



Nursing Image Perceived by Nursing Students after COVID-19 Pandemic

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Abstract

Background and Aim: Nurses gained more attention than other healthcare professional during the Covid-19 pandemic, when they were at the front line of fight against the pandemic. Since then, numerous concerns and issues have been raised in relation to nursing practice, which have the potential to affect the nursing students' ideas, attitudes and experience with nursing profession. Therefore, the purpose of this study was to determine the nursing image perceived by nursing students following COVID-19 pandemic.

Materials and methods: This descriptive-qualitative study was conducted at Alborz University of Medical Sciences. Participants in this study included nursing students enrolled in their first, second, third, fourth, sixth, and eighth semesters, who had been selected by purposeful sampling technique. Data was collected using the virtual focused group method in the e-learning system forum (Navid). MAXQDA-10 software was used to analyze the data with conventional content analysis approach.

Results: A total of 86 students participated in the virtual focus group interviews. Data were analyzed by content analysis approach, which resulted in the formation of 6 subcategories and 2 main categories. The main categories included perceived self-concept (with subcategories of feeling valuable, doubt and unconditional lover), and perceived public image (with subcategories of nurse as hero, nursing as a profession, and transient promotion).

Conclusion: The Covid-19 pandemic has promoted the image of nursing for nursing students as well as general public. However, there is concern about the temporary promotion of professional image of nursing. It is necessary for the nursing officials and experts to consider such conditions as an opportunity to introduce nursing profession academically, with the aim of creating motivation and positive attitude toward nursing in students, and stabilizing a positive image of nursing in the society.

Keywords: Nursing, Covid -19 pandemic, Nursing Image.

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Introduction

The dignity, and social state of nurses, which is affected by the public's view of the profession, plays an important role in the nurses' feeling and attitude towards their professional identity and how they see themselves and their profession [1,2]. Although the image of nursing has been developed over the past century from a physician assistant to an independent and professional care provider with scientific-theoretical foundations [3], the image of nursing in the world has been a worrying issue [4].

Findings of many studies show that although nursing community consists of competent, educated and trusted professionals, this profession faces challenges related to its image, which affects its ability to attract younger people with sufficient competence for nursing. It is also increasingly difficult to retain students in nursing programs [5,6]. Several social and environmental factors, including misconceptions and stereotypes, personal experiences and media, play an important role in the society's lack of knowledge about nursing [7].

Nurses are considered to be the symbol of compassion who save lives and give hope to patients. However, the general public still has a stereotyped and outdated view of nurses [3]. The public does not know enough about the evolution of nursing profession [6,8], as in most societies, nursing is portrayed as a female profession where nurses work as subordinates to doctors [4,6,9]. These images affect the self-concept of nurses [4]. Social identity theory argues that nurses' self-concept can be derived or influenced by public image, so improving the public image of nursing plays an important role in strengthening the nurses' self-concept and forming a desirable nursing identity [8,9,10].

Studies show that it is not possible to achieve quality care without considering the social status of nurses and improve it [2,6]. Iranian studies show that, the nursing profession in Iran suffers from a poor public image and low social status. This makes nurses think that their work is not appreciated and valued, which leads to frustration and sometimes confusion about their professional identity [2]. In this regard, the results of a study by Teresa-Morales and colleagues showed that people's lack of understanding about the reality of nursing as a profession is a common phenomenon that plays a major role in creating a negative image of nursing [3].

The formation of nursing's professional identity starts from the time of training through interaction with experienced personnel [10] and continues throughout the entire professional life. Having a positive professional identity, is the most important factor in creating job satisfaction and is the best predictor of job retention in nursing [11].

