياس الاكتئاب والقلق والتوتر-42 عنصرًا (DASS-42) لتقييم الاستبيان العاطفي بجانب الاستبيان لتقييم رضا الطلاب عن برنامج التمريض.

النتائج: كان مستوى الرضا عن برنامج التمريض منخفضًا ($M = 2.19$, $SD = 1.18$)، واضطراب الحالة الانفعالية كان خفيفًا ($M = 2.35$, $SD = 0.79$). توجد علاقة ارتباط موجبة ودلالة إحصائية بين رضا الطلاب عن برنامج التمريض وحالتهم العاطفية مقاسة بـ (DASS-42) حيث بلغت قيمة معامل ارتباط بيرسون (0.879).

الخلاصة: أوضحت هذه الدراسة أن رضا الطلاب عن برنامج التمريض يرتبط ارتباطًا إيجابيًا بحالتهم العاطفية من حيث الاكتئاب والقلق والتوتر. هذه النتيجة مثيرة للقلق فيما يتعلق بأهمية تقليل مخاطر الاكتئاب والقلق والتوتر بين طلاب التمريض.

الكلمات المفتاحية: رضا الطالب عن برنامج التمريض، الحالة العاطفية.

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Introduction:

Nursing students' satisfaction as a psychological state plays a crucial factor in the field of health care education, as it influences their emotional status, as well as their motivation and learning outcomes. (Karaca et al., 2019; Rodríguez-García et al., 2021; Visiers-Jiménez et al., 2021). Furthermore, low satisfaction level affects their intention to stay in the nursing program and may indicate early burnout(Valero-Chillerón et al., 2019).

Studies have shown that nursing students worldwide experience increased levels of depression, stress, and anxiety, which can affect their emotional well-being (Chaabane et al., 2021; Labrague et al., 2018; Nebhinani et al., 2020; Tung et al., 2018; Xie et al., 2020), Emotional distress can stem from various sources, but sometimes it is linked to the added pressures brought on by the demands of education and training processes. (Alghamdi et al., 2019; Hamaideh et al., 2017), as well as many demographics (Lavoie-Tremblay et al., 2022; Rayan, 2019; Salvarani et al., 2020).

Studies have indicated a potential link between the emotional well-being of nursing students, including factors such as stress, anxiety, and depression, and their level of job satisfaction in the future(Kaur & Malhotra, 2018; Khatun et al., 2018; Suni et al., 2017).

Emotional health status and satisfaction with work affect each other(Emmanuel Olatunde & Odusanya, 2015). Findings from a study in Iran have expressed worries about the quality of their learning surroundings, which differs from their peers in certain countries, particularly in the Middle East (Mamaghani et al., 2018). Another study conducted among nursing students in Jordan demonstrated that their satisfaction with the nursing program was neutral (Jaradeen et al., 2012). Additionally, nursing students in Saudi Arabia expressed higher than average satisfaction with their clinical learning experiences(Abouelfettoh & Mumtin, 2015). To summarize, student satisfaction in nursing programs differs among countries. When considering nursing programs, it is important to explore various factors that can affect the satisfaction of nursing students. These factors may relate to the educational process (Abouelfettoh & Mumtin, 2015; Oducado & Estoque, 2021; Padilha et al., 2019; Sacco & Copel, 2018), the characteristics of nursing students themselves(Stone et al., 2020), and finally the placement of clinical experience (Jayasekara et al., 2018; Phillips et al., 2017; Sigalit et al., 2017).

In Jordan, studies showed that Jordanian college students experience moderate depression, severe anxiety, and moderate stress (Dalky & Gharaibeh, 2019), while studies which discuss satisfaction with nursing programs are so limited. This study was carried out to assess the nursing students' satisfaction with the nursing program and to investigate the relationship between satisfaction with a nursing program and emotional status, and guided by the following questions:

1. What is the level of nursing students' satisfaction with the nursing program?
2. What is the level of emotional status among nursing students?
3. Is there a significant relationship between nursing students' satisfaction with the nursing program and their emotional status?

Methodology: Study design: The study employed a cross-sectional analytical descriptive approach.

