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PSYCHOLOGICAL AND EMOTIONAL IMPACTS CAUSED ON NURSES AFTER A DISASTER SITUATION: A SCOPING REVIEW

IMPACTOS PSICOLÓGICOS E EMOCIONAIS PROVOCADOS NO ENFERMEIRO APÓS SITUAÇÃO DE CATÁSTROFE: UMA SCOPING REVIEW

IMPACTOS PSICOLÓGICOS Y EMOCIONALES CAUSADOS EN EL ENFERMERO TRAS UNA SITUACIÓN DE CATÁSTROFE: UNA SCOPING REVIEW

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Abstract

Introduction: Given the relevance of psychological impacts on nursing teams working in disaster contexts, it is essential to invest in support, education and simulation strategies to prevent post-traumatic stress disorder (PTSD), anxiety and burnout, while promoting mental health. **Objective:** To identify, through a scoping review, the main psychological and emotional effects experienced by nurses, as well as the factors associated with their vulnerability and resilience in these scenarios. **Methods:** A scoping review was conducted, according to the Joanna Briggs Institute recommendations. The search was performed using the EBSCOhost search engine in the MEDLINE Ultimate, CINAHL Ultimate, and MedicLatina databases. A total of 161 articles were analyzed, of which 6 met the inclusion criteria, revealing high levels of PTSD, anxiety, and burnout among nurses operating in disaster contexts. **Results:** Healthcare professionals who respond to a disaster, regardless of the nature of the event, suffer a strong psychological and emotional impact[1-3]. Less experienced professionals, with limited support, who were psychologically affected prior to the event and employ ineffective coping strategies are more likely to develop PTSD symptoms[1]. Studies suggest the provision of emotional support before, during, and after an event, as well as debriefings among peers[3]. **Conclusion:** Professionals working in disasters face traumatic situations that affect their mental health, with nurses being the most vulnerable due to their direct involvement with victims. To reduce these negative impacts, the importance of education and simulation, early recognition of psychological symptoms and the use of strategies such as stress management, physical/social activities, and the prioritization of basic needs is emphasised.

Keywords: Attitude of Health Personnel; Disaster Medicine; Mass Casualty Incidents; Psychosocial Impact.

Resumo

Introdução: Dada a relevância dos impactos psicológicos nas equipas de enfermagem que atuam em contextos de catástrofe, torna-se essencial investir em estratégias de suporte, educação, simulação, prevenindo transtorno de stresse pós-traumático (TSPT), ansiedade, *burnout* e promovendo a saúde mental. **Objetivo:** Identificar, através de uma *scoping review*, os principais efeitos psicológicos e emocionais sofridos pelos enfermeiros, bem como os fatores associados à sua vulnerabilidade e resiliência nesses cenários. **Métodos:** *Scoping review*, segundo as recomendações Joanna Briggs Institute. Pesquisa realizada através do motor de busca EBSCOhost nas bases de dados MEDLINE Ultimate, CINAHL Ultimate e MedicLatina. Foram analisados 161 artigos, dos quais 6 cumpriram os critérios de inclusão evidenciando elevados níveis de TSPT, ansiedade e *burnout* nos enfermeiros que atuam em contextos de catástrofe. **Resultados:** Os profissionais de saúde que intervêm perante uma catástrofe, independentemente da natureza do evento, sofrem um forte impacto psicológico e emocional[1-3]. Os profissionais menos experientes, com pouco suporte, afetados psicologicamente antes do evento e com estratégias de *coping* ineficazes apresentam uma maior probabilidade de desenvolver sintomas de TSPT[1]. Estudos sugerem suporte emocional antes, durante e depois de um evento, assim como *debriefings* entre os pares[3]. **Conclusão:** Profissionais que atuam em catástrofes enfrentam situações traumáticas que afetam a sua saúde mental, sendo os enfermeiros os mais vulneráveis devido ao envolvimento direto com as vítimas. Para reduzir esses impactos negativos, salienta-se a importância da educação e simulação, reconhecimento precoce de sintomas psicológicos e o uso de estratégias como gestão do stresse, atividades físicas/sociais e priorização de necessidades básicas.

Palavras-chave: Atitude do Pessoal de Saúde; Impacto Psicossocial; Incidentes com Feridos em Massa; Medicina de Desastres.

