Wydawnictwo UR 2023
ISSN 2544-1361 (online)
doi: 10.15584/ejcem.2023.1.15

http://www.ejcem.ur.edu.pl
European Journal of Clinical and Experimental Medicine
Eur J Clin Exp Med 2023; 21 (1): 120–128

ORIGINAL PAPER

From ground zero of the pandemic – nurses' stories via Photovoice

İbrahim Çetin , Hilal Türkben Polat , Rukiye Burucu , Işın Cantekin

Nursing Department, Kamil Akkanat Faculty of Health Sciences, Necmettin Erbakan University, Konya, Turkey

ABSTRACT

Introduction and aim. With the ongoing COVID-19 pandemic, healthcare workers continue to work selflessly and intensively despite many occupational hazards. Although various studies have been carried out to evaluate the experiences of nurses who play an important role in the fight against the pandemic and the effects thereof, qualitative studies carried out using the photovoice technique are very limited. The aim of this study was to evaluate the experiences of nurses working during the COVID-19 pandemic and show the impact that COVID-19 has had on nurses' work and daily life using creative photographic data.

Material and methods. This qualitative study employed a participatory action research design, and photovoice technique was used. Research data were collected from nurses working in COVID-19 clinics of various hospitals between May and September 2021. Data analysis was performed via a phenomenological interpretation method.

Results. Five themes emerged from the data: (1) burnout, (2) anxiety, (3) social isolation, (4) emphasis on professional value, and (5) the value of life. Each theme was presented with representative photographic and written narratives provided by the participants.

Conclusion. The findings of this study suggest that nurses experience problems such as burnout, anxiety, and social isolation. All the participants associated these problems with the negative effects of the COVID-19 pandemic on work and daily life. On the other hand, the participants emphasized professional value and the value of life despite all the negativities and risks.

Keywords. COVID-19, pandemic, Photovoice, nursing care, qualitative research

Introduction

The first COVID-19 outbreak associated with exposure to a seafood market was detected in the Wuhan province of China in December 2019.[1] On January 30, 2020, the World Health Organization (WHO) declared the outbreak as an Internationally Important Public Health Emergency after a new type of coronavirus was detected. On March 11, 2020, COVID-19 was declared as a pandemic.[2] In Turkey, the first case was seen on the same day, and the first COVID-19 related death occurred 6 days later. By February 2022, the daily number of new cases exceeded 100,000 and the number of deaths exceeded 200.[3] While the COVID-19 pandemic continues to affect the public health, social, and economic sectors, the overarching objective of the Strategic Preparedness and Response Plan for COVID-19 – preventing the transmission of SARS-CoV-2 and the occurrence of related diseases and deaths – has been confirmed.[4] Healthcare workers, who played a key role in the fight against the COVID-19 pandemic, faced the highest risk to occupational disease exposure including injury and death. Occupational infections due to COVID-19, skin problems caused by long-term use of personal protective equipment, toxicity due to frequent use of disinfectants, and chronic fatigue are some of the problems experienced by healthcare workers. In addition, the pandemic also has a negative effect on the mental health of healthcare workers.[5]

Corresponding author: Işın Cantekin, e-mail: i_cantekin@hotmail.com

Received: 13.11.2022 / Revised: 16.12.2022 / Accepted: 30.12.2022 / Published: 25.03.2023

Çetin İ, Polat HT, Burucu R, Cantekin I. *From ground zero of the pandemic – nurses' stories via Photovoice*. Eur J Clin Exp Med. 2023;21(1):120–128. doi: 10.15584/ejcem.2023.1.15.

Of the COVID-19-related deaths in Turkey, only 6,643 healthcare workers died. The estimated number of deaths, which is quite high for healthcare workers, may increase if the working conditions and workload are not improved and protective measures are not implemented.[6] On the other hand, the International Council of Nurses (ICN) issued a statement similar to that of the WHO stating that the number of deaths of nurses reported during the pandemic was contradictory and underreported. Despite the potentially fatal risks, nurses continued to work more intensively than ever during the pandemic, attracting the attention of the community with their success.[7] In a meta-analysis study, the prevalence of emotional exhaustion was 34.1%, depersonalization was 12.6 % among nurses during the COVID 19 pandemic.[8]

