

Comparison of the mental health status of nursing and midwifery students of Islamic Azad University, Sari branch during the outbreak of the Corona disease

Homeyra Akbarzadeh*,¹ Kolsom Akbarnataj Bisheh,² Mohammad Taha Saadati Rad³

Abstract

Introduction: The spread of the corona virus and the psychosocial consequences related to health is one of the most important human social events in the 21st century. The current study was conducted with the aim of measuring and comparing the mental health status of nursing and midwifery students during the outbreak of the Covid-19 disease.

Research methods: This descriptive-analytical study was conducted cross-sectional with aim of comparing the mental health status of nursing and midwifery students during the outbreak of the Covid-19 disease. The study population included all nursing and midwifery students of Sari Azad University studying in the second semester of 2019, 430 people (290 nursing and 140 midwifery). Due to the limited research population, all subjects were included in the sample size by census method; Due to the limited research population, all subjects were included in the sample size by census method; But 339 people participated in the study, 210 (61.9%) from nursing and 129 (38.1%) from midwifery. The research tool was the General Health Questionnaire (GHQ) form of 28 questions by Goldberg and Hiller. After approving the plan and obtaining the code of ethics, the electronic form of the questionnaires along with the informed consent form to participate in the study was uploaded to the student groups using the Press Line online software through social networks (Telegram, WhatsApp and Instagram). Data were analyzed using independent t-tests and chi-square in SPSS version 22.

Findings: The average general health score of nursing students was 12.57 ± 20.13 and that of midwifery students was 12.74 ± 23.79 . Statistically, there was a statistically significant difference between the average general health scores of the two groups ($P < 0.05$), which indicated better general health in nursing students.

Conclusion: The general results of the research showed that the level of mental health in midwifery students was not suitable compared to nursing. Considering that nursing and midwifery students experience the most interaction and therapeutic relationship with patients in terms of mental health, therefore, in order to improve the mental health of students, it is suggested to those concerned to provide the necessary arrangements such as group counseling for solutions.

Keywords: covid-19, nursing student, mental health, midwifery

Received: 2/ May/ 2023

Accepted: 19/ June/ 2023

Citation: Akbarzadeh H, Akbarnataj Bisheh K, Taha Saadati Rad M. Comparison of the mental health status of nursing and midwifery students of Islamic Azad University, Sari branch during the outbreak of the Corona disease, Family and health, 2024; 13(4): 170-182

¹ - **(Corresponding author)** Instructor, Department of Nursing, Islamic Azad University, Sari Branch, Sari, Iran, homeyraakbarzadeh@yahoo.com, tell: 09111286094

² - Assistant Professor, Department of Nursing, Islamic Azad University, Sari Branch, Sari, Iran, akbar2536@gmail.com

³ - Psychiatry and Behavioral Sciences Research Center, Addiction Research Institute, Mazandaran University of Medical Sciences, Sari, Iran, saadatirad@yahoo.com



Introduction:

Covid-19 is an infectious disease caused by the acute respiratory syndrome coronavirus, which affects the respiratory system and causes symptoms similar to the common cold. One of the most dangerous conditions of this disease is the unpredictability of the situation and the uncertainty of when to control the disease. Also, one of the consequences of this disease is the creation of psychological problems (1). Despite significant advances in the field of medicine, the outbreak of some new infectious diseases still has many consequences and complications on human life (2). In fact, although man has tried to make it possible to adapt and reduce the spread of infectious diseases by creating educational and therapeutic developments (3), but these changes have not been able to protect man from the physical and psychological consequences of these types of diseases (4). For example, the spread of a new virus called Covid-19, which causes respiratory infections from colds to more severe diseases such as MERS and SARS, showed that this new disease can change people's lives and threaten their physical and mental health. The outbreak of this new virus started in December 2019 in Wuhan, China and spread rapidly in other parts of the world. Covid-19 has also spread in Iran and has quickly endangered people's physical and mental health, because the spread of this disease has increased the fear of death due to viral infections and has led to psychological pressure(5). The spread and spread of Covid-19 led to home quarantine and the closing of many recreational and educational centers, which negatively affected people's mental health (6). Fear of contracting an epidemic disease, feelings of desperation, impatience, worry about the economic consequences of an epidemic outbreak, and fear of famine are among the factors that increase the likelihood of psychological damage during quarantine or social distancing (7). Therefore, the overall negative impact of Covid-19 on the economy, daily life, social-activities and the ability to work has been associated with more psychological problems (8). Two strains with physical infections lead to a decrease in health, sleep quality and post-traumatic stress symptoms (8, 9). The effects of injuries and psychological pressures caused by emergency crises and especially the experience of corona disease remain on affected individuals, families and society and may affect many psychological aspects including lifestyle, coping strategies, quality of life and mental health put Also, according to the existing stress, they can lead to impaired judgment, decreased concentration and self-confidence, increased anxiety, and as a result, depression and sometimes suicide(10). Stress and depression are common problems among young university students (11). For a large number of students, the experience of entering university is associated with going through adolescence. On the one hand, they start taking responsibility for their life decisions, the way they live and provide for their health in such a way that this process requires adaptation to the new educational environment and adaptation to academic, social and professional education demands (12). And on the other hand, theoretical and clinical training programs can impose significant psychological stress on undergraduate students. A significant amount of psychological diseases have been reported among nursing students, including stress, suicidal thoughts and mental disorders and personal problems (12, 13). Nurses and nursing students are known as a population with a high stress level, and the stressful cases of nursing students include long hours of study, student clinical pressures, and adjustment of the theoretical program, which effects on nursing students include social and psychological anxiety, symptoms cognitive problems, symptoms of depression and

negative impact on academic success (14). Also, lack of clinical experience, unfamiliar departments, difficult patients, fear of making mistakes and evaluation by faculty members are other influential factors (15). Meanwhile, studies have shown that the most common psychological problems among students are stress, anxiety and depression (16, 17). Nursing students are valuable human resources, but there is a lack of comprehensive research on psychological disorders and depressive symptoms in this population. In recent years, the focus of health professionals on occupational mental health and emotional well-being of students has increased (18). Since university students, especially nursing and midwifery students, are considered to be prone to psychological symptoms during the outbreak of the Covid-19 disease, so that at the beginning of the outbreak of this disease in our dear country Iran, like other countries in the world, universities were closed from the first and most basic. The measures to prevent the widespread spread of the covid-19 disease were one of the most important reasons for creating fear and anxiety among students, the concern about the impact of the corona virus on the future of education, the future job situation and the reduction of social connections (19, 20) which can manifest itself in the form of depression symptoms such as sadness, low energy, impaired concentration, sleep and appetite disturbances, physical pains, headaches and digestive problems (21). The increasing risk of mental disorders among the students and paying attention to their effective role in the mental health of the society is important in order to achieve the desired goals, as well as paying attention to the fact that any problems in the physical and mental health of students, especially stress, anxiety and Depression affects the body and mind, personal and social life, and their performance and efficiency. And taking into account the fact that the problems that have arisen affect the student's educational status, which is an important principle in the student's educational process, therefore, this research aims to investigate the mental health of nursing and midwifery students of the Islamic Azad University, Sari Branch, during the outbreak of the Covid-19 disease. 19 has been done.

Research methods:

The current research is a descriptive-analytical study that was conducted cross-sectional with the aim of comparing the mental health status of nursing and midwifery students of the Islamic Azad University of Sari branch during the outbreak of the Covid-19 disease. The research population included all nursing and midwifery students of Sari Azad University, numbering 430 people (290 nursing and 140 midwifery respectively). Due to the limited size of the research population, sampling was done through census. With the point that 339 people answered the questionnaires in this study. The method of conducting the research was as follows: after approving the plan and obtaining the code of ethics under the number IR.IAU.SARI.REC.1399.040, the electronic form of the questionnaires along with the informed consent form to participate in the study using the Press line online software. It was designed and the questionnaire link was uploaded to student groups through social networks (Telegram, WhatsApp and Instagram). The criteria for entering the study included having informed consent and the criterion for leaving the study was not completing the questionnaires completely.