Sample: The study participants were 273 students who enrolled in undergraduate nursing programs in one of the biggest Jordanian Universities/ Faculty of Nursing for the academic year 2022-2023, second semester, the sample constitutes 43% of the study population who were 800 nursing students, convenient sampling method were employed. All eligible participants who completed the questionnaire were included in the study. The study inclusion criteria were undergraduate nursing students currently enrolled in an undergraduate nursing program and willing to participate in the study.

Study Tools: The first tool used was the Depression, Anxiety, and Stress Scale-42, a commonly self-reported questionnaire with 42 items that assess emotional status. The questionnaire uses a four-point Likert scale, with higher scores indicating increased emotional disturbances. It includes three subscales for measuring depression, anxiety, and stress. It can be used by calculating the mean of all items together to measure the level of negative emotional status in general or calculating the mean of each subscale to measure the level of each, the scale has high internal consistency, stability over time, and validity (Parkitny & McAuley, 2010). The criterion for judging the items of the study tool the Depression, Anxiety, and Stress Scale -42 as follow:

If the average score of items is between 1 and 1.74, it means the person's emotional state is good, and no need for intervention.

If the average score of items is between 1.75 and 2.49, it suggests a mild emotional disturbance and some simple intervention may be helpful.

If the average score of items is between 2.50 and 3.24, it indicates a moderate emotional disturbance and more intervention may be necessary, though it is not urgent.

If the average score of items is equal to or greater than 3.25, it indicates a severe emotional disturbance and requires urgent intervention.

The second tool was a constructed questionnaire to obtain nursing students' satisfaction with the nursing program, which consists of two parts. The first part obtained the demographic data of the respondents, which included gender, age, and year of nursing education. The second part is composed of 30 statements about students' satisfaction with the nursing program, there are five possible responses for each statement (strongly disagree, disagree, neutral, agree, strongly agree) on the Likert scale.

Researchers developed this survey after a thorough review of relevant literature. To ensure its validity, the survey was presented to a group of 11 specialists in nursing and mental health. These specialists evaluated the survey's paragraphs to determine if they aligned with the intended objectives, were clearly written, and accurately represented the nursing program. The researchers relied on the opinions of these specialists to determine the final content of the survey, with 80% agreement required before any required change. All opinions are taken into consideration.

The questionnaire's reliability was obtained by analyzing the correlation between students' performance on each item and their overall performance on the scale. Positive correlation coefficients show that the scale has a valid construct. The stability coefficient, calculated with the Cronbach alpha equation, was 0.94, indicating good stability and validity.

The criteria for evaluating the components of the Student's Satisfaction with the Nursing Program Questionnaire are as follows:

If the average score of items \leq (2.33): the level of student satisfaction with the nursing program is low.

If the average score of items (2.34 – 3.66): the level of student satisfaction with the nursing program is moderate.

If the average score of items $\geq (3.67)$: the level students of satisfaction with the nursing program is high.

Ethical considerations:

The ethics and research committee at XXX University's Faculty of Nursing has granted ethical approval (Reference Number EC4/2023) for this study. Participants were provided with informed consent that guaranteed their anonymity, confidentiality, and protection of their rights as human subjects. They also assured that their participation will be voluntary and will not affect their academic achievements and they can withdraw from the study at any time before data analysis. The completed questionnaires assigned numbers instead of personal information and were securely kept in a cabinet accessible only to the researcher for research purposes.

Data Collection Procedures:

The questionnaires and consent forms hard copies were distributed to participants in their classes, they asked to complete questionnaires and given clear instructions about how to respond to the items in the questionnaires to return completed questionnaires to a secure drop-box located at the Faculty of Nursing. The collected questionnaires coded and prepared for data analysis. The data collection period spanned three weeks during the second semester 2022-2023 depending on the student's availability.

Data analysis:

The data analysis was conducted using the Statistical Package for Sciences (SPSS 25). Descriptive statistics, including mean, standard deviation, frequency, and Pearson correlation coefficient, were utilized to provide a summary of the data. Additionally, missing data is managed through case and Pair-Wise deletions.

Results

Demographic Characteristics:

The study involved 273 nursing students. Table (1) displays the distribution and percentage of participants based on their gender and level of nursing education in the bachelor program of the Faculty of Nursing.

