



## Original Article

# Perceptions of frontline ground zero nurses in Lebanon regarding psychological needs and coping mechanisms during the most recent COVID-19 outbreak

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### Abstract

**Objectives:** Lebanese frontline nurses were not only fighting off a pandemic for the past year but also facing escalating political, social, economic, and humanitarian turmoil that have accentuated the pressures exerted upon them. However, their needs for psychological support and coping mechanisms have been uncharted in light of the documented stress frontline nurses have been living for the past year. This paper aimed at exploring the perceptions of frontline ground zero nurses in Lebanon regarding their psychological needs and coping mechanisms during the most recent COVID-19 outbreak.

**Methods:** This study was conducted in 2 main ground-zero hospitals in Beirut. This research paper has adopted a qualitative exploratory research design through employing the phenomenological approach, where online interviews were carried out among 15 frontline ground zero nurses in the 2nd week of January 2020.

**Results:** The results of this study showed that the nurses perceived a need for significant psychological support led by their hospital, while they had to employ various coping mechanisms. The qualitative analysis of the verbatim conveyed by participating nurses have resulted in the emergence of five themes; "Need for actual support," "Need for formal psychological counseling," "Praying and being spiritual," "Avoiding the news," and "Self-reminders."

**Conclusion:** This study demonstrated that sufficient action has not been taken to enhance the mental health of these frontline nurses, where they shared their perspective of inadequate support mechanisms and the necessity for technical, systemic, and structured mental health support.

**Keywords:** Beirut blast; coronavirus; COVID-19; frontline nurses; psychology; qualitative.

Managing a serious public health crisis is an unmapped experience in the unpredictable at different stages. Public institutions develop strategies to estimate rates and control the outbreak using the evidence published by other nations. Furthermore, the significant amount of confusion correlated with emergent pathogens adds to the maintained collective fear which makes up much of the cumulative public traumatic experience. The challenge posed, though, can on the other hand lead to constructive changes, as people channel their coping strategies, collaborate in teams, and organizational re-

form takes place to improve the readiness of countries against future disasters, yet this is not the case developing countries where turmoil usually summarizes the picture.<sup>[1]</sup>

As global pandemics cause diverse conflicts for people of all age groups and backgrounds, the psychological burden faced by health personnel serving at the frontlines is the usually the most prominent and can be serious and permanent.<sup>[2]</sup> The 2019 novel coronavirus (SARS-CoV-2) that appeared in Wuhan, China, contributed to a unique disease outbreak, where it is challenging to comprehend in full the resulting pressure put

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on nurses working with COVID-19 patients. It was inevitable for the quickly evolving reaction to this emerging virus to have a significant influence on the health of front-line medical personnel. In addition, the exponential propagation rate of COVID-19 contributed, from both a functional and psychological standpoint, to unprecedented duties that HCWs could not have been sufficiently prepared to cope with. A major psychological strain faced by frontline nurses in response to COVID-19 has been reported by recent descriptive studies globally, with increased prevalence of depression, distress, post-traumatic stress disorder (PTSD) and recorded suicidal ideation.<sup>[3]</sup> As demonstrated by the prevalence of anxiety, exhaustion, substance abuse and suicide among all categories of healthcare workers internationally, this is in the population already under tremendous pressure even before COVID-19. Health-care professionals are an extremely susceptible category with respect to the psychological effects of pandemics owing to the elevated probability of illness, heightened job intensity, and concern of transmitting the infection to their communities.<sup>[4]</sup> An extraordinary rate of healthcare professionals have been affected since the latest Ebola epidemic<sup>[5]</sup> where it has been reported that they had higher prevalence of PTSD.<sup>[6]</sup>

Global experts have produced guidelines surrounding the usage of Psychological First Aid. The feasibility of this technique, nevertheless, is not well established and obstacles to its use arise exist. The necessity to promote the psychological health of frontline nurses was recognized during COVID-19.<sup>[7]</sup> Nevertheless, a shortage of data on the psychological needs of COVID-19 nursing staff has also been highlighted by this outbreak, and a shortage of proof guidelines on what psychological and social assistance could be most successful in supporting them. Through the COVID-19 pandemic, whatever advice was offered there appeared to come from professional judgment and to be inferred from other technical bodies, such as military staff. Such systematic instruction has proven to be of use in an increasingly growing disease outbreak. Healthcare professionals, nevertheless, are a distinct demographic, living alongside their task, not dispatched in time-limited crisis conditions, nor with any decompression time allocated.<sup>[8]</sup>