The clinical picture and symptoms of the disease led to increased hospitalizations and nursing care demand. Nursing care, which is often carried out in infection services and intensive care units, contributes significantly to the achievement of many goals from saving the patient's life to the success of treatment, preventing complications, and maintaining holistic, uninterrupted daily life activities.[9-10] The professional performance displayed by nurses during the pandemic was sometimes described as heroic. Furthermore, the literature emphasized that such a performance is already due to the nature of the nursing profession wherein patient advocacy and high-level care are continued even in the most difficult times. Societies once again remembered the critical role of nurses in the healthcare system as they went through an unprecedented pandemic.[11-12]

We can now examine in more detail the experiences of nurses in their fields of work during the COVID-19 pandemic through scientific research. Changing working conditions and increased risks also affect other areas of life. These effects show that nurses may have difficulty maintaining their mental and physical health.[13-15] We believe that nursing care experiences shaped during the pandemic and archived via scientific publications will contribute to the planning of future research and delivery of care services in the field. In the present study, we incorporated the power of qualitative research design to generate in-depth information on the subject as well as the richness of photographic expression in our data collection methods.

Aim

In this context, the aim of this study was of the experiences of nurses on active duty during the COVID-19 pandemic and reveal the impact of COVID-19 on nurses' work and daily life using creative photographic data.

Material and methods

Ethical approval

Ethical approval for the study was obtained from Necmettin Erbakan University Ethics Committee for Scientific Research in Health Sciences (decision no. 2021-6 date: 2/2021). The participants were properly informed and written consent was obtained. Nicknames were used instead of full names to ensure privacy. It was ensured that the privacy of third parties (patients, relatives, and other healthcare workers) was protected in the photographs.

Study design

This qualitative study was designed as a participatory action research and photovoice technique was used.[16] Photovoice is a technique that engages participants through photographic data generation to create a positive change and increases people's interest and responsiveness to the research question/subject by utilizing the impressive power of photographs.[17] Photovoice establishes a bridge between researchers and participants and enables stronger data to be produced regarding the meaning of the information. In addition, it makes participants freer in the data generation process, making it easier to focus on them and authenticity rather than the researcher's priorities.[18]

Research population and sample

The research population consists of nurses working in various hospitals in Turkey during the COVID-19 pandemic. Sample size calculation is not recommended in qualitative studies.[19] However, it is stated that 5–25 participants are enough for purposive sampling.[20] It is reported that qualitative data analysis will be difficult if there are many participants, stressing the importance of achieving data saturation.[21,22] Within this framework, the present study included 14 participants based on the inclusion and exclusion criteria. It was thought that data saturation was reached when the same answers started to be received from the participants. In this process, the data collection process has been terminated. Inclusion criteria were as follows: (a) Working as a nurse in COVID-19 clinics/units during the pandemic, (b) being interested in expressing one's experiences and thoughts with photographs, and (c) giving informed consent for voluntary participation in the study.

Nurses from six different provinces working in university hospitals and a private hospital throughout Turkey were included in the study via the snowball sampling technique. At the time of the research, various restrictions were imposed in Turkey due to the COVID-19, especially curfews covering certain hours. Therefore, sampling and the application phase were carried out online.

Procedure

The procedural steps of the study were defined by the researchers based on an extensive literature review.[23-24] The researchers gave information about the research to the nurses they could contact and asked them to share this

information with other nurses they knew and provide the contact information of those interested in participating with their permission. A digital presentation was prepared by a researcher about the purpose of the research, its scope, what the application will be like, and the rules of photography. With this presentation, an introductory meeting was held online for the nurses who provided their contact information. For those who could not attend, the meeting was repeated on a different date. Immediately after the meetings, the presentation file was shared with the participants and a voluntary sample group was formed.

Participants were told they had one month to take photographs with their own cameras. The photographs taken individually were evaluated together with the participants, and they were asked to create titles and written narratives for the agreed photographs. In-depth individual interviews were conducted with each participant based on photographic narratives. Interviews were conducted online by a researcher having experience in conducting qualitative research and semi-structured interviews, whereas the other researcher participated in interviews as a rapporteur for making observations and preparing field notes. For each participant, two group meetings lasting at least 30 and a maximum of 55 minutes and at least one individual interview were held. The interviews are concluded after the answers are repeated or the preliminary evaluations of the photographs with photographic and written statements are completed. Afterward, a session was held by all the researchers and the photographs to be included in the study were selected. The steps from reaching the participants to data collection were carried out between May and September 2021.

Data collection

Research data were collected mainly via the photovoice technique. The tools used for this purpose included:

Participant information form (PIF): The form consists of ten questions on the general characteristics of the participants.

Photograph- and written narrative-related instructions: These include considerations to be made regarding photography and storage. During the photography period, an e-mail address was shared with the participants for additional information requests and possible questions and the necessary support was provided. An e-mail account was created to collect the photographs taken.