Resumen

Introducción: Dada la relevancia de los impactos psicológicos en los equipos de enfermería que actúan en contextos de catástrofe, resulta esencial invertir en estrategias de apoyo, educación y simulación, preveniendo el trastorno de estrés postraumático (TEPT), la ansiedad y el *burnout*, y promoviendo la salud mental. **Objetivo:** Identificar, mediante una scoping review, los principales efectos psicológicos y emocionales sufridos por los enfermeros, así como los factores asociados a su vulnerabilidad y resiliencia en estos escenarios. **Métodos:** *Scoping review*, según las recomendaciones del Joanna Briggs Institute. La investigación se realizó mediante el motor de búsqueda EBSCOhost en las bases de datos MEDLINE Ultimate, CINAHL Ultimate y MedicLatina. Se analizaron 161 artículos, de los cuales 6 cumplieron los criterios de inclusión, evidenciando elevados niveles de TEPT, ansiedad y *burnout* en los enfermeros que trabajan en contextos de catástrofe. **Resultados:** Los profesionales de la salud que intervienen ante una catástrofe, independientemente de la naturaleza del evento, sufren un fuerte impacto psicológico y emocional[1-3]. Los profesionales menos experimentados, con poco apoyo, afectados psicologicamente antes del evento y con estrategias de *coping* ineficaces presentan mayor probabilidad de desarrollar síntomas de TEPT[1]. Los estudios sugieren apoyo emocional antes, durante y después de un evento, así como sesiones de *debriefing* entre pares[3]. **Conclusión:** Los profesionales que actúan en catástrofes enfrentan situaciones traumáticas que afectan su salud mental, siendo los enfermeros los más vulnerables debido a su implicación directa con las víctimas. Para reducir estos impactos negativos, se destaca la importancia de la educación y la simulación, el reconocimiento precoz de síntomas psicológicos y el uso de estrategias como la gestión del estrés, actividades físicas/sociales y la priorización de necesidades básicas.

Descriptores: Actitud del Personal de Salud; Impacto Psicosocial; Incidentes con Víctimas en Masa; Medicina de Desastres.

Introduction

According to *Lei de Bases da Proteção Civil* (Framework Law on Civil Protection) "A disaster is a serious accident or series of serious accidents liable to cause significant material damage and, possibly, casualties, severely affecting living conditions and the socio-economic base in certain areas or throughout the national territory"[4].

Disasters severely disrupt the functioning of a community, causing destruction, threatening lives and leading to death, injury and illness, long-term disability, loss of property and disruptions to social support, among many other adversities[1].

Beyond the individuals who experience or are directly affected by disasters, those within their family and professional spheres may also exhibit PTSD[1].

Victims are considered to be those who are directly exposed to an incident, but many others should also be considered. Thus, we can classify victims into categories as follows: "Primary Victims: directly exposed; Secondary Victims: family members of primary victims; Tertiary Victims: professionals involved in rescue efforts; Quaternary Victims: community involved in the disaster; Fifth-Level Victims: not directly involved; Sixth-Level Victims: chance prevented direct exposure"[5].

Accordingly, the professionals' experience resulted in psychosocial impacts, including distress in dealing with the effects on the population under their care, as well as in managing the impacts on their personal or family lives[6]. Consequently, they considered the disaster to be a traumatic experience in which the professional also suffers. In summary, professionals may become victims and develop stress reactions which, although normal, can evolve into psychological/psychiatric pathology[5].

The psychological distress of professionals is linked to their inexperience in responding to disasters, as well as to the unpredictability of the impacts on the community and the complex care environment, which ultimately generates stress[6].

National and global concern regarding the psychological impact of disasters encompasses the mental health of healthcare professionals, who may also be considered survivors and victims. Several studies warn of high levels of post-traumatic stress, anxiety, depression, occupational stress and burnout after their intervention in specific scenarios, also highlighting the "heroic attitude", altruism, empathy and the difficulty/stigma in seeking help as being the most harmful to the mental health of these professionals[7].

In fact, mental health encompasses emotional, psychological and social well-being. When affected, it conditions how we think, feel and interact, impairing professional performance, leading to errors/failures and triggering feelings of incompetence, work-related demotivation, isolation, cynicism, guilt, and even suicide[7].

Nurses are fundamental to the planning, response and recovery phases of humanitarian aid, making it imperative to explore their experiences for future situations. There is a need to invest in this area to deepen knowledge of disasters within nursing, consequently improving critical thinking skills and readiness to respond[8].

Education and training must be appropriate and evidence-based, drawing from the reflections of nurses who have experienced disaster responses. By learning from nurses' previous experiences in disaster situations, educational interventions can be developed to include strategies that enhance nurses' psychological resilience. Understanding how nurses act and respond, how they communicate, and identifying the most favorable leadership techniques is crucial to developing an awareness of how to act in the future[9].