To put things into perspective, the Lebanese frontline nurses were not only fighting off a pandemic for the past year but rather facing escalating political, social, economic and humanitarian turmoil that have accentuated the pressures exerted upon them. On the 4th of August 2020, a mind-blowing blast hit the port of Beirut rendering the city half destroyed, and depriving the survivors from immense medical equipment, resources and personnel. The frontline nurses working in the ground zero area, the ones who did not die, yet survived the traumatic experience had to rush to the service of thousands of injured citizens on that night and at the same time maintain infection control measures to avoid a COVID-19 massacre. These same frontline nurses since December have been facing an immense outbreak with limited resources.<sup>[9]</sup>

Therefore, we need clear data for how effectively to meet this

#### What is presently known on this subject?

- Lebanese frontline nurses have been combating the COVID-19 pandemic amidst escalating political, social, economic, and humanitarian crises, intensifying the pressures they experience. Their psychological support needs and coping mechanisms have been largely unexplored, even though they have faced significant stress over the past year.

#### What does this article add to the existing knowledge?

- This research provides insights into the perceptions of frontline ground zero nurses in Lebanon regarding their psychological needs and coping strategies during the recent COVID-19 outbreak.

#### What are the implications for practice?

- The findings emphasize the lack of adequate action to bolster the mental well-being of these nurses. They highlight the urgent need for more comprehensive, technical, systemic, and structured mental health support mechanisms within the hospitals they work in. This calls for hospital administrations and health policymakers to address these needs promptly to ensure the well-being and effectiveness of frontline healthcare workers.

demographic's psychosocial needs through an outbreak and after it, and this proof must ultimately be informed by the perceptions and desires of the workforce itself. To date, relatively little qualitative research has been done to examine frontline nurses own perspectives and perceptions of ground-zero nurses working with COVID-19. More so until present, no study in Lebanon has considered the views of the frontline nurses themselves on psychosocial assistance. Through interviewing frontline nurses about their own perspectives and thoughts about psychosocial care they have received during the most recent outbreak and after the massive Beirut Blast, and thereby seeking to reinforce the voices and perceptions of frontline staff themselves, we set out to address this void. As we face more surges of COVID-19 in Lebanon, this collective approach is crucial as we need to guarantee that we can protect the health of the nursing staff and support the care they offer to the Lebanese community. Thus, this paper aims at exploring the perceptions of frontline ground zero nurses in Lebanon regarding their psychological needs and coping mechanisms during the most recent COVID-19 outbreak.

## Materials and Method

### Research Design

This research paper has adopted a qualitative exploratory research design through employing the phenomenological approach described by Coliazzis's literature in research methodology. This design has potentiated the researchers in getting a profound comprehension of the nurses' perceptions of their needs and coping mechanisms employed after the Beirut blast and during the most recent COVID-19 outbreak that has been reported in Lebanon and thus to answer the following research questions: (1) What are the perceived psychological needs of frontline ground zero nurses in Lebanon during the most recent COVID-19 outbreak? (2) How do frontline ground zero nurses in Lebanon describe their coping techniques during the most recent COVID-19 outbreak? (3) How do these nurses describe their situation as frontline nurses in the midst

of overlapping crises in Lebanon? Colaizzi's phenomenology also established the existing phenomena through the perceptions and experiences of the approached sample, thus matching the common characteristics among the study participants and exploring their shared values rather than focusing on individual features. Colaizzi's seven step approach to thematic analysis was used. Colaizzi's (1978) seven-stage approach ensures a thorough investigation, with each phase remaining true to the facts. The ultimate product is a succinct yet comprehensive explanation of the phenomena under investigation, which has been validated by the people who generated it. The technique relies on detailed first-hand reports of experience obtained through face-to-face interviews. The researchers read the data literally over and over again, extracting relevant knowledge, coding repetitious material, and finally summarizing it as themes. The Colaizzi approach consists of seven steps: (1) read the entire interview; (2) extract main points; (3) formulate concepts; (4) organize the set of concepts into clusters of themes; (5) combine the groups of themes into an exhaustion description; (6) create the basic framework of the phenomenon recognized by an unambiguous quote; and (7) contact participants for additional data.<sup>[10]</sup>