Studies show that despite many efforts that have been made to improve nursing image, there is still evidence of a negative perception of nursing among nursing students, which could lead to the high turnover among future nurses [5,6]. In addition, these studies show that the perception of nursing image affects the nursing students' attitudes towards nursing care and the identity of their future professional role as nurses [8,12]. Marzban and Marzban stated that more than 50% of nursing students have a negative attitude towards their profession and this is due to the low status of nursing profession in the society [13]. Most studies reflect the realistic image of nursing profession through media, especially social media [6], and their active interaction with the media

and participation in scientific meetings and debates [5]. In general, the nursing profession has not been properly introduced in social media [4, 14], and it can be argued that nursing profession has passively allowed the media to portray an unfavorable image of nursing [4].

The outbreak of Covid-19 pandemic created different and unpredictable conditions, which affected the public image of healthcare workers, especially the nurses. Severe challenges and sufferings, such as separation from family/friends and enduring physical and emotional stress caused by the global Covid-19 pandemic, draw the attention of individuals, society and media to healthcare workers and nurses in particular. The nurses' contribution to the fight against Covid-19, and the nurses' courage and sacrifice shown through media coverage have probably been influential on changing the public image of nursing. This has influenced the public sense of gratitude, admiration and even love for nurses [1,4,15]. Despite the serious challenges that have been raised following the Covid-19 pandemic, it seems that this pandemic has shed a light on the realities and challenges of modern nursing [7,15].

Zhang et al. (2021) stated that the challenges created by Covid-19 have greatly affected the formation of professional identity in medical students [11]. It seems that explaining the new perception of nursing profession by nursing students following Covid-19 pandemic will be helpful in understanding the current situation and possible challenges of nursing profession. Therefore, this study was conducted to determine the perception of nursing students towards nursing profession before and during the pandemic.

Methods

This is a descriptive-qualitative study that was conducted at Alborz University of Medical Sciences in 2022. Through purposeful sampling, 6 focus group meetings were held and 56 undergraduate nursing students at the 1st, 2nd, 3rd, 4th, 6th, and 8th semesters participated.

Virtual focus group meetings were held to collect the data. A focus group is research and a data gathering method, which brings together a small group of people to answer questions in a moderated setting. The group members are chosen according to the predefined demographic characteristics (i.e semester and age). Considering the promotion of e-learning systems following the Covid-19 pandemic, the researchers decided to use focus group in a virtual forum. In this way, a virtual forum in Navid's learning management system was created for each semester.

Before starting the interviews, an explanation about the study objective and the formation of focused groups were given to the participants. The students were encouraged to reply to each other while answering the questions in order to form a discussion. The interview started with general questions, such as what is your self-image of nursing and has it changed after the pandemic? According to each semester, the subsequent questions were asked from the students. For example, questions asked from semester 1 students who had chosen nursing during the pandemic were seriously different from semester 8 students who understood the image of nursing before the pandemic. Thus, the subsequent questions were designed differently for each semester. Other questions were related to the new image of nursing in the society during and after the pandemic. The focus groups were guided by a moderator (first author), and the interviews were guided by the following questions:

- What feedback did you receive from people?
- What effect do they think the pandemic had on nursing profession and its image in society?

Data were analyzed by conventional content analysis method. For this purpose, the interviews were first extracted from the Navid system. Then, the text of each interview was read several times to get a general sense of understanding. Also, the semantic units or sentences related to the study objectives were determined and labeled by open codes. In the next steps, the initial codes were classified in subcategories according to their similarities and differences. For each of the focused group interviews, the analysis continued until this stage and then, the next interview was analyzed. By using MAXQDA-10 software, the researchers prevented the formation of repetitive codes, which facilitated the data reduction process. The subcategories were revised several times and necessary changes were made to them, which then formed the main categories.

The participants were assured that their names would not be revealed in the study. This study has been approved by the Ethics Committee of Alborz University of Medical Sciences (IR.ABZUMS.REC.1399.294). Since the interviews were conducted in a virtual focus group format, the issue of informed consent was not raised because only students who were willing to participate in the study and expressed their verbal consent in some ways were surveyed.

Results

In total, 9 students at semester 1, 9 students at semester 2, 18 students at semester 3, 9 students at semester 4, 12 students at semester 6, and 8 students at semester 8 participated in the virtual focus group interviews (Table 1). The results of data analysis are presented in two main categories and 6 sub-categories (Table2).