Although nurses and other professionals involved in disasters are often seen as heroes, it is crucial to raise awareness regarding the need for psychological self-care strategies and prioritize the impact of the profession on their mental and psychological health, as they may also need help and perform a vital role in society by asssisting its members. Thus, organizations must play an active role in crisis management, which will enable greater motivation and also a better and healthier adaptation to the unforeseen nature of crises, given that unpredictability is a characteristic of disasters[7].

Methodology

This study employed a scoping review methodology, according to Joanna Briggs Institute recommendations. The core research question was defined using the PCC framework as: What is the psychological and emotional impact (C) experienced by nurses (P) following a disaster situation (C)? (Table 1).

Table 1: PCC.

Population	P	Nurse
Concept	C	Psychological and Emotional Impact
Context	C	Disaster Situation

The search was performed using the EBSCOhost search engine in the MEDLINE Ultimate, CINAHL Ultimate, and MedicLatina databases. This process occurred between March 26 and 27 of 2024, using DeCS descriptors with the following search strategy: “psychosocial impact” AND “health personnel” AND “mass casualty incidents” AND “disaster medicine”.

The inclusion criteria applied were: healthcare professionals affected by disaster situations; English and Portuguese literature publications published between 2019 and 2024, available in full-text and peer reviewed. The exclusion criteria considered were: target age group up to 18 years and studies focusing exclusively on COVID-19 (Table 2).

Table 2: Exclusion criteria.

Target age group up to 18 years
Studies focusing exclusively on COVID-19

A total of 161 articles were initially retrieved; however, inclusion/exclusion criteria had to be applied to refine the results and align with the research focus.

The methodology of this scoping review followed a narrative thematic approach to data analysis, which allowed for an in-depth exploration of the literature.

Thus, following detailed analysis, five duplicate articles were excluded, 144 after reading the title and six after reading the abstract. After reading the six remaining articles in full, these same six articles were included for discussion, as they directly addressed the research objective (Figure 1).

Subsequent to the data extraction from the studies, the information was analyzed to identify recurrent themes and conceptual patterns. Concurrently, a narrative description of the characteristics of the studies was performed. This combination allowed the mapping of the literature and the identification of gaps, providing a comprehensive overview of the field. Furthermore, a double-blind methodology was employed in the review of the studies.

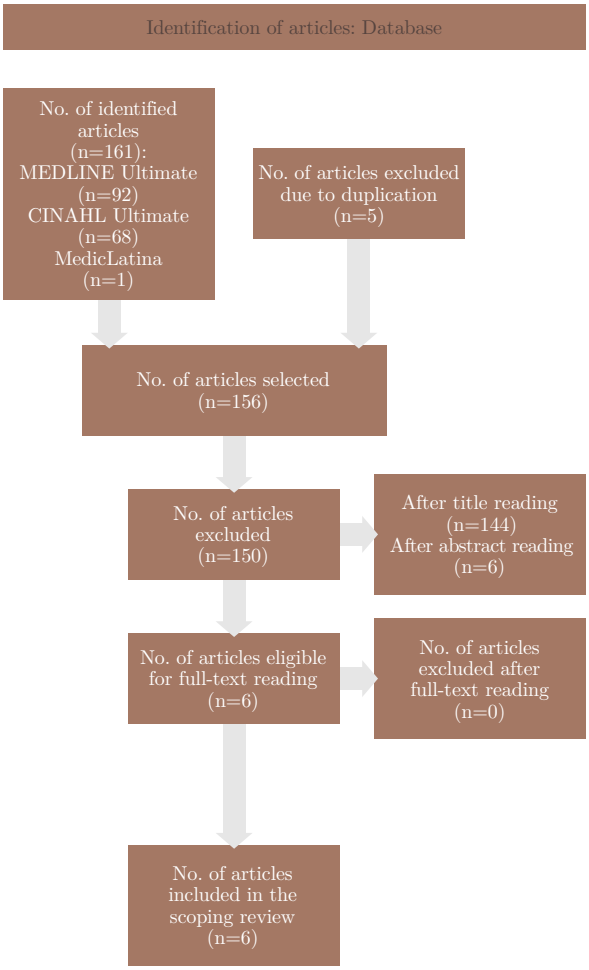

Figure 1: Adapted from Page *et al* (2021)[10].