Semi-structured interview form (SSIF): This form consists of two parts – the first is a six-question section standardized for photovoice technique and briefly called SHOWED[25] and the other part consists of three open-ended questions created by the researchers of this study. The standardized questions for photovoice technique are: (a) "what do you see here?", (b) "what is really happening here?", (c) "how does this relate to our lives?", (d) "why does this concern, situation, or strength exists?", (e) "how can we become empowered through our new understanding?", and (f) "what can we do?".

Other questions present on the interview form are as follows: (a) "what have you been through during this period?" (b) "how has this affected your profession?" and (c) "how has the pandemic affected the lives of nurses?". Two external specialists and two nurses were consulted for the evaluating SSIF.

The PIF was an online survey. Semi-structured interviews were recorded with participant permission and transcribed within 48 h after the interview to minimize data loss. The conformity of the transcripts with the interviews was checked by a separate researcher other than the rapporteur. The photographs and narratives included in the research were converted into a digital file. At the end of the data collection process, 35 photographs, written narratives for 14 photographs, data collected using PIF, and 50 pages of interview records and field notes were included in the data analysis process. The photographs that strongly represented the themes were determined by joint decision of the researchers. Photos and other data are stored encrypted on the first researcher's computer.

Data analysis

Colaizzi's seven-step phenomenological interpretation method was used in the evaluation of qualitative data, and the application steps were shaped accordingly (Table 1).[26] The qualitative data was first evaluated individually by each researcher, then jointly in the presence of all the researchers, and finalized with consensus. Miles–Huberman conformity analysis was performed for SSIF and the themes determined by encoders to ensure reliability.[27] The conformity coefficient for SSIF and the themes determined by the encoders were calculated to be 1 and 0.97, respectively. Induction was used in the grouping of themes and deduction was used to finalize the themes. In case of differences of opinion between the researchers, a joint decision was made after taking the opinion of a faculty member specializing in qualitative research. Data analysis was carried out according to Colaizzi's phenomenological interpretation method (Data recording, Extracting significant statements*, Formulating meaning*, Organizing formulated meanings into clusters of themes*, Exhaustively describing the investigated phenomenon*, Understandable expression of the investigated phenomenon, Verification of the basic structure**; *Miles–Huberman model was used for determining, making sense of, and grouping the statements.**The participants were contacted, and the data was verified in case of hesitation).

Consistency and verifiability were provided for reliability and credibility, and transferability were provided for validity.[28] In order to ensure verifiability, opinions were taken from two external experts, and expert auditing technique was used. In order to ensure consistency,

standardized questions for photovoice were used, and expert opinions were obtained for the other three questions in SSIF. Verification/member checking was done when all interpretations were member checked. In addition, an interview template was created and adhered to in order to standardize all the interviews. To ensure credibility, the interviews were held in the appropriate time frame. The moderator summarized the answers given by the interviewee during the interviews and confirmed with participant feedback.

Table 1. Social demographic data of the participants

Variables			Average	Standard deviation
Professional experience (months)			7.71	7.043
			Number (n)	Percent (%)
Worked provinces	Konya		9	64.2
	Kırıkkale		1	7.14
	Kocaeli		1	7.14
	Bursa		1	7.14
	İstanbul		1	7.14
	Ankara		1	7.14
Employed Institutions	Special		1	7.14
	Public	University Hospital	2	14.28
		Ministry of Health Training and Research Hospital	4	28.56
		City Hospital	2	14.28
		Public Hospital	5	35.71
Gender	Female		13	87
	Male		1	13
Educational Status	Licence		11	78.6
	Degree		2	14.3
	Doctorate		1	7.1
Marital status	Married		7	50
	Single		7	50
Childbearing status	childless		9	64.3
	1 child		2	14.3
	2 children		2	14.3
	3 children		1	7.1
Her/His Covid status	Infected		4	28.6
	Non-infectious		10	71.4
Covid status of family members	Infected		8	57.1
	Spouse		2	14.3
	Brother		1	7.1
	More than one person in the family (mother, father, sibling, spouse)		5	35.7

All data collected during the research were protected using encrypted files and an antivirus program. This research was reported in accordance with the Standards for Reporting Qualitative Research checklist.[29]

Results

The majority of the 14 nurses included in the study were women (87%). Their mean age was 29.5 ± 6.5 years, and their mean work experience was 7.7 ± 7 years. Furthermore, 78.6% of the nurses received a bachelor's degree, 50% were married, 64.3% of the nurses did not have any children, 28.6% of the nurses had COVID-19 infection themselves, and 57.1% reported that at least one of their family members had COVID-19 (Table 1).