Table (1) Distribution of participant students by gender and level

sex	Level of nursing education				n	%
	First-year	Second year	Third year	Fourth-year		
Male	19	14	11	6	50	18.3%
Female	65	59	58	41	223	81.7%
Sum	84	73	69	47	273	
%	30.8%	26.8%	25.2%	17.2%		100%

Students' satisfaction with the nursing program:

Arithmetic means and standard deviations were calculated for the study sample's performance on the scale of student satisfaction with the nursing program, the result showed that the level of student satisfaction with the nursing program was low ($M=2.19$, $SD=1.18$).

The arithmetic means, standard deviations, and rank of items of the measure of student's satisfaction with the nursing program showed in Table (2) the degree of satisfaction of the students of the Faculty of Nursing with the nursing program was low on the scale as a whole, the table shows that the estimates of the students of the Faculty of Nursing in the items of the scale were medium in (12) items and low in (18) items. The least ranked item was for (I find training settings meet training needs.) ($M=1.86$, $SD=1.41$), followed by the item (I am provided with study plans for each subject.) ($M=1.88$, $SD=1.45$) and the item (I can easily access the internet for distance learning materials.) ($M= 1.89$, $SD=1.45$).

Table (2) Student's Satisfaction with the Nursing Program Questionnaire items; mean, SD., rank, and level

	Item	Mean	SD.	Rank	Level
1	I find enough time to do the duties and tasks required of me.	2.38	1.60	10	Moderate
2	I find the facilities within the college such as benches, cafeteria, toilets, photocopying service...satisfactory.	2.65	1.65	7	Moderate
3	I find the faculty members and the secretary helpful.	2.53	1.64	8	Moderate
4	I find teaching staff helps me develop professional competence.	2.36	1.62	12	Moderate

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	Item	Mean	SD.	Rank	Level
5	I find well-equipped clinical laboratories.	2.76	1.68	1	Moderate
6	I find follow-up from the college for my academic performance.	2.66	1.69	6	Moderate
7	I receive handouts and syllabi for clinical courses.	2.71	1.65	3	Moderate
8	I can communicate well with the college staff.	2.49	1.64	9	Moderate
9	I find teaching staff in the college are at a high level of knowledge.	2.67	1.62	5	Moderate
10	I feel confident doing patient care.	2.36	1.61	11	Moderate
11	I find time for sports or leisure activities.	2.32	1.58	13	Low
12	I receive effective supervision from my clinical supervisors.	2.71	1.69	4	Moderate
13	I find channels available to express student complaints.	2.72	1.72	2	Moderate
14	I find the tasks required of me within my abilities.	1.88	1.48	29	Low
15	I find an appropriate academic counseling college.	1.90	1.46	23	Low
16	I find a suitable social environment in college.	1.89	1.41	26	Low
17	I receive any changes in my duties or assignments at the appropriate time	1.92	1.47	21	Low
18	I was notified of my grades and methods for determining my grades.	1.98	1.56	14	Low
19	I find books and other necessary teaching materials available.	1.96	1.55	15	Low
20	I received study plans for each subject.	1.88	1.45	28	Low
21	I find transportation to and from the college is available.	1.95	1.52	17	Low
22	I find classrooms are suitable for teaching and learning.	1.91	1.44	22	Low

Item		Mean	SD.	Rank	Level
23	I receive psychological support from specialized professionals in the college if necessary.	1.94	1.51	19	Low
24	I find training settings meet training needs.	1.86	1.41	30	Low
25	I find clinical supervisors care about my safety during training	1.95	1.52	18	Low
26	I receive encouragement when performing extra tasks.	1.90	1.46	24	Low
27	I find clinical supervisors are cooperative.	1.95	1.50	16	Low
28	I receive a fair evaluation for the assignments that are asked of me.	1.93	1.48	20	Low
29	I can easily access the internet for distance learning materials.	1.89	1.45	27	Low
30	can review my scores easily with the concerned staff	1.89	1.43	25	Low
SCALE AS A WHOLE		2.20	1.18		Low

The levels of emotional status among nursing students:

The arithmetic means and standard deviations for the Depression, Anxiety, and Stress Scale -42 performance of the study sample were calculated. The results showed that the emotional disturbance level among Faculty of Nursing students was generally mild ($M=2.35$, $SD=0.79$), meanwhile, 16 items fit into a moderate level of emotional disturbance, but no severe symptoms of depression, anxiety, or stress were detected based on the student's responses on the scale (Table .3).