Table 1: Demographic characteristics of the participants

Variable		Frequency (%)
Sex	Male	27 (42)
	Female	38 (58)
Marital status	Single	65 (100)
	Married	0
Age (year)	18-20	42 (65)
	20-22	23 (35)
Semester	1	9 (13.8)
	2	9 (13.8)
	3	18 (27.6)
	4	9 (13.8)
	6	12 (18.4)
	8	8 (12)

Table 2: Main categories and subcategories

Main categories	Subcategories
Perceived self-image	Feeling valued
	Uncertainty
	Unconditional lover
Perceived public image	Nurse as hero
	Nursing as a profession
	Transient improvement

1- **Perceived self-image:** This category had 3 subcategories of feeling valued, uncertainty, and unconditional lover.

1-1: Feeling valued: The participants' experiences showed that following the Covid-19 outbreak, the feelings of being useful, being noticed and being valued have been forming in the minds of students. The students had been entering the nursing profession for different reasons, and when they compared how they felt before and after the pandemic, they felt more satisfied and saw themselves as more determined students. A realistic explanation of nursing role after the pandemic was effective in forming the students' sense of worth. This applied to students in all semesters. However, there were students who did not change their image of nursing because of the pandemic, arguing that they already knew everything about the profession and nothing has changed for them.

"Considering the current circumstances, I have no fear or discomfort in choosing nursing. I also give peace to my family and I am thousand time prouder of being a nurse. I am happy that God decided to serve my fellow colleagues in this way, because nursing is one of the most valuable jobs in the field of medicine and treatment." (A 3rd semester student)

"I was completely afraid of working at patient bedside. Now that the Corona virus has been explained and discussed, I don't seem to be afraid anymore, and when I see how useful I can be in this situation and help people, I feel good and fear has

no meaning to me anymore. It even gives me a feeling of being brave. (A 6th semester student)

"Before this, I didn't consider the role of nurses to be so strong, but now I am proud of myself that I am studying in this field, and for me, treatment is no longer synonymous with following the doctor's orders." (A 2nd semester student)

"Personally, I feel proud that I am going through this ups and downs and become a part of medical team. In addition, I am interested in clinical work, and I am proud that I have now entered the field of nursing." (A 1st semester student)

"In this situation, I am really proud of my field of study more than before. I have become more interested in nursing than before. In my opinion, this disease made people realize the value of nurses and medical staff." (A 1st semester student)

1-2: Uncertainty: Uncertainty and doubt were the key words seen in the statements of some participants. As the students were advancing in their academic education, this concern became stronger in them. Although the participants believed that the value of nursing has increased in public view, they expressed their concerns for the future as they began to learn about the nature of nursing. They had doubts about how long they might be able to endure these harsh conditions and continue working as a nurse.

"I don't want to say this, but now I really don't have a positive view of nursing, having seen this situation, because I feel that it is very difficult to work in this situation." (An 8th semester student)

"Instead of being excited and happy, I started my work in a crisis and in a bad situation. Now, the

students who just like me started their work in this situation say that it is very difficult for them, even though they are new to nursing. Despite all the good feelings I had about nursing, now the fear and discouragement have been added to my concerns. (An 8th semester student)

"With the continuation of this pandemic, many people may avoid nursing program, just as we protect our health and avoid our children from going to school." (A 6th semester student)

"Despite the interest I have, when I see nurses complain about the current situation and the government's promises and payments that have not been fulfilled yet, I feel very discouraged. Do I really have the patience to stay in this job?" Can I enjoy my work or not?" (An 8th semester student)

1-3: Unconditional lover: Participants believed that the Covid-19 pandemic showed how much nurse's love to care for people is limitless.