In carrying out this study, a constructivist epistemology is followed as the respondents' perceptions were investigated taking into account that they are situational, personal, and interpreted by perceiving the world around them and how they react to the phenomenon.<sup>[11]</sup>

### Study Subjects

A sample of 15 nurses working with COVID-19 patients has been recruited through a purposive sampling technique. The frontline nurses were mainly from 2 ground zero hospitals in Beirut, which means the hospitals have been situated within the area of 6 miles from the point of impact of the 4th of August Beirut Blast, thus these hospitals have been severely impacted by the explosion. The nurses who have been deemed eligible to be included in the study were strictly COVID-19 frontline nurses who have been serving for at least the past year in their hospitals and who were exclusively on a work shift during the night of the blast.

### Recruitment and Data Collection

The nurses were approached through email, where eligible nurses have received an invitation to take part in the research in addition to a document delineating the purpose of the study as well as the steps entailing participation, as well as a written consent document for them to sign upon approval to participate. After recruitment, the nurses were invited to take part in the online interviews and were informed about the procedure as well as decided on the data and time with them.

### Interviews

Online interviews were performed via teleconferencing software until data saturation was achieved. Due to the most recent coronavirus outbreak that obstructed face-to-face

interviewing, the interviews were performed remotely as a quarantine has been implemented in Lebanon since 7 January 2021. That in addition to the high reported workload and long working hours these nurses are serving, as well as fulfilling the requirements of social distancing and infection prevention and control the online interviews were justified. The interviews were conducted according to the availability of the involved nurses, where the investigators decided on a convenient timing with the respondents in terms of being able to provide accurate verbatim of the perceptions of the nurses. In an effort to prevent the incidence of moderator dominance, both researchers turned to performing the interviews. Multiple questions have been asked such as, "How are you coping with the current situation you are living through as a frontline nurses working in a ground zero hospital?", "How do you describe the psychosocial support the you have received and are receiving as a frontline nurses working in a ground zero hospital?", "How do you delineate your needs as a frontline nurse working in a ground zero hospital?"

### Data Analysis

The nurses involved in the research were specifically told that the conversations would be filmed to be utilized during the data evaluation. The frontline nurses' verbatim was translated into English and interpreted using an inductive study of thematic material. The evaluation comprised of narrating the direct quotes of the respondents, open text labeling, and classification, thereby defining the emerging topics.<sup>[12]</sup> The analysis was conducted each researcher independently, and then the investigators convened and questioned the findings before they reached agreement on the emergent findings, guaranteeing that their personal views on the matter were not expressed in the whole procedure. The verbatim was recalled multiple times to achieve a profound and genuine understanding of the accounts, and then the excerpts were assigned in concise and meaningful terms to demonstrate the correct meaning of the knowledge conveyed by the respondents and then those terms were grouped, restructured, and compiled into qualitative themes that were carefully evaluated.

### Trustworthiness and Credibility

To improve the study's reliability and eradicate the existence of any biases, the researchers have conducted numerous procedures in line with previous studies in the field of qualitative methodological research.<sup>[13]</sup> Both researchers used cohesively structured interview formats and posed the very same queries, meaning that the emerging concepts were thoroughly covered and that no details were overlooked on any dimensions of the findings. Many quotations were utilized to convey the conclusions of the research, which provided the nurses an authentic voice. In addition, experts in the domain of qualitative research were consulted, where a control procedure was implemented to validate the data. The assessment was carried out independently and the researchers, employed member-checking to ensure authenticity and reliability in combina-

tion with peer-checking, where the results were transferred back to the participants for confirmation after completing the themes.<sup>[14]</sup> In addition, external peer-checking was often used to ensure that the results were transferable, where nurses with the same traits as those who already engaged in the analysis were required to acknowledge the validity of the emerging patterns and their own encounters.

### Ethical Considerations

Institutional Review Board approval was obtained (IRB number: ECO-R-57). Informed consent was obtained from all individual participants included in the study. The investigators indicated to all the respondents that their participation was entirely voluntary and there were no detrimental effects of opting out of the study. The nurses were also assured that their contribution was confidential and that all details to be revealed would be anonymous.