Results

The 6 articles included in the present scoping review are detailed in the table below (Table 3), which contains the title and authors of the articles, the year of publication, the objective of the study, the main results found and the conclusions. This compilation provides an overview of the current evidence related to the addressed topic, focusing on the psychological and emotional impact on healthcare professionals and the associated factors identified during disaster situations.

Table 3: Synthesis of the articles.

Article identification	Study Design	Objective	Result
Experiences of nurses involved in natural disaster relief: A meta-synthesis of qualitative literature (2020)[9]	Qualitative Meta-synthesis.	To explore the experiences of nurses after experiencing natural disasters.	Leadership and adaptability in problem-solving are essential for enhancing disaster management, being influenced by factors such as legislation, competencies, local coordination, and preparedness. The importance of empowerment in decision-making is noted and related to effective leadership, communication and trust. Resilience was also identified as a defense mechanism for coping with pressure situations, which are often extreme. The significance of solid leadership and continuous psychological support to ensure the emotional well-being of professionals is highlighted.
A Systematic Review of the Impact of Disaster on the Mental Health of Medical Responders (2019)[1]	Systematic Literature Review.	To assess the psychological impact of disasters on healthcare professionals and to identify potential associated risk factors.	Healthcare professionals, particularly those working in pre-hospital emergency and emergency departments, permanently face critical and traumatic situations that demand high-quality care, which has demonstrated a negative impact on their psychological/mental health. Following a disaster, the most frequent psychological illness among these professionals is PTSD, which may occur concurrently with depression, substance abuse and other anxiety disorders. Teamwork and peer support, alongside appropriate training in communication and stress management skills, help prevent the development of psychiatric disorders.
A day in the life: psychological impact on emergency responders during the 22 March 2016 terrorist attacks (2024)[11]	Qualitative Study and In-depth Interview.	To understand the stress factors experienced by emergency first responders and their psychological impact, and to identify the factors that either facilitated or limited their response and their experience during after-action debriefings.	The emergency response to terrorist attacks encompasses several different dimensions of events that can induce stress. The study revealed that preparedness is fundamental. The importance of leadership and teamwork was highlighted in the study as a protective factor, while there was criticism of leadership causing additional stress, however, this did not seem to compromise the adequacy of the emergency response. The study indicates that the main stress factors experienced were: a sense of constant threat; feelings of insecurity; additional stress and insecurity regarding appropriate actions; helplessness; emotional stress; feelings of guilt and frustration.
Lessons in Post-Disaster Self-Care From 9/11 Paramedics and Emergency Medical Technicians (2019)[3]	To explore preferred self-care practices among paramedics and emergency medical technicians (EMTs) who responded to the September 11, 2001, terrorist attack in New York City.	Qualitative study with convenience sampling.	Professionals who have experienced disaster events such as the September 11 terrorist attack undergo situations that can be psychologically disturbing. The long-term effects of this exposure may lead to depression, anxiety and withdrawal. The participants' responses highlighted the importance of prioritizing their own basic physical needs, both before and after a disaster: ensuring adequate sleep, nutrition, engagement in physical and social activities and conducting periodic routine check-ups. They also reported the benefits of establishing a routine and strengthening existing social ties and support infrastructure, such as building a supportive relationship with a psychologist and peers prior to the disaster. The findings suggest the provision of emotional support to first responders before, during and after a traumatic event, along with peer debriefings.
Emotional and psychological implications for healthcare professionals in disasters or mass casualties: A systematic review (2021)[2]	Systematic Literature Review.	To synthesize and describe the emotional and psychological implications for healthcare professionals who provided care during an incident or a mass casualty disaster.	Feelings of sadness, restlessness, anxiety, insomnia, helplessness, fear, panic, among others, were identified as common reactions among nurses and other healthcare professionals dealing with mass casualties or disasters. These reactions can lead to PTSD, effectively turning professionals into hidden victims. However, positive feelings such as commitment, professional satisfaction and pride in their role during the disaster event were also found. Thus, efficient professional training becomes a prime preventative factor, associated with simulation scenarios, the development of disaster and emergency plans, as well as psychological support for professionals, cognitive-behavioral therapy or meditation.
Understanding the psychological impacts of responding to a terrorist incident (2021)[12]	Detailed Analysis of Qualitative Interview Data.	To gain further understanding of first responders' perspectives on their involvement in major incident responses, specifically assessing how and which individual and systemic factors contributed to their preparedness or may have facilitated or hindered their response.	As described by the professionals themselves in interviews, they experienced symptoms of emotional exhaustion, excessive worry (anxiety), intrusive memories, flashbacks, burnout and avoidance behaviors. They emphasize the importance of psychosocial support for those responding to these tragic incidents and offer a series of recommendations for organizational preparedness for future events.