Measurement tool: The tool used in this research includes a demographic questionnaire based on questions related to demographic characteristics, including age, sex, field of study, academic

semester, medical history, type of underlying disease, Working in the department of corona patients, communicating with people suspected of corona and having a history of depression, stress, death of a family member due to corona. Also, to measure students' mental health, the standard 28-question General Health Questionnaire (GHQ) by Goldberg and Hiller was used, which has subscales including physical symptoms, symptoms of anxiety and sleep disorders, social functioning, and symptoms of depression. Each scale has 7 items, physical symptoms from questions 1 to 7, which include headache, feeling weak and weak, feeling the need for strengthening drugs or body coldness. The symptom of anxiety includes questions 8 to 14, which examine things such as anxiety, insomnia, being under pressure, anger and heartbreak. Disruption in social functioning includes questions 15 to 21, which examines the feeling of satisfaction in performing tasks, the feeling of usefulness, learning ability, and enjoyment of daily activities, and the symptoms of depression include questions 22 to 28, which examine the feeling of worthlessness in oneself. And life explores despair and suicidal thoughts, death wishes and inability to do things. In all options, low scores indicate health and high scores indicate lack of health or discomfort in people. The maximum score a person can get in this questionnaire is 84 and the minimum score is zero. According to the conducted research, the cutoff point for separating healthy people from the sick was 23, so that a score of 23 and above in the overall score indicates a mental disorder and below 23 is considered a sign of mental health. How to score this questionnaire Based on the Likert scale, each of the four situations is given a score (0-1-2-3) (22). The reliability of the general health questionnaire was checked based on three methods of retesting, splitting into two halves and Cronbach's alpha, and reliability coefficients of 0.7, 0.93 and 0.9 were obtained for the total score of this questionnaire, respectively. In a survey, Goldberg reported the reliability of this questionnaire to be 95% and its alpha coefficient was 93% (23). The reliability and validity of the mentioned questionnaire has been proven in previous studies conducted in Iran and other countries, so that in the study of Ansari et al., 84-91% was reported in Iran (22).

Statistical analysis of data: Data was analyzed using SPSS software version 19. Descriptive statistics (prevalence, percentage of relative frequency, mean, standard deviation) were used to present the findings, and statistical significance was evaluated using t-test and chi-square tests and p value <0.05.

Findings:

Descriptive indices of demographic variables of the research (prevalence and frequency percentage) are given in table number one.

Table 1: Demographic characteristics of research units

Characteristic		Test results	Midwifery (Percent)	Nursing (Percent)	Total (Percent)
Activity in the COVID19 Departments	Yes	p-value=0.000 X ² =13/995	27(20.9)	15(7.1)	42(12.4)
	No		102(79.1)	195(92.9)	297(87.6)
Gender	Female	p-value = 0.008	91(70.5)	174(82.9)	265(78.2)

	Male	$X^2=7.102$	38(29.5)	36(17.1)	74(21.8)
History of underlying disease	Yes	p-value= 0.198 $X^2=1.656$	9(7)	8(3.8)	19(5.6)
	No		120(93)	201(96.2)	320(94.4)
Types of underlying disease	Cardio-vascular	p-value= 0.059 $X^2=15.465$	2(1.6)	1(0.5)	3(17.65)
	Diabetes Mellitus		2(1.6)	1(0.5)	3(17.65)
	Respiratory		3(2.3)	3(1.4)	6(65.29)
	Blood Hypertension		0(0)	3(1.4)	3(17.65)
	Renal		1(0.8)	1(0.5)	2(11.76)
	Other		2(1.6)	0(0)	2(11.76)
Death of a family member due to Corona	Yes	p-value=0.032 $X^2=4.594$	31(24)	31(14.8)	62(18.3)
	No		98(76)	172(85.2)	277(81.7)
Exposure with people suspected of Corona Age	Yes	p-value= 0.019 $X^2=5.527$	46(35.7)	50(23.8)	96(28.3)
	No		83(64.3)	160(76.2)	243(71.7)
	20-30	p-value= 0.000 $X^2=25.461$	114(88.4)	209(99.5)	323(95.3)
	>30		14(10.9)	1(0.5)	14(4.1)
Semester	First term	p-value= 0.000 $X^2=31.492$	3(2.3)	13(6.2)	16(4.7)
	Second term		27(209)	28(13.3)	55(16.2)
	Third term		3(2.3)	20(9.5)	23(6.8)
	Fourth term		30(23.3)	42(20)	72(21.2)
	Fifth term		7(5.4)	14(6.7)	21(6.2)
	Sixth term		10(7.8)	38(18.1)	48(14.2)
Internship			4(3.1)	10(4.8)	14(4.1)
			22(17.1)	32(15.2)	54(15.9)
			19(14.7)	13(6.2)	33(9.7)