"With all my heart, I came to the conclusion that nursing means love and love means nursing." (A 4th semester student)

"Medical sciences are all difficult fields. After covid-19 pandemic, this difficulty became more apparent, but the joy of making others feel better has made me to endure all these difficulties." (A 3rd semester student)

"With the spread of this disease, the stereotype that a nurse is a manifestation of dedication, love and patience, which I didn't understand before, became appeared to me." (As 8th semester student)

2. Perceived public image: The findings showed a significant improvement in the role and status of nursing in public's view during the pandemic. In this study, the second main category of "perceived public image" consisted of 3 subcategories.

2-1; Nurse as hero: The most important concept that students talked about during the pandemic was the positive feedback they received from public about nursing. The term "health defender" had become a common discourse in the Iran media and even public during the pandemic, which were given to healthcare workers, especially the nurses. Nurses were introduced as heroes of health system. This new image was different from the

image that the participants had previously perceived.

"Doctors and nurses are risking their own health to take care of covid patients, which show their dedication in helping the society. It's crucial to recognize them as health defenders." (An 8th semester student)

"Everywhere people were saying that the medical staff are trying to keep people alive. It is hopeful. We are people who study for the survival and health of others without any request, even at the cost of our own lives." (A 3rd semester student)

"The doctors and nurses are referred to as defenders of health and everyone is thanking and praising them, especially the nurses." (A 6th semester student)

2-2; Nursing as a profession: The participants referred to Covid-19 pandemic as the factor that started the renaissance of nursing image in the public's eye. Changing the image that saw the nurse as a doctor's assistant who only does simple tasks was an important factor in improving the image of nursing from the participants' point of view.

"Unfortunately, we lost a lot of nurses due to Covid-19. But I am happy that the society has changed its view of nursing (Of course, a little)." (A 6th semester student)

"After the pandemic, people's view of nursing changed, and nursing services and their hard work were widely recognized by public. Nursing is a profession and requires academic education, and without nurses, running a hospital is not possible at all." (A 8th semester student)

"This disease, with all its evils, was able to prove to everyone that all treatment staff, including nurses, cannot be replaced, and how lack of nurses prevents patient recovery." (A 1st semester student)

"Despite the negative points and social harms of Covid-19 pandemic, it made many people who had a superficial view of nursing realize the importance and true value of this profession. People began to realize that if there were no medical staff and nurses in this situation, it would have been much more difficult to control the disease." (A 1st semester student)

"I thank God that I was accepted into the nursing field, because I feel it was in my best interest to study nursing. After the corona pandemic, I think a

big revolution happened in the medical fields, especially nursing, which attracted people's attention towards nursing and changed their view of nursing. I saw with my own eyes how people, who mocked nursing before, began to praise our profession." (A 3rd semester student)

2-3; Transient promotion: Despite the positive experiences that students had about the promotion of nursing image, some students were not optimistic about this promotion. They believed that the improvement in nursing image is temporary and will return to its previous state after the pandemic, and people forget how nurses, with their knowledge and skills, were helpful in treating patients.

"We are a nation that lives in the moment and makes mountains out of straw. You know, immediately after any event, these stories are made and after a while, everything will be the same as before!" (3rd semester student)

"It is good to see that nurses are praised in the news and social networks, but are these praises permanent? Maybe this crisis has caused people to pay more attention to nurses, but I think it is temporary. Corona virus will leave our country sooner or later, and then it will be the same mess again." (A 4th semester student)

At the beginning of Covid-19 pandemic, many nurses made great their efforts and people appreciated them, but now it has become normal unfortunately, and I hear people say that it is their job or their duty! In the end, people just made a small expression of sympathy." (A 6th semester student)

Discussion

Feeling valued was one of the categories found in this study. The nursing students had a better image of nursing compared to before the pandemic. The feeling of being useful, being noticed and being valuable along with the positive and heroic public image of nursing had greatly affected the students' perception of nursing. In the study of Tang et al. (2022), the occurrence of public emergencies was considered as

an effective factor in creating a positive attitude toward the profession in nursing students, and this attitude could be seen in the later stages of pandemic compared to its early stages [16].