Table(3) Depression, Anxiety, and Stress Scale

item		Mean	SD.	Rank	Level
1.	I found myself getting upset by quite trivial things	2.267	1.171	25	Mild
2.	I was aware of the dryness of my mouth	2.732	1.308	7	Moderate
3.	I couldn't seem to experience any positive feelings at all	2.648	1.323	10	Moderate
4.	I experienced breathing difficulty (eg, excessively rapid breathlessness in the absence of physical exertion)	12.54	1.333	14	Moderate

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	item	Mean	SD.	Rank	Level
5.	I just couldn't seem to get going	2.882	1.257	2	Moderate
6.	I tended to over-react to situations	2.754	1.304	6	Moderate
7.	I had a feeling of shakiness (eg, legs going to give way)	2.842	1.283	3	Moderate
8.	I found it difficult to relax	2.615	1.375	11	Moderate
9.	I found myself in situations that made me so anxious I was most relieved when they ended	2.831	1.260	4	Moderate
10.	I felt that I had nothing to look forward to	2.542	1.314	13	Moderate
11.	I found myself getting upset rather easily	2.483	1.336	17	Mild
12.	I felt that I was using a lot of nervous energy	2.893	1.280	1	Moderate
13.	I felt sad and depressed	2.813	1.335	5	Moderate
14.	I found myself getting impatient when I was delayed in any way (eg, elevators, traffic lights, being kept waiting)	1.948	1.226	41	Mild
15.	I had a feeling of faintness	2.124	1.262	26	Mild
16.	I felt that I had lost interest in just about everything	2.044	1.244	29	Mild
17.	I felt I wasn't worth much as a person	1.956	1.259	39	Mild
18.	I felt that I was rather touchy	2.022	1.283	32	Mild
19.	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	1.989	1.261	36	Mild
20.	I felt scared without any good reason	2.003	1.238	33	Mild
21.	I felt that life wasn't worthwhile	2.029	1.233	31	Mild
22.	I found it hard to wind down	2.102	1.241	27	Mild
23.	I had difficulty swallowing	2.044	1.235	30	Mild
24.	I couldn't seem to get any enjoyment out of the things I did	1.992	1.221	35	Mild

item		Mean	SD.	Rank	Level
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	1.963	1.236	38	Mild
26	I felt down-hearted and blue	1.945	1.212	42	Mild
27	I found that I was very irritable	2.051	1.265	28	Mild
28	I felt I was close to panic	1.996	1.270	34	Mild
29	I found it hard to calm down after something upset me	1.952	1.263	40	Mild
30	I feared that I would be "thrown" by some trivial but unfamiliar task	1.985	1.230	37	Mild
31	I was unable to become enthusiastic about anything	2.505	1.266	15	Moderate
32	I found it difficult to tolerate interruptions to what I was doing	2.575	1.275	12	Moderate
33	I was in a state of nervous tension	2.501	1.283	16	Moderate
34	I felt I was pretty worthless	2.344	1.274	24	Mild
35	I was intolerant of anything that kept me from getting on with what I was doing	2.432	1.267	19	Mild
36	I felt terrified	2.476	1.300	18	Mild
37	I could see nothing in the future to be hopeful about	2.658	1.265	9	Moderate
38	I felt that life was meaningless	2.659	1.285	8	Moderate
39	I found myself getting agitated	2.388	1.340	22	Mild
40	I was worried about situations in which I might panic and make a fool of myself	2.428	1.326	20	Mild
41	I experienced trembling (eg, in my hands)	2.421	1.309	21	Mild
42	I found it difficult to work up the initiative to do things	2.377	1.336	23	Mild
Scale as whole		2.35	0.79	-	Mild

Relationship between nursing students' satisfaction with the nursing program and their emotional status