## Results

### Characteristics of the Nurses

The sample of this research paper involved 15 COVID-19 frontline nurses practicing at two different ground zero hospitals in Beirut, Lebanon, where 8 (53.3%) were female while 7 (46.7%) were male. The average age of the group was 23.4 years, where 5 (33.3%) worked in COVID-19 specialized units, 6 (40%) practiced in the emergency rooms and 4 (26.7%) worked in intensive care units.

### Phenomenology

The qualitative analysis of the verbatim conveyed by participating nurses has resulted in the emergence of five themes; "Need for actual support," "Need for formal psychological counseling," "Praying and being spiritual," "Avoiding the news," and "Self-reminders."

### Need for Actual Support

In light of the escalating crises frontline nurses in Lebanon have been pushing through, the participating nurses have expressed the real need for actual support rather than the "propaganda support" that they have been receiving since the start of the whole situation and especially during the latest outbreak. For instance, one of the nurses said, "...we need equipment...we need more nurses to help...we need financial increments...but rather we get media coverage and clapping campaigns and news reports...who is that going to help...what is going to do?...if we are ever going to get through this we need actual strategy and immense resources..." (N8). Another nurse also shared a similar account, "...we are not receiving the support that we actually need...every day we hear that we will have more on the frontlines to lay us off...more respirators...more beds...but they don't seem to ever arrive...we only hear fake promises and the media is always here broadcasting our situation but it's all in vain...we need real solutions..." (N12). Also another nurse proclaimed, "...

you feel that all the support is theoretical...nothing actually comes through...if you listen to the leaders in the health sector you'd think us nurses working on the frontlines are being nurtured...the truth is we are suffering...we don't need all the propaganda...commercials and campaigns, calls for national solidarity...it's all nice to get recognized for the work we do I am not denying that but that won't help in the actual fight...it just fades and we are still stuck in the same situation...we need real support...structural and financial..." (N3).

### Need for Formal Psychological Counseling

The second theme that was highlighted by the nurses, relates to the psychological support that they have been receiving especially after the Beirut blast and during the economic and recent COVID-19 crises. The nurses stressed that they need structured counseling by designated professionals rather than the informal gathering of the nursing staff, supervisors, and other healthcare workers to support each other. For instance one of the nurses shared, "...to speak for myself, I am in need to see a therapist or a counselor regularly...I have not been seeing the benefit of infrequent pep talks by the supervisors or the hospital management...we need to be taken care of by professionals so that we can continue serving...especially that personally I feel like I have PTSD...I want to through it..." (N10). A comparable testimony was also conveyed, "...the psychosocial support that we have receiving ?? I don't recall to have received such a thing...I was directly called for the frontline and I voluntarily signed up for it even after the blast I kept on my spirits and kept working...however all that I received in the sense of psychological support was on social media...that's it..." (N2). Further, another nurse also shared, "...we are flailing we are broken...we have been bombarded by an explosion and by the rising numbers of positive cases...we are weak and we need actual psychotherapy...formal counseling sessions with professional psychotherapists to overcome our stress...our ongoing trauma...we need to be healthy if we are going to care for patients..." (N14).

### Praying and Being Spiritual

The frontline nurses who have participated in this study have shared that they relied on spiritual and religious coping to persevere and continue their practice on the frontlines. They have reported that it made them feel stronger and gave them hope for the future. For instance, one of the nurses recounted, "...I find myself praying more these days, especially with everything that we have witnessed in the past months...now that we are facing higher numbers and high mortality rates...I feel the urge to pray for myself and for my family...for my patients to get better...it helps me as it makes me think that it's all in the hands of God and anything that happens is for a reason..." (N5). Another nurse also expressed, "...I turn to God and Saint Charbel in these difficult times...I seek my condolence in the divine mercy as He is always overseeing us and protecting us from harm...this makes me feel safe and makes me feel that I will be okay and that everything will be fine as long as I am

doing good and I am praying..." (N13). A similar perception was also shared, "...finding spiritual meaning in all of the events we have witnessed is what keeps me sane and collected...it has all happened and this is all happening to teach us something important...so I pray and I look deep into my soul to learn and to help my community and my family..." (N4).