Sun et al. (2007) and Heung et al. (2005) also reported a positive increase in the attitude of nursing students toward nursing after the SARS epidemic [17,18], and this is while studies were reporting different results before the epidemic. In the study of Marzban and Marzban (2018), nursing students and general public did not have a great view of nursing [13]. Elibol et al. (2017) in their study believed that the attitude of students towards nursing profession and their image was not positive [19]. Uysal and Demirdağ (2022) also stated that nurses have become more visible during the pandemic, and there has been a positive shift in how the public views nursing profession, although some outdated stereotypes still persist [20].

The present study found that students were uncertain and doubtful about the challenges and difficulties of nursing profession during the Covid-19 crisis. They also had more doubt about their ability to become nurse and how long they might be able to endure these harsh conditions and continue working as a nurse. These concerns also increased as the students advanced in their education. It seems that Covid-19 crisis has shown students the hard-working condition and responsibility of nurses in the society. Final year students felt a strong connection with the role of nurses and were able to better understand the responsibility of nurses. In a study in Singapore that examined the transition from student to hospital nurse, the lack of clinical skills to provide care was cited as an important factor in causing stress in the students,

which is also confirmed by other studies [19,21,22].

In the present study, the unconditional love for nursing profession was evident in the nursing students. The participants believed that the covid-19 pandemic showed them that nurses should love to care and there is no limit to this love. Adib- Hajbagheri and Bolandian (2020) believed that nursing care, which is a combination of sense of responsibility, benevolence, attention and concern, respect and understanding of others as a human being regardless of negative consequences, is the true concept of love [23]. In the study of Araghian Mojarad and Shafipour (2021), nurses who cared for patients with Covid-19 did not perceive patient care as unpleasant despite the difficult conditions they were working in, rather it made them to feel like superhuman who provide care in difficult situations with love and patience [24]. In this regard, Nie et al. (2021) in China showed that participants in their study believed Covid-19 pandemic have made them more interested in clinical nursing, and the humanitarian aspects of nursing practice were more valuable to them [25]. It seems that the occurrence of Covid-19 crisis and seeing the sacrifice of nurses have caused nursing students to have clearer image of nursing profession and the love and patience it requires, despite the existing difficulties. However, the results of Tang et al. (2022) study showed that in areas where the severity of Covid-19 pandemic was greater, the students' positive perception of nursing profession was lower than in areas where there was less risk and work pressure [16].

In this study, the concept of “nurse as hero” emerged as the most significant

topic discussed by the students following the pandemic. In the Covid-19 pandemic, nurses were faced with one of the biggest health challenges in history. Being on the front line of fight against the pandemic and endangering own health through close contact with patients, have caused the media to portray healthcare workers as superhumans [26]. In a study that investigated public images of nurses in the media, nurses were often shown as a hero, a soldier, a woman or a hope. However, Stokes-Parish et al. (2020) believed that presenting the image of a superhero and an angel can undermine the difficulties that nurses endure. They also believed that nurses should use every opportunity to highlight their skills, knowledge and compassion in the media and daily life in order to challenge the hero stereotype given to them [27]. Although these narratives suggest a positive view of nursing and reflect a general appreciation of nurses, they also run the risk of ignoring the skills and knowledge needed to deliver care, which may potentially alter the image of nursing profession [28].

The present study found that nursing students perceived nursing as an important profession during the pandemic, and covid-19 has caused the renaissance of nursing profession in the society, changing the image that see nurses only as doctor's assistants who only do simple tasks. This issue was an important factor in improving the image of nursing in the society.

This study also found that students thought the new perception of nursing as a profession by general public might be temporary. Also, despite the positive image of nursing perceived by the participants, some students were not

optimistic about this new image and believed that the positive image of nursing profession might be temporary. They believed that after the end of pandemic, the image of nursing will return to its previous state and people forget how nurses, with their knowledge and skills, were influential in patient treatment and recovery Catton and Iro (2021) believed that designation of the year 2020 as the International Year of Nurses, and the media's emphasis on overcrowded hospitals and lack of human resources, are not enough and with the end of this crisis, the sacrifices made by nurses are forgotten, which shows the need to take planned action to strengthen the image of nursing in society and reduce its challenges [29].