Themes

On performing qualitative analysis of the collected data, five main themes and a total of 16 sub-themes were created. Due to the large number of sub-themes, only the main themes are presented in this section with their representative photographic and written narratives to simplify the presentation of the findings (Table 2, Fig. 1, Fig. 2).

Table 2. Distribution of themes and sub-themes

Theme	n	Sub- theme	n
Burnout	30	Burnout	6
		Despair	12
		Hope/Despair	8
		Depersonalization	2
		Unmet expectations	2
Anxiety	16	Anxiety of infection	8
		Anxiety about inexperience	5
		Anxiety associated with family and children	3
Social Isolation	13	Social isolation (Contingency included)	13
Professional degree emphasis	18	Awareness	12
		A sense of self-actualization	3
		The importance of communication with the patient	2
		Increase in team awareness	1
Value of life	7	--	7

Theme 1: Burnout

According to the analysis, there was a strong emphasis among participants on "burnout" caused by the pandemic. In addition to data highlighting burnout directly, opinions reflecting desperation and despair were also shared. Factors such as hours of strenuous routines, patient losses, treatment practices and nursing care not yielding the desired result, inability to care for relatives with COVID-19 infection, and inability to support their child's daily routines were among the reasons for the feeling of helplessness experienced by the nurses.

Participant 1. *"... I've never had a situation where treatment and medication were so inadequate. We were just struggling without knowing what to do. Time was not important. No one was asking about the time. Patients were going blue and dying..."*

Participant 2. *"When I was going to the shift, I was saying goodbye to my children, saying "I might not be able to come home if I get sick tomorrow, don't worry" and leaving. They were crying and sending me on shift…"*

Participant 3. *"When the condition of our patients did not improve and our interventions were inadequate, I was falling to the aside with feelings of exhaustion and helplessness."*

Theme 2: Anxiety

The theme of "anxiety" put forward in this research was associated with several factors. For example, one participant with limited experience in the profession experienced anxiety due to the inexperience.

Participant 4. *"I had 1.5 months of work experience...They put me in the COVID-19 ward; I was so nervous. I was inexperienced and that was difficult for me; I asked experienced nurses for help, but then I was increasing their workload."*

Analysis of the interviews showed that all participants felt anxious about transmitting COVID-19 to their relatives and loved ones.

Participant 5. *"...I found out in September that I was COVID-19 positive. When my first CT scan showed that I had lung involvement, I was terrified and I cried. The only thing I could think of at the time was my family. My father has hypertension, and I was worried about transmitting COVID-19 to him."*

Theme 3: Social isolation

It was found that the exhausting routines expressed in the first theme and the anxiety about transmitting COVID-19 to others expressed in the second theme pushed nurses into social isolation. According to the data, social isolation affected the families of the nurses and also their social lives. One participant described social isolation in her own verses along with the photo in Figure 1-c.

Participant 6.

Who would have thought we'd look at life behind masks
Who would have thought smiles would be hidden
Who would have thought life would end up on the other side of the bars
Wait, life, we are fighting, and we're going to win...

Participant 7. *"Covid limited our freedom, we were left alone… On the other hand, the sense of being together and acting together strengthened in our team."*

Theme 4: Emphasis on professional value

Despite the negative feelings they experienced and the difficult working conditions, the participants stated that they played a very important role in providing valuable service, treatment, and care to patients during the pandemic.

Participant 8. *"It was a common opinion that nurses just prepared injections and only did what the doctor said, but now the patients see us the most, we touch them the most. We are valued more now."*

The participants frequently stated that the value given to nurses by the community and patients increased. One nurse said: "*...some people came to us and said 'you have worked so hard, you were always on duty when we were at home,' and some people coming to get vaccinated brought us little presents and thanked us for our efforts. In fact, the community in general understood how hard nurses work.*" (**Participant 9.**)

Theme 5: The value of life

The participants stated that they were affected by severely ill or dying patients, and that their clinical experiences during the pandemic strongly reflected the value and fragility of life. Participants also stated that similar thoughts were shared by the patients receiving care

Fig. 1. Photographic narratives of the participants representing (a) burnout, (b) anxiety and (c) social isolation

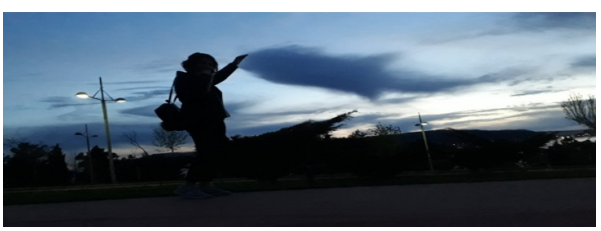

Fig. 2. Photographic and written narrative representing the theme of the value of life

(Figure 2). The COVID-19 pandemic has been an unprecedented experience so far. One nurse associated the inability of holding traditional ceremonies for relatives who have died due to COVID-19 with the value of life.