### Avoiding the News

Another theme that was prevalent throughout the interviews with the participating nurses was that dramatically negative news reports and social media posts are contributing to a collective feeling of despair and fear and isolating themselves from such sources of stress has made them feel more comfortable, mentally balanced, and more goal directed. For example one of the frontline nurses said, "...it's all either fake campaigns...fake news...reports about the misery of the situation...it makes everything seem like dooms day...the situation is rough but we need to avoid being influenced by the dramatization of the situation and actually work in making things better..." (N15). Also another nurse had a very similar opinion, "...what the media is doing these days are actually just pushing the blame game and nagging about the recent situation with the outbreak rather than just spotlighting constructive plans to overcome the coronavirus crisis and pushing the politicians to do their work...it is very negative we need to stop nagging and start working..." (N6). In addition, another nurse also shared, "...currently with the recent outbreak the media has only been a source of stress and depression for me...it actually demotivated me to keep on my work...so I cut it off... I focused on myself, my family, my colleagues...I feel better about it all now and I believe we are going to go through it sanely..." (N1).

### Self-reminders

The final theme that emerged from the thematic analysis depicted that the nurses had to practice mindfulness to remind themselves that what they are doing is crucial for the community which have highlighted a sense of altruism and empathy and made them feel motivated. For instance, one of the nurses said, "...I need to remind myself that we are doing great work and that I am not only practicing my nursing skills but rather defending the health of the country and the people during the duty especially when we have a high influx and high stress...as this is exactly why I enrolled in nursing school.. to save lives..." (N7). Another nurse also proclaimed, "...what makes you feel good at the end of the day after being in the mid of the storm is that when you go back home feeling that you have done good for the patient...regardless that you are being physically and psychologically challenged..." (N11). Another nurse also said, "...sometimes I stop everything I am doing and just reflect on my work...I feel like I need to look at the details and remind myself that what we are doing is actually heroic ...we are sacrificing our health and our family's safety to save lives... to do good for the country because it is in our hands now... this makes all of it worth it and gives you a boost and keeps you going..." (N9).

## Discussion

The increasing number of positive COVID-19 cases during the recent outbreak in Lebanon, and the high prevalence of critical cases needing intensive care, equipment, and resources have placed tremendous pressure on the healthcare professionals working on the frontlines, especially nurses. On top of that, the frontline nurses in Lebanon are dealing with a deepening economic, political, and humanitarian crisis that has been crowned by a cataclysmic explosion at the port of Beirut, which rendered them facing the pandemic with minimal resources. This research paper have highlighted the needs and coping mechanisms employed by frontline ground zero nurses in dealing with the most recent nationwide outbreak of COVID-19 in an attempt to draw the attention to and get a genuine understanding of the actual needs of these nurses and explore their perception on the need for psychological support. The results of this study have shown that the nurses working on the frontlines in Lebanon are not receiving the proper support whether structural and financial, or even psychological support. The nurses who participated have voiced that what they have been receiving as support is inadequate at the least and they need professional psychological counseling. This is consistent with Mitchell (2019) which have published a report on the frontline nurses in the UK and have shown a high alarming rate of suicidality, while the nurses' complaints and reports on their mental health to their superiors were ignored and not addressed properly.<sup>[15]</sup> For instance, an editorial published in 2018, have highlighted the mental health of nurses have always been treated as an individual responsibility rather than an organizational and national policy need especially when the issue is raised due to lack of staffing and resources, the management tend to stress the notion of resilience and strength of nurses rather than tackling the issue and providing actual support for them.<sup>[16]</sup> Our findings are also supported by Watson (2020) which have reported that nurses usually disregard their mental health if not taken care of.<sup>[17]</sup> The research shows that mental health of nurses is usually overlooked and rather stigmatized as being a drag to the work of the health-care team, thus it is usually not voiced or disregarded which stresses the important need for professional psychological support. The results of our research papers are also in line with Maben, Taylor, and Bridges (2020) which have documented the need for structural and formal psychological help and guidance for frontline COVID-19 nurses in order for them to be able to persevere in their work.<sup>[18]</sup> In addition, the results of our study have shown that the frontline nurses have yielded to avoid exposure to media portals in order to avoid accentuating their stress as they have reported that news reports and social media have been significantly negative in portraying the situation rather than help in finding and highlighting solutions. This is consistent with Keles et al.<sup>[19]</sup> (2020) and Shensa et al.<sup>[20]</sup> (2018) which have previously reported the negative influence of media channels on the psychological health of individuals. In addition, Cinelli et al.<sup>[21]</sup> (2020) have