This study had some limitations. For instance, interviewing the participants through virtual focus group was a limitation as we could not take the body language and field notes under the consideration. If we had the possibility to conduct face-to-face interviews, we could probably be able to obtain richer data.

Conclusion:

The findings of present study show that COVID-19 pandemic was able to increase the positive perception of nursing students and general public towards nursing profession. However, the students had concerns that this improved professional image of nursing may fade after the end of COVID-19 pandemic.

It is recommended to use the experience of Covid-19 pandemic to promote nursing image among the general public and nursing students. Nursing managers can use national networks and social media to introduce nursing profession and correct the traditional view of nursing that people

have in the society, educating them to recognize nursing as an academic and scientific profession.

Nurses are a huge workforce in any nation, and nursing managers can introduce nursing profession by educating general public through national media and social networks, creating a more realistic and positive image for nursing profession in the society.

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Conflict of Interest

The authors declare no conflict of interest in conducting and publishing the research.

References:

- Lotfi M, Zamanzadeh V, Nobakht A, Khajehgoodari M. Consequences of Coronavirus Pandemic on the Image of Nursing in Iran. *Nurs Open*. 2021;8(4):1998-2000.
- Rodríguez-Pérez M, Mena-Navarro F, Domínguez-Pichardo A, Teresa-Morales C. Current Social Perception of and Value Attached to Nursing Professionals' Competences: An Integrative Review. *Int J Environ Res Public Health*. 2022 Feb 5;19(3):1817.
- Teresa-Morales C, Rodríguez-Pérez M, Araujo-Hernández M, Feria-Ramírez C. Current Stereotypes Associated with Nursing and Nursing Professionals: An Integrative Review. *Int J Environ Res Public Health*. 2022 Jun 22;19(13):7640.
- Ndirangu, EW, Sarki AM, Mbekenga C, Edwards Grace. Professional Image of Nursing and Midwifery in East Africa: an exploratory analysis. *BMC Nursing*. (2021); 20, 37
- Neumbe IM, Ssenyonga L, Soita DJ, Iramiot JS, Nekaka R. Attitudes and Perceptions of Undergraduate Nursing Students towards the Nursing Profession. *PLoS One*. 2023 Jul 25;18(7):1-14.
- Stetson GV, Kryzhanovskaya IV, Lomen-Hoerth C, Hauer KE. Professional Identity Formation in Disorienting Times. *Med Educ*. 2020;54(8):765–766.
- Sacgaca L, Pasay An A, Alqarni AS, Pangket P, Alshammari SA, Ramadan MY, et al. Sociocultural and Perceived Public Image of Nurses Among Nursing Students: The Mediating Role of Self-concept. *BMC Nursing*. 2024 ;23(1):1-9.
- Li Z, Zuo Q, Cheng J, Zhou Y, Li Y, Zhu L, et al. Coronavirus disease 2019 pandemic Promotes the Sense of Professional Identity Among Nurses? *Nurs Outlook*. 2021; 69(3): 389-398.
- Elmorshedy H, AlAmrani A, Ahmed Hassan, MH, Fayed A, Ann Albrecht S. Contemporary Public Image of the Nursing Profession in Saudi Arabia. *BMC Nursing*. (2020);19- 47.
- Zhang Z, Fu W, Tian C, Zhang F, Zhao B, Mao J, et al. Professional Identity of Chinese Nursing Students During the COVID-19 Pandemic Outbreak: A Nation-Wide Cross-Sectional Study. *Nurse Educ Pract*. 2021; 52:103040.
- Zhong Y, Ma H, Zhang CC, Jiang QY, Li J, Liao CJ, et al. Professional identity, job satisfaction, and turnover intention among Chinese novice nurses: A cross-sectional study. *Medicine (Baltimore)*. 2024 Jan 19;103(3):1-6.
- Grinberg K, Sela Y. Perception of the Image of the Nursing Profession and its Relationship with Quality of Care. *BMC Nursing*. 2022 ;21(1):57.
- Marzban A, Marzban H. Attitudes of Nurse Students Toward Their Discipline and Future Career in Hormozgan University of Medical Sciences. *Journal of Development Strategies in Medical Education* 2018; 5(2): 22-32.[Persian]
- Matbouei M, Raiesdana N, Nobahar M, Arian M. Assessment of the Nurse Image in Iranian Cinema. *Journal of Nursing Education*, 2020; 9 (5) :11-19.[Persian]
- Hu X, Chen X, Ouyang Q, Li G, Wade GH, Chen Y. The Potential Influences of Professional Identity for Undergraduate Nursing Students During the COVID-19 Pandemic: A Cross-Sectional Study. *Japan Journal of Nursing Science*. 2024; 21(2): 12567.
- Tang M, Sun Y, Zhang K, Luo R , Liu Y, Sun H, et al. Associated Factors of Professional Identity Among Nursing Undergraduates During COVID-19: A Cross-Sectional Study.