Participant 10. "... A lot of people experienced this disease and lost a relative. Losing someone close and no one coming to the funeral showed the importance of simple things and life."

Participant 11. *"Even those with mild disease started to look at life differently. They're afraid of death. Everything, even money, is losing importance. My wife and I went through this. My wife's been through a lot. Both her lungs were half shut down. Nothing else was important to us at that moment."*

Discussion

The findings obtained in this study were discussed within the framework of five main themes covering the feelings and experiences of nurses providing care to infected patients in various clinics during the COVID-19 pandemic. These themes are burnout, anxiety, social isolation, emphasis on professional value, and the value of life.

Burnout is a psychological syndrome that involves emotional exhaustion, desensitization, and a feeling of decreased personal achievement, especially in relation to working with clients or patients.[30] Intensive care unit nurses participating in this study reported that they often experienced a feeling of burnout during the pandemic. Burnout can have dangerous consequences for nurses, patients, and health institutions, such as poor quality of care and service. Excessive workload, financial and human resources, and psychological factors such as the presence of social support in the workplace are important in explaining burnout.[31] It has been reported that work environments affect the psychological health of medical personnel.[32] In particular, working in areas, such as intensive care units, where working conditions are more difficult and require high level of attention greatly increases the workload of nurses. Working in very difficult conditions during the pandemic, having inadequate social support, and experiencing disruptions in familial dynamics can lead to the depletion of nurses' emotional resources and the manifestation of burnout syndrome.[7,33] The COVID-19 pandemic has increased the stress experienced by nurses[34], and the increased patient load due to the pandemic further triggered burnout among nurses.[34] If the problem of burnout among nurses is not addressed in such a period, it may lead to various negative psychological effects in the future.[35]

Anxiety is defined as a feeling of worry, nervousness, or unease about something with an uncertain outcome, accompanied by various physiological symptoms that can occur at any time in the lives of individuals.[36] Due to the COVID-19 pandemic, healthcare workers experience significant levels of anxiety and stress, and stress is even considered as an independent health related risk factor.[37] Among healthcare workers, nurses exhibit the most anxiety-related symptoms.[38] It was reported that 85.7% of nurses showed moderate-to-severe anxiety[39] and 20.7% showed severe anxiety.[40] When emotions such as stress, fear, and anxiety experienced during the pandemic cannot be controlled, they can lead to undesirable problems such as anger, loneliness, despair, depression, and post-traumatic stress disorder.[40,41] The United Nations urged governments to focus on initiating mental health services for their citizens, especially healthcare workers, during the pandemic.[42]

Since COVID-19 is a respiratory disease, various isolation measures have been introduced to prevent its spread. As a result of these measures, schools were closed, intercity travel and movement were restricted, and curfews were imposed. In addition to all these measures, nurses who provided care for patients diagnosed with COVID-19 were concerned about infecting family members and further isolated themselves. Social isolation is without doubt the most effective measure against COVID-19, but it can negatively affect the mental health of individuals.[43,44] Social isolation can trigger various psychological problems such as panic disorder, anxiety, and depression.[45,46] During the pandemic, hospitals have become an intensive and stressful workplace where nurses spend more time. Nurses tried to overcome the problem of social isolation with the support of their colleagues.[47]

The pandemic has led to a situation where many individuals are infected at the same time and treatment is carried out in hospital conditions. This period highlighted the importance of the concept of "care," which is the main purpose of the nursing profession. ICN declared the theme of 2020 as "Nurses: A Voice to Lead – Nursing the World to Health".[48] In the fight against COVID-19, nurses have worked with dedication on the front line, and nursing care plays a key role in ending this pandemic.[49] Therefore, institutions should carry out activities to increase the professional motivation of nurses. Nurses felt loneliness, fear, and restlessness and experienced instability and emotional exhaustion at the beginning of the pandemic. However, mutual social support provided by team members, financial incentives offered by institutions, positive feedback from patients and their relatives, public praise, and support increased the motivation of nurses.[50]