The Pearson's correlation coefficient was calculated between the averages of the students' responses to the two scales, this descriptive statistic was used to identify the strength and direction of the correlation between nursing student's satisfaction with the nursing program and their emotional status. Pearson's correlation coefficient between the nursing student's satisfaction with the nursing program and their emotional status was found to be $r = 0.879$, indicating a strong positive correlation between the two variables at the significance level $\alpha \leq 0.01$

Discussion:

The Depression, Anxiety, and Stress Scale -42 is a scale that measures symptoms, and participants may overstate or understate their symptoms. This could result in skewed responses to the questionnaires, which could explain the relatively different percentages between the studies when measuring depression, anxiety, and stress as the subscales of the Depression, Anxiety, and Stress Scale -42. Therefore, the overall mean of all items in the scale is considered an indicator of emotional health status among the participants. This study indicated that the emotional status in terms of depression, anxiety, and stress among the participants. In this study, it ranged from mild to moderate compared to previous studies that reported high prevalence level of emotional disturbances (Shamsaei et al., 2018; Tung et al., 2018). However, it is compatible with results reported by systemic review and meta-analysis for 121 studies, which confirmed mild to moderate level of emotional disturbance in term of anxiety and stress (Vo et al., 2023). According to the findings of this study, we observed that nursing students tend to undergo certain emotional upheavals such as stress, anxiety, and depression. Several studies in this area have specifically emphasized this challenge faced by nursing students as compared to their peers in other academic programs (Bartlett et al., 2016).

The student's satisfaction with the nursing program was assessed using the Student's Satisfaction with the Nursing Program Questionnaire, the results showed satisfaction level ranged from low to moderate which is consistent to somehow with a previous study in the same nursing program, that indicated a neutral level of student satisfaction with the nursing program (Jaradeen et al., 2012). The findings of this study have revealed

some contrasting results about the satisfaction levels of nursing students in the nursing program, as compared to other studies conducted in different countries and nursing programs (Admi et al., 2018; Tomas & Muronga, 2022). It is worth noting that the level of satisfaction appears to be lower in this particular case. The findings from the study conducted on nursing students' satisfaction with the nursing program suggest a potential opportunity to enhance the educational experience. It is imperative to consider the establishment of an efficient administrative and organizational structure, along with the provision of training locations that are tailored to meet the students' training needs. One of the items on the scale, "I find training settings meet training needs," received a lower score, which highlights the importance of addressing this area. Furthermore, the evaluation of the nursing program includes analyzing the nursing student satisfaction study to identify areas that require re-orientation for promoting better emotional well-being of students. It is a crucial aspect of the program to ensure that students are content with their learning experience.

The study findings indicate that if mild to moderate emotional states among participants are not addressed promptly, they may escalate to severe emotional states, which can negatively influence academic achievements. Therefore, it is important to handle emotional issues promptly to prevent them from becoming more severe. There is ongoing discussion regarding the potential correlation between the emotional well-being of nursing students and their satisfaction with the nursing program. Though it is acknowledged that these factors may influence one another, it is imperative to prioritize the promotion of both based on the conclusive findings of this study. It is worth noting that the study solely concentrated on a single academic institution in Jordan. As such, it is plausible that other universities may have distinct variables that could influence the contentment of nursing students with nursing programs and their emotional well-being. This, in essence, implies that the study has certain limitations.

Conclusion:

This study revealed that students' satisfaction with the nursing program positively correlated with their emotional status in terms of depression, anxiety, and stress. This finding is alarming regarding the importance of decreasing the risk of depression, anxiety, and stress among nursing students. Both emotional status and nursing students' satisfaction with the nursing program - with its multifaceted faces - at the Faculty of Nursing are in need to be promoted to gain better outcomes in the nursing education

program and to decrease the vulnerability of emotional distress among nursing students.

Recommendations:

Conducting more studies related to the degree of satisfaction and emotional state in other colleges and universities and their relationship to different variables and categories. Enhancing the education process environment and promoting constructive training experience with satisfactory training settings. Based on our study findings, it is advisable to implement interventions targeting the management of depression, anxiety, and stress among nursing students. It is essential to prioritize the emotional health of nursing students, as they constitute a significant portion of the future healthcare workforce.