carried out a study which have resonated with our findings. The research has shown that media and social media platforms have contributed immensely to the development of a huge infodemic that have precipitated the rise of fake news and fear among communities regarding the pandemic, which in turn have made the work of frontline healthcare workers even more challenging in facing the misconceptions and the associated stigma. Moreover, our results have shown that the surveyed frontline nurses have resorted to religious coping, self-reflection and mindfulness to cope with the severely spiraling situation with the pandemic, where they had to remind themselves of the altruism and compassion they practice in their profession as in order to keep providing the community with the need care. This is consistent with Chow et al.<sup>[22]</sup> (2021), which have surveyed frontline COVID-19 workers and found that religious coping was an essential strategy adopted by the nurses to overcome the prevalent stress and depression that has been precipitated by the pandemic. Our findings have also been corroborated by Lee et al.<sup>[23]</sup> (2020) which have documented the reliance on religious and spiritual reflection among frontline nurses to mediate the rising fear and hopelessness that has been incited by the rising outbreak of COVID-19.

### Limitations

The key drawback of this research may have been the failure to perform the interviews via extended face-to-face interactions, which could have improved the robustness of the qualitative results. This was, nevertheless, necessary in order to avoid the possibility of exposure between the investigators and the respondents. Thus, several procedures followed by the researchers verified the validity of the results, although the interviews were virtually carried out.

### Conclusion

In the light of the swirling crises the frontline nurses working in ground zero hospitals in Beirut have been facing the pandemic while fighting off their psychological distress. This research paper have shown that the mental health of these nurses have not been tackled with proper measures, where the nurses voiced their negative perception of ineffective support strategies need for technical, structural and formal psychological support. It was reported that media were a significant cause of escalating anxiety and stress as it was not possible to determine the validity of reports or information circulated. In addition, their endurance and coping strategies were strengthened by religious and spiritual reflection coping, compassion for helping society and the nation, and reminding themselves of the importance of their profession.

### Recommendations

This paper calls on the health policy leaders in the country; the ministry of health and the professional orders and syndicates to take notice to the psychological well-being of these nurses

and provide them with applicable, effective and professional psychological support systems. To boost their self-esteem, morale, and the capacity of HCWs to adapt to the disease outbreak, the improvement of health networks should be facilitated by supplying frontline HCWs with critical knowledge about accessible mental health resources. The researchers stress the need to find alternative solutions to the lack of equipment in order to satisfy the structural needs of these nurses and potentiate them to respond to the outbreak. Not only that, but sustainable response plans shall be put in place so that similar crises would not render us uncappable and would not deplete the nursing workforce. Sustainable strategies and emergency response plans would aid the healthcare workers to follow systemic methods in dealing with health crisis. Moreover, the results represent a guide and motivation for potential research on resilience and the need for resilience-based approaches in psychology research and education, preparation and funding for frontline health professionals in Lebanon and the region.

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### References

1. Ahmed A, Aqeel M, Aslam N. Covid-19 health crisis and prevalence of anxiety among individuals of various age groups: A qualitative study. *J Ment Health Train* 2020;16:58–66.
2. Alradhawi M, Shubber N, Sheppard J, Ali Y. Effects of the Covid-19 pandemic on mental well-being amongst individuals in society. A letter to the editor on "The socio-economic implications of the coronavirus and Covid-19 pandemic: A review". *Int J Surg* 2020;78:147–8.
3. Nyashanu M, Pfende F, Ekpenyong M. Exploring the challenges faced by frontline workers in health and social care amid the Covid-19 pandemic: Experiences of frontline workers in the English Midlands region, UK. *J Interprof Care* 2020;34:655–61.
4. Ng QX, De Deyn MLZQ, Lim DY, Chan HW, Yeo WS. The wounded healer: A narrative review of the mental health effects of the Covid-19 pandemic on healthcare workers. *Asian J Psychiatr* 2020;54:102258.
5. Ji D, Ji YJ, Duan XZ, Li WG, Sun ZQ, Song XA, et al. Prevalence of psychological symptoms among ebola survivors and healthcare workers during the 2014-2015 ebola outbreak in Sierra Leone: A cross-sectional study. *Oncotarget* 2017;8:12784–91.
6. Shah N, Kuriansky J. The impact and trauma for healthcare workers facing the ebola epidemic. The psychosocial aspects of a deadly epidemic: What ebola has taught us about holistic healing. Santa Barbara, California: ABC-CLIO; 2016. p.91–109.
7. Minihan E, Gavin B, Kelly BD, McNicholas F. Covid-19, men-