Although nurses worked with superhuman strength and dedication during the COVID-19 pandemic, this challenging period has led to changes in their lives as it has in the lives of other individuals. The complex feelings and desperation felt between life and death have caused nurses to focus on the value of life. During this period, nurses lost not only the patients they cared for but also their colleagues. Many nurses and their relatives got in-

fected with COVID-19. In Turkey, compared with the general population, the incidence of COVID-19 was 10 times higher among healthcare workers.[51] This painful experience has also resulted in some positive changes. These include thinking about the meaning of one's own life; questioning life in general; and associating events, people, and experiences with positive meanings.[52]

Study limitations

Not every experience can be investigated by the photovoice method. Creating photographic data for certain situations and experiences may not be legally and ethically possible. This is the main limitation of the present research.

Conclusion

This research conducted during the COVID-19 pandemic revealed the signs of burnout and anxiety experienced by nurses and showed that nurses experienced social isolation. The photographic narratives of the participants formed strong representations about their experiences during the pandemic process. Participants had the opportunity to express themselves freely and share common outputs in the sessions. Photo narratives selected for a stronger and more widespread impact were published on the official website of the researchers' institution. These feelings and experiences were reflected by the photographic and written narratives. These problems need to be addressed quickly and effectively as the feeling of burnout, uncontrollable intense anxiety, and social isolation will have further negative consequences among nurses as well as their relatives, patients, and the healthcare system. However, despite all the negativities and risks, nurses participating in the present study emphasized the value of life and nursing profession, which is undoubtedly admirable. Governments, managers, and nongovernmental organizations and societies should be aware of the great dedication shown by nurses during the COVID-19 pandemic and continue to appreciate and honor the positive impact of nursing care throughout the pandemic.

Declarations

Funding

This research received no external funding.

Author contributions

Conceptualization, I.C., H.T.P, R.B. and I.C.; Methodology, I.C., H.T.P, R.B. and I.C.; Software, I.C., H.T.P, R.B. and I.C.; Validation, I.C., H.T.P, R.B. and I.C.; Formal Analysis, I.C., H.T.P, R.B. and I.C.; Investigation, I.C., H.T.P, R.B. and I.C.; Resources, I.C., H.T.P, R.B. and I.C.; Data Curation, I.C., H.T.P, R.B. and I.C.; Writing – Original Draft Preparation, I.C., H.T.P, R.B. and I.C.; Writing – Review & Editing, I.C., H.T.P, R.B. and I.C.; Visualization, I.C., H.T.P, R.B. and I.C.; Supervision, I.C., H.T.P, R.B. and I.C.; Project Administration, I.C., H.T.P, R.B. and I.C.; Funding Acquisition, I.C., H.T.P, R.B. and I.C.

Conflicts of interest

The authors have no conflict of interest.

Data availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethics approval

Ethical approval for the study was obtained from Necmettin Erbakan University Ethics Committee for Scientific Research in Health Sciences (decision no. 2021-6 date: 2/2021).

References

1. Novel Coronavirus-China. World Health Organization; 2020. https://www.who.int/emergencies/disease-outbreak-news/item/2020-DON233. Accessed July 15, 2022.
2. Vaishnav M, Dalal PK, Javed A. When will the pandemic end? *Indian J Psychiatry*. 2020;62:(3):330-334. doi: 10.4103/psychiatry.IndianJPsychiatry_1030_20.
3. Ministry of Health. General Coronavirus Chart. https://covid19.saglik.gov.tr/TR-66935/genel-koronavirus-tablosu.html. Accessed June 30, 2022.
4. World Health Organization. Critical preparedness, readiness and response actions for COVID-19: interim guidance, 27 May 2021 (No. WHO/2019-nCoV/Community_Actions/2021.1). Accessed June 30, 2022.
5. World Health Organization. COVID-19: Occupational health and safety for health workers: interim guidance, 2 February 2021 (No. WHO/2019-nCoV/HCW_advice/2021.1). Accessed June 30, 2022.
6. World Health Organization. The impact of COVID-19 on health and care workers: a closer look at deaths (No. WHO/HWF/WorkingPaper/2021.1). Accessed June 30, 2022.
7. International Council of Nurses. ICN confirms 1,500 nurses have died from COVID-19 in 44 countries and estimates that healthcare worker COVID-19 fatalities worldwide could be more than 20,000. https://www.icn.ch. Accessed June 30, 2022.
8. Galanis P, Varka I, Fragkou D, et al. Nurses' burnout and associated risk factors during the COVID-19 pandemic: a systematic review and meta-analysis. *J Adv Nursinng.* 2021;77(8):3286-3302. doi: 10.1111/jan.14839.
9. Bahar A, Buldak CI. Nursing Management of a Patient Diagnosed with COVID-19 in Intensive Care. *Yüksek İhtisas University Journal of Health Sciences.* 2020;1:78-84.
10. Celebi C. Nursing Care in Patients Diagnosed with Covid-19. *Ege Klin Medical Journal*. 2020;58(1):35-40.
11. Bagnasco A, Catania G, Gallagher A, Morley, G. Media representations of nurses in the pandemic: Just doing our job? *Nursing Ethic.* 2020;27(4):901-905.