References:

- Abouelfettoh, A., & Mumtin, S. (2015). Nursing students' satisfaction with their clinical placement. *Journal of Scientific Research and Reports*, 4(6), 490-500.
- Admi, H., Moshe-Eilon, Y., Sharon, D., & Mann, M. (2018). Nursing students' stress and satisfaction in clinical practice along different stages: A cross-sectional study. *Nurse Education Today*, 68, 86-92.
- Alghamdi, S., Aljabri, S., Jafari, G., Alzebali, R., Alkunaideri, N., & Kalantan, N. (2019). Sources of stress among undergraduate nursing students. *Glob J Health Sci*, 11(9), 116.
- Bartlett, M. L., Taylor, H., & Nelson, J. D. (2016). Comparison of mental health characteristics and stress between baccalaureate nursing students and non-nursing students. *Journal of Nursing Education*, 55(2), 87-90.
- Chaabane, S., Chaabna, K., Bhagat, S., Abraham, A., Doraiswamy, S., Mamtani, R., & Cheema, S. (2021). Perceived stress, stressors, and coping strategies among nursing students in the Middle East and North Africa: an overview of systematic reviews. *Systematic Reviews*, 10(1), 1-17.
- Dalky, H. F., & Gharaibeh, A. (2019). Depression, anxiety, and stress among college students in Jordan and their need for mental health services. *Nursing forum*,
- Emmanuel Olatunde, B., & Odusanya, O. (2015). Job satisfaction and psychological well-being among mental health nurses. *Int. J. Transl. Community Med*, 3, 64-70.
- Hamaideh, S. H., Al-Omari, H., & Al-Modallal, H. (2017). Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia. *Journal of mental health*, 26(3), 197-203.
- Jaradeen, N., Jaradat, R., Safi, A. A., & Tarawneh, F. A. (2012). Students satisfaction with nursing program. *Bahrain Med Bull*, 34(1), 1-6.
- Jayasekara, R., Smith, C., Hall, C., Rankin, E., Smith, M., Visvanathan, V., & Friebe, T.-R. (2018). The effectiveness of clinical education models for undergraduate nursing programs: A systematic review. *Nurse education in practice*, 29, 116-126.

- Karaca, A., Yildirim, N., Cangur, S., Acikgoz, F., & Akkus, D. (2019). Relationship between mental health of nursing students and coping, self-esteem and social support. *Nurse Education Today*, 76, 44-50.
- Kaur, H., & Malhotra, N. (2018). General mental health issues in relation with job satisfaction among nurses. *Indian Journal of Community Psychology*, 14(1), 54-60.
- Khatun, R., Akter, N., Muhammad, F., & Chowdhury, A. (2018). Job satisfaction among nurse's in public and private sector in Dhaka City of Bangladesh: a comparative study. *International Journal of Community Medicine and Public Health*, 5(6), 2177.
- Labrague, L. J., McEnroe-Petitte, D. M., Papathanasiou, I. V., Edet, O. B., Tsaras, K., Leocadio, M. C., Colet, P., Kleisiaris, C. F., Fradelos, E. C., & Rosales, R. A. (2018). Stress and coping strategies among nursing students: an international study. *Journal of mental health*, 27(5), 402-408.
- Lavoie-Tremblay, M., Sanzone, L., Aubé, T., & Paquet, M. (2022). Sources of stress and coping strategies among undergraduate nursing students across all years. *Canadian Journal of Nursing Research*, 54(3), 261-271.
- Mamaghani, E. A., Rahmani, A., Hassankhani, H., Zamanzadeh, V., Campbell, S., Fast, O., & Irajpour, A. (2018). Experiences of Iranian nursing students regarding their clinical learning environment. *Asian nursing research*, 12(3), 216-222.
- Nebhinani, M., Kumar, A., Parihar, A., & Rani, R. (2020). Stress and coping strategies among undergraduate nursing students: A descriptive assessment from Western Rajasthan. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine*, 45(2), 172.
- Oducado, R. M., & Estoque, H. (2021). Online learning in nursing education during the COVID-19 pandemic: Stress, satisfaction, and academic performance. *Journal of Nursing Practice*, 4(2), 143-153.
- Padilha, J. M., Machado, P. P., Ribeiro, A., Ramos, J., & Costa, P. (2019). Clinical virtual simulation in nursing education: randomized controlled trial. *Journal of medical Internet research*, 21(3), e11529.