	p-value= 0.102 X ² =2.675	72(55.8)	98(46.7)	199(71.6)
		57(44.2)	112(53.3)	55(19.8)
Sever Stress	p-value= 0.093 X ² =2.827	63(48.8)	83(39.5)	146(43.1)
		66(51.2)	127(60.5)	193(56.9)
History of depression	p-value= 0.451 X ² =0.567	5(3.9)	12(5.7)	17(5)
		124(96.1)	198(94.3)	322(95)

According to table number one, out of total 430 people (290 nurses and 140 midwives, respectively) in the research community, 339 people were included in the study as subjects, of which, according to the information in table number 1, 210 people (61.9%) from Nursing and 129 people (38.1%) from midwifery participated in the study. 42 people (12.4%) were working in corona wards, of which 15 were nurses and 27 were midwives, and 279 people (87.6%) were not working in corona wards, including 195 nurses and 102 midwives. 265 (78.2%) of the participants in the study were female and 74 (21.8%) were male. Other demographic characteristics of the participants are given in table number one.

The results of K_2 and independent T tests for the desired comparative hypotheses by maintaining the presuppositions related to the F test (The measurement level of the studied variable should be distance and relative, The studied groups are independent from each other, The condition of equality of variances has been met using Lune's test and the distribution of the studied variable is normal using the Kolmogorov-Smirnov test.) in tables 2, 3 and 4 has been displayed.

Table 2: Comparison of mean (standard deviation) of general health and its different items in nursing and midwifery students

Characteristic	p-value	Statistics Test	Midwifery	Nursing
General Health	0.010	-2.578	23.79(12.74)	20.13(12.75)
Physical Symptoms	0.000	-4.91	5.86(3.81)	4.24(3.06)
Anxiety	0.043	-2.027	5.64(4.5)	4.62(4.47)
Dysfunction	0.395	-0.851	7.85(2.87)	7.59(2.76)
Depression	0.158	-1.416	4.44(4.85)	3.69(4.72)

According to the results shown in table number two, the average score of general health in nursing students was 20.13 ± 12.57 and in midwifery students it was 23.79 ± 12.74 , which statistically is between the average health score. There was a statistically significant difference between nursing and midwifery students ($p\text{-value} < 0.05$), which indicated better general health in nursing students. In terms of physical symptoms, there was a significant difference between nursing and midwifery students ($p\text{-value} < 0.05$). Also, the average anxiety score of nursing students was 4.62 ± 4.47 and the average anxiety score of midwifery students was 5.64 ± 4.5 , indicating a statistically significant difference between the average anxiety score of midwifery and nursing students ($p\text{-value} = 0.043$). There was no significant difference between the average score of functional impairment and depression in nursing and midwifery students ($p\text{-value} > 0.05$)

Table 3: Comparison of the state of mental health in nursing and midwifery students

Characteristic	p-value	Test Statistics	Midwifery	Nursing
Desirable (Healthy)	0.145	5.207	76(58.9%)	148(70.5%)
Mild			37(28.7%)	44(21%)
Moderate			15(11.6%)	16(7.6%)
Severe			1(0.8%)	2(1%)

The findings of Table 3 show that out of a total of 224 people who were in good mental health, 148 people (70.5%) were from nursing and 76 people (58.9%) were from midwifery. Also, from the total of 81 people who had mild mental health problems, 44 people (21%) belonged to the field of nursing and 37 people (28.7%) belonged to the field of midwifery. 31 people had moderate mental health problems, of which 16 (7.6%) were nurses and 15 (11.6%) were midwives, and only 3 had severe mental health problems, of which 2 were nurses. And 1 other person was a midwife. The results indicated that there was no statistically significant difference between the two fields of study in terms of mental health ($p\text{-value} = 0.145$).