12. Şenol Çelik S, Atlı Özbaş A, Çelik B, et al. Covid-19 pandemic process: Turkish Nurses Association. *HEAD.* 2020;17(3):279-283.
13. Akkuş Y, Karacan Y, Güney R, Kurt B. Experiences of nurses working with COVID-19 patients: A qualitative study. *J Clin Nurs*. 2021;00:1-15. doi: 10.1111/jocn.15979.
14. LoGiudice JA, Bartos S. Experiences of nurses during the COVID-19 pandemic: A mixed-methods study. *AACN Adv Crit Care*. 2021;32(1):14-25. doi: 10.4037/aacnacc2021816.
15. Kisely S, Warren N, McMahon L, Dalais C, Henry I, Siskind D. Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis. *BMJ.* 2020;369:1642. doi: 10.1136/bmj.m1642.
16. Plunkett R, Leipert BD, Ray SL. Unspoken phenomena: using the photovoice method to enrich phenomenological inquiry. *Nurs Inq.* 2013;20(2):156-164. doi: 10.1111/j.1440-1800.2012.00594.x.
17. Wang C, Burris MA. Empowerment through photo novella: portraits of participation. *Health Educ Q.* 1994;21(2):171-186. doi:10.1177/109019819402100204
18. Hicks A, Lloyd A. Seeing information: Visual methods as entry points to information practices. *Libr Inf Sci.* 2018;50(3):229-238. doi: 10.1177/0961000618769973.
19. Sönmez V, Alacapınar F. Illustrated Scientific Research Methods. Memoir Publishing, Ankara (Extended 6th Edition): 2018;320-328.
20. Creswell JW. Mixed-method research: Introduction and application. In: Handbook of educational policy (pp. 455-472):1999; Academic press.
21. Baltaci A. A Conceptual Analysis on Sampling Methods and Sample Size Problem in Qualitative Research. *Bitlis Eren University Journal of Social Sciences Institute*. 2018;7(1):231-274.
22. Baltaci A. Qualitative Research Process: How to Conduct a Qualitative Research? *Ahi Evran University Journal of Social Sciences Institute*. 2019;5(2):368-388. doi: 0.31592/aeusbed.598299.
23. Bullard E. Photovoice.2015; Salem Press Encyclopedia.
24. Catalani C, Minkler M. Photovoice: a review of the literature in health and public health. *Health Educ Behav.* 2010;37(3):424-451. doi: 10.1177/1090198109342084.
25. Hergenrather KC, Rhodes SD, Cowan CA, Bardhoshi G, Pula S. Photovoice as community-based participatory research: A qualitative review. *Am J Health Behav.* 2009;33(6):686–698. doi: 10.5993/AJHB.33.6.6.
26. Zengin M, Yayan EH, Akinci A. Difficulties Experienced by Turkish Parents and Their Coping Strategies: Children with Mucopolysaccharidosis. *J Pediatr Nurs*. 2020;53:e142-e148. doi: 10.1016/j.pedn.2020.03.009.
27. Baltaci A. Miles-Huberman Model in Qualitative Data Analysis. *Ahi Evran University Journal of Social Sciences Institute*. 2017;3(1):1-15.
28. Arastaman G, Öztürk Fidan İ, Fidan T. Validity and Reliability in Qualitative Research: A Theoretical Review. *Yüzüncü Yıl University Faculty of Education Journal.* 2018;15(1):37-75. doi: 10.23891/efdyyu.2017.61.
29. O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med.* 2014;89(9):1245-1251. doi: 10.1097/ACM.0000000000000388.
30. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach Burnout Inventory.1986; Palo Alto, CA: Consulting Psychologists Press.
31. Manzano García G, Ayala Calvo JC. The threat of COVID-19 and its influence on nursing staff burnout. *J Adv Nurs.* 2021;77(2):832-844. https://doi.org/10.1111/jan.14642
32. Sigsbee B, Bernat JL.Physician burnout: A neurologic crisis. *Neurology.* 2014;83(24):2302-2306. doi: 10.1212/WNL.0000000000001077.
33. Bakker A, Le Blanc PM, Schaufeli WB. Burnout contagion among intensive care nurses. *J Adv Nurs.* 2005;51(3):276-287. https://doi.org/10.1111/j.1365-2648.2005.03494.x
34. Spoorthy MS, Pratapa SK, Mahant S. Mental health problems faced by healthcare workers due to the COVID-19 pandemic – a review. *Asian J Psychiatr.* 2020;51:102119. doi: 10.1016/j.ajp.2020.102119.
35. Kisely S, Warren N, McMahon L, Dalais C, Henry I, Siskind D. Occurrence, prevention, and management of the psychological effects of emerging virüs outbreaks on healthcare workers: rapid review and metaanalysis. *BMJ*. 2020;369:m1642. doi: 10.1136/bmj.m1642.
36. Zengin L, Gümüş F. Anxiety and depressive symptoms in nurses and related factors. *JAREN*. 2019;5(2):116-122.
37. Pappa S, Ntella V, Giannakas T, et al. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: a systematic review and meta-analysis. *Brain Behav Immun.* 2020;88:901-907. doi: 10.1016/j.bbi.2020.05.026.
38. Cebeci SP, Hilal K. Determination of depression, anxiety and stress levels in nurses caring for Corona Virus patients. *Ankara Journal of Health Sciences*. 2021;10(1):46-56.
39. Luceño-Moreno L, Talavera-Velasco B, García-Albuerne Y, Martín-García J. Symptoms of Posttraumatic Stress, Anxiety, Depression, Levels of Resilience and Burnout in Spanish Health Personnel during the COVID-19 Pandemic. *Int J Environ Res Public Health.* 2020;17(15):5514. doi: 10.3390/ijerph17155514.
40. Akturk H. Online Life and Psychological Effects During the New Coronavirus Disease Pandemic Period. Ankara University Institute of Health Sciences; Ankara. 2020.
41. Sevinç S, Özdemir S. Relationship between nursing students' anxiety and hopelessness: Kilis Example. *Journal of Research and Development in Nursing*. 2017;19(2):14-24.
42. Guterres A. UN leads call to protect most vulnerable from mental health crisis during and after COVID-19.2020; UN News.