- Parkitny, L., & McAuley, J. (2010). The depression anxiety stress scale (DASS). *Journal of physiotherapy*, 56(3), 204.
- Phillips, K. F., Mathew, L., Aktan, N., & Catano, B. (2017). Clinical education and student satisfaction: an integrative literature review. *International journal of nursing sciences*, 4(2), 205-213.
- Rayan, A. (2019). Mindfulness, self-efficacy, and stress among final-year nursing students. *Journal of psychosocial nursing and mental health services*, 57(4), 49-55.
- Rodríguez-García, M. C., Gutiérrez-Puertas, L., Granados-Gámez, G., Aguilera-Manrique, G., & Márquez-Hernández, V. V. (2021). The connection of the clinical learning environment and supervision of nursing students with student satisfaction and future intention to work in clinical placement hospitals. *Journal of Clinical Nursing*, 30(7-8), 986-994.
- Sacco, T. L., & Copel, L. C. (2018). Compassion satisfaction: A concept analysis in nursing. *Nursing forum*,
- Salvarani, V., Ardenghi, S., Rampoldi, G., Bani, M., Cannata, P., Ausili, D., Di Mauro, S., & Strepparava, M. G. (2020). Predictors of psychological distress amongst nursing students: A multicenter cross-sectional study. *Nurse Education in Practice*, 44, 102758.
- Shamsaei, F., Yaghmaei, S., Sadeghian, E., & Tapak, L. (2018). Survey of stress, anxiety and depression in undergraduate nursing students of Hamadan University of Medical Sciences. *Iranian journal of psychiatric nursing*, 6(3), 26-31.
- Sigalit, W., Sivia, B., & Michal, I. (2017). Factors associated with nursing students' resilience: Communication skills course, use of social media and satisfaction with clinical placement. *Journal of professional nursing*, 33(2), 153-161.
- Stone, R., Cooke, M., & Mitchell, M. (2020). Undergraduate nursing students' use of video technology in developing confidence in clinical skills for practice: A systematic integrative literature review. *Nurse Education Today*, 84, 104230.
- Suni, M., Nirmala, V., & Sikkandar, S. (2017). Stress and job satisfaction among staff nurses. *Asian Journal of Nursing Education and Research*, 7(1), 31-34.

- Tomas, N., & Muronga, H. (2022). Undergraduate nursing student satisfaction with the nursing program at a university campus in Namibia. *International Journal of Africa Nursing Sciences*, 17, 100443.
- Tung, Y.-J., Lo, K. K., Ho, R. C., & Tam, W. S. W. (2018). Prevalence of depression among nursing students: A systematic review and meta-analysis. *Nurse Education Today*, 63, 119-129.
- Valero-Chillerón, M. J., González-Chordá, V. M., López-Peña, N., Cervera-Gasch, Á., Suárez-Alcázar, M. P., & Mena-Tudela, D. (2019). Burnout syndrome in nursing students: An observational study. *Nurse Education Today*, 76, 38-43.
- Visiers-Jiménez, L., Suikkala, A., Salminen, L., Leino-Kilpi, H., Löyttyniemi, E., Henriques, M. A., Jiménez-Herrera, M., Nemcová, J., Pedrotti, D., & Rua, M. (2021). Clinical learning environment and graduating nursing students' competence: A multi-country cross-sectional study. *Nursing & Health Sciences*, 23(2), 398-410.
- Vo, T. N., Chiu, H.-Y., Chuang, Y.-H., & Huang, H.-C. (2023). Prevalence of Stress and Anxiety Among Nursing Students: A Systematic Review and Meta-analysis. *Nurse Educator*, 48(3), E90-E95.
- Xie, N., Qin, Y., Wang, T., Zeng, Y., Deng, X., & Guan, L. (2020). Prevalence of depressive symptoms among nurses in China: a systematic review and meta-analysis. *PloS one*, 15(7), e0235448.