The results of comparing the average mental health of intern and non-intern nursing and midwifery students in table number four show that a statistically significant difference was observed between the average mental health score of intern nursing and midwifery students ($p\text{-value} = 0.028$), while for non-intern students of the two disciplines There was no statistically significant difference.

Discussion and conclusion:

The findings of the present study, with the aim of investigating and comparing the mental health status of nursing and midwifery students during the outbreak of the Corona virus disease, showed that nursing students have better mental health than midwifery students, and there is a statistically significant difference between the average mental health score of the students of these two disciplines. Also, mental health indicators including physical symptoms, anxiety, depression, and social functioning were also discussed, as in all items related to mental health,

nurses had a better mental health condition and there was a statistical difference in the two indicators of physical symptoms and anxiety. Significance was observed between nursing and midwifery students. In addition, the performance impairment index was reported to be higher than other indices in both groups. The results of the present study are in harmony with the studies of Ansari et al (22), Tavakolizadeh et al (24), Leo et al (26), Shadmehr et al (27), and Miri et al (28). The high average score of impairment in social functioning, physical symptoms and anxiety in midwifery students in the present study may be caused by the stressful environmental effects of the educational environment and the hospital environment and interaction with patients, which more than any other factor affects anxiety and social functioning. It has been a transition (26). These results also show that due to their limited experience, students need counseling services and training in social skills and coping methods to face various problems in the academic and living environment. In the comparison between the average healths score of non-trainee nursing and midwifery students, no statistically significant difference was observed, but there was a statistically significant difference between the average health score of trainee students in the two groups. In the explanation of this statistical difference in midwife trainee students, it can be considered probable due to the close interactions of these students with patients and observing the suffering and difficulty of the patient during childbirth, which can have a direct effect on their mental health and increase their level of anxiety and depression. Although due to the emerging nature of the Corona phenomenon, there are few psychological studies related to the epidemic of the Covid-19 disease, but the results of the study by Asadi et al with the title of Correlation between Corona anxiety and care behaviors of nurses working in Corona referral hospitals, it showed that nurses experience moderate levels of anxiety when facing the covid-19 disease, which is consistent with the results of the current research. In explanation, maybe it should be said because nurses are in the center of the incident and in direct contact with the patient, the existence of anxiety in them is inevitable, but because of their sense of responsibility in providing nursing care to patients, they are able to manage this anxiety so that there is no danger to the patient (29). In another study conducted by Shahin et al. (2020) titled the frequency of anxiety and depression during the corona epidemic in the health team and in the form of a meta-analysis, it was found that the prevalence of anxiety in the health team is 23%, which is similar to the present study. It is also true for the average level of anxiety index in students (30). The ambiguous nature of the disease and the continuous change of clinical symptoms can be another reason for mental health disorders in students because they cannot imagine proper and predictable treatment planning and as a result they may consider themselves incapable of facing the disease. and on the other hand, they are worried about themselves and especially their families, which can cause mental problems. Although in the present study, the variables affecting the occurrence of mental disorders were not investigated and it can be mentioned as one of the limitations of the present study, but in any case, entering a new environment and the need to adapt, separation and distance from family and friends, living with people with different cultures. Different, the inadequacy of comfort facilities and economic problems, especially in non-native students living in dormitories and rented houses, should not be overlooked in causing mental discomfort. Also, the non-cooperation of some students in the Corona epidemic to participate in the research project, including the limitations of conducting this was the study. Face-to-face counseling and explaining the benefits of participating in the study for education and