- tal health and psychological first aid. *Ir J Psychol Med* 2020;37:259–63.
8. Kılıç N, Şimşek N. The effects of psychological first aid training on disaster preparedness perception and self-efficacy. *Nurse Educ Today* 2019;83:104203.
  9. El Sayed MJ. Beirut ammonium nitrate explosion: A man-made disaster in times of the Covid-19 pandemic. *Disaster Med Public Health Prep* 2022;16:1203–7.
  10. Shosha GA. Employment of Colaizzi's strategy in descriptive phenomenology: A reflection of a researcher. *Eur Sci J* 2012;8:31–42.
  11. Schmitt F. Social epistemology. In: Greco J, Sosa Ernest, editors. *The Blackwell guide to epistemology*. Malden, Massachusetts: Wiley-Blackwell; 2017. p.354–82.
  12. Corwin ZB, Clemens RF. Analyzing fieldnotes: A practical guide. *Handbook of qualitative research in education*. Cheltenham UK: Edward Elgar Publishing; 2020. p.489–502.
  13. Anney VN. Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *J Emerg Trend Educ Res Policy Stud* 2014;5:272–81.
  14. Speziale HS, Streubert HJ, Carpenter DR. *Qualitative research in nursing: Advancing the humanistic imperative*. 5th ed. Hong Kong: Lippincott Williams & Wilkins; 2011.
  15. Mitchell G. Figures spark call for inquiry into alarming levels of nurse suicide. Available at: <https://www.nursingtimes.net/news/workforce/figures-spark-call-for-inquiry-into-alarming-levels-of-nurse-suicide-29-04-2019/>. Accessed Sep 25, 2023.
  16. Traynor M. Guest editorial: What's wrong with resilience. *J Res Nurs* 2018;23:5–8.
  17. Watson P. Caring for yourself and others during the Covid-19 pandemic: Managing healthcare workers' stress. *Compassion in action webinar series*. Available at: <https://www.youtube.com/watch?v=F4LU-EoAFew>. Accessed Sep 25, 2023.
  18. Maben J, Taylor C, Bridges J. Guidance to support nurses' psychological well-being during Covid-19 crisis. University of Surrey and the University of Southampton. Available at: <https://www.surrey.ac.uk/sites/default/files/2020-05/guidance-to-support-nurses-psychological-well-being-during-covid-19-crisis-final.pdf>. Accessed Sep 25, 2023.
  19. Keles B, McCrae N, Grealish A. A systematic review: The influence of social media on depression, anxiety and psychological distress in adolescents. *Int J Adolesc Youth* 2019;25:79–93.
  20. Shensa A, Sidani JE, Dew MA, Escobar-Viera CG, Primack BA. Social media use and depression and anxiety symptoms: A cluster analysis. *Am J Health Behav* 2018;42:116–28.
  21. Cinelli M, Quattrocioni W, Galeazzi A, Valensise CM, Brugnoli E, Schmidt AL. The Covid-19 social media infodemic. *Sci Rep* 2020;10:16598.
  22. Chow SK, Francis B, Ng YH, Naim N, Beh HC, Ariffin MAA, et al. Religious coping, depression and anxiety among healthcare workers during the Covid-19 pandemic: A Malaysian perspective. *Healthcare Basel* 2021;9:79.
  23. Lee SA, Mathis AA, Jobe MC, Pappalardo EA. Clinically significant fear and anxiety of Covid-19: A psychometric examination of the coronavirus anxiety scale. *Psychiatry Res* 2020;290:113112.