43. Kaya B. Effects of pandemic on mental health. *J Clin Psy.* 2020;23(2):123-124.
44. Banerjee D, Rai M. Social isolation in Covid-19: The impact of loneliness. *Int J Soc Psychiatry.* 2020;66(6):525-527.
45. Cullen W, Gulati G, Kelly BD. Mental health in the COVID-19 pandemic. *QJM*. 2020;113(5):311-312. doi: 10.1093/qjmed/hcaa110.
46. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen Psychiatr.* 2020;33(2):e100213. doi: 10.1136/gpsych-2020-100213
47. Özbezek BD, Paksoy HM, Çopuroğlu F. The Effect of Social Support Perceptions of Health Care Workers on Burnout Level during the Covid-19 Pandemic Period. *IBAD Journal of Social Sciences*. 2021;11:413-434. doi: 10.21733/ibad.951414.
48. International Nurses Council, Nursing the World to Health - ICN announces theme for International Nurses Day 2020. https://www.icn.ch/news/nursing-world-health-icn-announces-theme-international-nurses-day-2020, Accessed June 15, 2022.
49. Choi KR, Skrine Jeffers K, Logsdo MC. Nursing and the novel coronavirus: Risks and responsibilities in a global outbreak. *J Adv Nurs.* 2020;76(7):1486-1487. doi: 10.1111/jan.14369.
50. Zhang Y, Wei L, Li H, et al. The Psychological Change Process of Frontline Nurses Caring for Patients with COVID-19 during Its Outbreak. *Mental Health Nursing*. 2020;41(6):525-530.
51. Turkish Medical Association, 6th month evaluation report of the COVID-19 pandemic. Available from: https://www.ttb.org.tr , Accessed June 20, 2022.
52. Nowicki GJ, Ślusarska B, Tucholska K, Naylor K, Chrzan-Rodak A, Niedorys B. The Severity of Traumatic Stress Associated with COVID-19 Pandemic, Perception of Support, Sense of Security, and Sense of Meaning in Life among Nurses: Research Protocol and Preliminary Results from Poland. *Int J Environ Res Public Health*. 2020;17(18):6491. doi: 10.3390/ijerph17186491.