information with the aim of raising the level of awareness and promoting healthy living methods were considered as ways to reduce this limitation. Considering the high prevalence of mental disorders, especially disorders in social functioning, physical symptoms and anxiety in students, it is suggested to plan the necessary planning in the field of improving mental health, especially in the field of life skills training in order to increase their abilities and psychological capacity at the level. The skill should start from the lower levels of education and continue up to the universities. Measures such as providing welfare facilities by municipalities, conducting consultations in health service centers for parents and holding mental health workshops in universities, as well as the necessity of teaching life skills, especially effective communication and interpersonal skills, teaching courage and stress management can help reduce mental pressure and improve the general health of students.

Acknowledgments: This study was conducted with the support of the Research Vice-Chancellor of Azad University, Sari Branch, and with the code of ethics IR.IAU.SARI.REC.1399.040. We hereby thank and appreciate the financial support of this honorable deputy. Also, the researchers consider it necessary to thank all nursing and midwifery students of Sari Azad University who participated in this study.

Conflict of interest: The authors declare that there is no conflict of interest in the present study.

References:

1. Sadeghinejad M, Saeidi M, Momen S, Saadatirad MT, Mohseni F. COVID-19 diagnosis, treatment, and management: Key features you need to know. *Razi Journal of Medical Sciences*. 2020;27(3):138-59. URL:<http://rjms.iums.ac.ir/article-1-6136-en.html>
2. Cherif A, Barley K, Hurtado M. Homo-psychologicus: Reactionary behavioural aspects of epidemics. *Epidemics*. 2016;14:45-53. DOI: 10.1016/j.epidem.2015.09.003
3. Raude J, MCColl K, Flamand C, Apostolidis T. Understanding health behaviour changes in response to outbreaks: Findings from a longitudinal study of a large epidemic of mosquito-borne disease. *Social science & medicine*. 2019;230:184-93. DOI: 10.1016/j.socscimed.2019.04.009
4. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The lancet*. 2020;395(10227):912-20. DOI:[https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
5. Deng S-Q, Peng H-J. Characteristics of and public health responses to the coronavirus disease 2019 outbreak in China. *Journal of clinical medicine*. 2020;9(2):575. DOI: 10.3390/jcm9020575
6. Chen Q, Liang M, Li Y, Guo J, Fei D, Wang L, et al. Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet Psychiatry*. 2020;7(4):e15-e6. DOI: 10.1016/S2215-0366(20)30078-X
7. Sood S. Psychological effects of the Coronavirus disease-2019 pandemic. *Research & Humanities in Medical Education*. 2020; 7(11): 23-6. <https://www.rhime.in/ojs/index.php/rhime/article/view/264>