- International Journal of Nursing Sciences. 2022 ;9(1):107-113.
17. Sun Y, Guo J, Li X, Guan R. Comparison and Analysis of Professional Attitude of Nursing Undergraduates Before and After SARS. *Mod Nurs* 2007;13(10):892-4
18. Heung YY, Wong KY, Kwong WY, To SS, Wong HC. Severe Acute Respiratory Syndrome Outbreak Promotes a Strong Sense of Professional Identity Among Nursing Students. *Nurse Educ Today* 2005; 25(2):112-8.
19. Elibol E, Kader A, Harmancı S. Reasons Nursing Students Choose the Nursing Profession and their Nursing Image Perceptions: A Survey Study. *Nurs Pract Today*. 2017; 4(2):67-78
20. Uysal N, Demirdağ H. The Image of Nursing Perceived by the Society in the Covid-19 Pandemic: A Cross-Sectional Study. *Nurs Forum*. 2022; 57(6):1339-1345.
21. Wu CS, Rong JR, Huang MZ. Factors Associated with Perceived Stress of Clinical Practice Among Associate Degree Nursing Students in Taiwan. *BMC Nurs*. 2021 Jun 7;20(1):89.
22. Hallaran AJ, Edge DS, Almost J, Tregunno D. New Nurses' Perceptions on Transition to Practice: A Thematic Analysis. *Can J Nurs Res*. 2023 Mar; 55(1):126-136.
23. Adib-Hajbaghery M, Bolandian Sh. Love in Nursing: A Concept Analysis. *J Caring Sci*. 2020, 9(2), 113-119.
24. Araghian Mojarad F, Shafipour V. Intensive Care Nurses' Experiences of Moral Distress in the COVID-19 Pandemic, *J Mazandaran Univ Med Sci* 2023; 33 (222): 124-134.[Persian]
25. Nie S, Sun C, Wang L, Wang X. The Professional Identity of Nursing Students and Their Intention to Leave the Nursing Profession During the Coronavirus Disease (COVID-19) Pandemic. *The Journal of Nursing Research*. 2021 ;29(2), 139.
26. Rojas Sarango DE, Mesa-Cano IC, Ramírez-Coronel AA, Moyano Brito EG. Nursing Role in the Covid-19 Pandemic: Systematic Review; *Archivos Venezolanos de Farmacología y Terapéutica*. 2021; 40 (6): 575-581.
27. Stokes-Parish J, Elliott R, Rolls K, Massey D. Angels and Heroes: The Unintended Consequence of the Hero Narrative. *J Nurs Scholarsh*. 2020 ;52(5):462-466.
28. Barrett D, Heale R. COVID-19: Reflections on Its Impact on Nursing. *Evid Based Nurs*. 2021 Oct; 24(4):112-113.
29. Catton H, Iro E. How to reposition the nursing profession for a post-covid age. *BMJ*. 2021;373- n1105.