8. Zhang SX, Wang Y, Rauch A, Wei F .Unprecedented disruption of lives and work: Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry research*. 2020;288:112958. DOI: 10.1016/j.psychres.2020.112958
9. Sun L, Sun Z, Wu L, Zhu Z, Zhang F, Shang Z, et al. Prevalence and risk factors of acute posttraumatic stress symptoms during the COVID-19 outbreak in Wuhan, China. *MedRxiv*. 2020. doi: <https://doi.org/10.1101/2020.03.06.20032425>
10. Zhu H, Wei L, Niu P. The novel coronavirus outbreak in Wuhan, China. *Global health research and policy*. 2020;5(1):1-3. DOI: 10.1186/s41256-020-00135-6
11. Q.Mahmoudi , H.Azeemi , M.Zarghami The effect of assertive training on degree of anxiety and assertiveness of nursing students. *Journal of Gorgan University of Medical Sciences*. 2004;6(2):66-72 URL: <http://goums.ac.ir/journal/article-1-205-en.html>.
12. Uehara T, Takeuchi K, Kubota F, Oshima K, Ishikawa O. Annual transition of major depressive episode in university students using a structured self-rating questionnaire. *Asia-Pacific Psychiatry*. 2010;2(2):99-104. DOI:10.1111/j.1758-5872.2010.00063.x
13. Zandi H, Sadeghi A, Shamsaei F, Tapak L. The Relationship between Self-Efficacy with Life Satisfaction in Nursing Students *Journal of Nursing Education*, February-March 2020, Volume 8, Issue 6 DOI: 10.21859/jne-08605
14. Jimenez C, Navia-Osorio PM, Diaz CV. Stress and health in novice and experienced nursing students. *Journal of advanced nursing*. 2010;66(2):442-55. DOI: 10.1111/j.1365-2648.2009.05183.x
15. Moscaritolo LM. Interventional strategies to decrease nursing student anxiety in the clinical learning environment. *Journal of nursing education*. 2009;48(1):17-23. DOI: 10.3928/01484834-
16. Chen L, Wang L, Qiu XH, Yang XX, Qiao ZX, Yang YJ, et al. Depression among Chinese university students: prevalence and socio-demographic correlates. *PloS one*. 2013;8(3):e.۰۸۳۷۹. <https://doi.org/10.1371/journal.pone.0058379>.
17. Pitt V, Powis D, Levett-Jones T, Hunter S. Factors influencing nursing students' academic and clinical performance and attrition: an integrative literature review. *Nurse education today*. 2012;32(8):903-13. DOI: 10.1016/j.nedt.2012.04.011
18. Orly S, Rivka B, Rivka E, Dorit S-E. Are cognitive-behavioral interventions effective in reducing occupational stress among nurses? *Applied Nursing Research*. 2012;25(3):152-7. Orly
19. Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, et al. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry research*. 2020;287:112934. DOI: 10.1016/j.psychres.2020.112934
20. Fakari FR, Simbar M. Coronavirus pandemic and worries during pregnancy; a letter to editor. *Archives of academic emergency medicine*. 2020;8(1):e21-e PMID: 32185371.
21. Organization WH. Depression and other common mental disorders: global health estimates. World Health Organization; 2017. <https://apps.who.int/iris/handle/10665/254610>.
22. Ansari H, Bahrami L, Akbarzade L, Bakhasani N. Assessment of General Health and Some Related Factors among Students of Zahedan University of Medical Sciences In 2007. *J Tabib-E-Shargh* 2008; 9(4): 295-304.
23. Goldberg DP, Hillier V. A scaled version of the General Health Questionnaire. *Psychological medicine*. 1979;9(01):139-45. doi: 10.1017/s0033291700021644

24. Karami S, Pirasteh A. Assessment of mental health among Zanjan University of medical sciences. ZUMS Journal. 2011; 9: 66-73.
25. Tavakoli zadeh J, Ghahramani M, Chamanzary H. The survey of mental health status in Ghonabad medical sciences college students in 2012. Ofoghe Danesh 2012; 8: 47-54.
26. Liu C-Y, Yang Y-z, Zhang X-M, Xu X, Dou Q-L, Zhang W-W, et al. The prevalence and influencing factors in anxiety in medical workers fighting COVID-19 in China: a cross-sectional survey. Epidemiology & Infection. 2020;148. doi: 10.1017/S0950268820001107.
27. Shadmehr M, Ramak N, Sangani A. The role of perceived mental stress in the health of suspected cases of COVID-19. Journal of Military Medicine. 2020;22(2):115-21.
28. Miri MM , Hosseini Zijoud SM, Ghashghaei H. Comparison of the Mental Health of Medicine and Engineering Students in Iran 2014-2015. Journal of Military Medicine Winter 2017 ,Volume 18, Issue 4 Pages: 360-366
29. Asadi N, Salmani F, Pourkhajooyi S, Mahdavifar M, Royani Z, Salmani M. Investigating the Relationship Between Corona Anxiety and Nursing Care Behaviors Working in Corona's Referral Hospitals. IJPCP 2020; 26 (3) :306-319
30. Şahin MK, Aker S, Şahin G ,Karabekiroğlu A. Prevalence of depression, anxiety, distress and insomnia and related factors in healthcare workers during COVID-19 pandemic in Turkey. Journal of community health. 2020;45:1168-77. DOI: 10.1007/s10900-020-00921-w