Discussion

Healthcare professionals, particularly those working in pre-hospital emergency and emergency departments, continuously face critical and traumatic situations that demand high-quality care, which has proven to have a negative impact on their psychological/mental health[1].

There is a consensus across all analyzed articles that nurses and other healthcare professionals who respond to a disaster, regardless of the nature of the event, suffer a significant psychological and emotional impact, rendering them susceptible to the development of psychological disorders including PTSD, anxiety disorders, depression, sleep disturbances, emotional exhaustion and flashbacks. Furthermore, feelings such as anger, irrationality, alienation, the development of somatic symptoms and substance abuse were also frequently identified and reported.

Feelings of sadness, restlessness, anxiety, insomnia, helplessness, fear, panic, among others, were identified as common reactions among nurses and other healthcare professionals dealing with mass casualties or disasters, leading to PTSD and effectively turning professionals into hidden victims[2].

The requirement for professionals to make life-or-death decisions, given that disaster medicine necessitates allocating resources to those who can be saved, induces extreme emotional stress, as caregivers are unable to provide the standard of care they would normally deliver in a non-disaster setting[11].

The long-term effects of interventions in disaster situations can lead to depression, anxiety, and withdrawal[3]. To prevent these issues, study participants emphasized the importance of prioritizing their own basic physical needs, both before and after a disaster: ensuring adequate sleep, nutrition, engagement in physical and social activities, as well as undergoing periodic routine check-ups[3].

Children constitute a particularly vulnerable group; when severely injured or deceased, they also represent a risk factor for healthcare professionals[1].

Nurses are more susceptible to developing psychiatric disorders following a disaster compared to physicians. This disparity may be due to nurses' tendency to develop stronger emotional bonds with victims; however, further research is needed to fully understand the difference in prevalence[1].

Concerning terrorist attacks, the primary stressor for professionals during the acute phase was the feeling that a new attack could occur at any moment, resulting in a constant sense of threat[11]. In addition to this constant threat, the lack of preparation and training contributed to additional stress and insecurity regarding appropriate action, further compounded by the emergence of leadership issues[11].

One study suggests that less experienced healthcare professionals, those with limited social support, psychologically affected prior to the event, those with higher exposure to the disaster situation, prior trauma exposure, adaptation difficulties or ineffective coping strategies demonstrate a higher likelihood of developing PTSD symptoms[1]. These findings are also consistent with another study, which defines pre-disaster factors as including personal factors, such as significant events in the professional's life prior to the event, including personal trauma and personal history, demonstrating a relationship with the risk of mental health issues following a disaster event[2].

Furthermore, the lack of preparation and training leads to professional frustration, demonstrating that preparedness is fundamental[11].

Protective factors against the development of these conditions include the importance of developing technical, leadership and communication skills, while emphasizing teamwork and peer support. Positive communication is identified as crucial for fostering resilience and enabling nurses to find innovative and creative solutions during real-time events[9]. Furthermore, resilience was highlighted as a defense mechanism for coping with often extreme pressure situations[9].

In parallel with these individual competencies, other fundamental factors also emerge, including adequate legislation, effective local coordination, and stakeholders' knowledge of disaster plans, coupled with a robust psychological and social support network. These

organizational factors are necessary to mitigate feelings of insecurity and helplessness and promote the development of resilience and effective coping strategies.

In one of the studies, participants acknowledged the importance of addressing their psychosocial needs as part of a comprehensive self-care approach. This included dedicating time to seek psychological support and engaging in activities such as music, exercise, and religious practices[3].

Positive emotions reported included professional satisfaction, pride and commitment concerning the role performed during the exceptional event[2].

Findings from several studies suggest providing emotional support to first responders before, during and after a traumatic event, as well as conducting peer debriefings[3,12].

It is also suggested that interventions be developed to enhance nurses' response capabilities in disaster situations, promoting the professional development of nurses working in this field, with the ultimate goal of building more effective disaster management systems and strengthening the vital role of nursing in this domain[9].

Adequate training and the subsequent acquisition of communication and stress management skills can also empower professionals, increase their confidence and amplify psychological resilience, demonstrating that these factors serve as protective factors against the development of psychiatric disturbances in healthcare professionals[1].

Thus, efficient professional training becomes a prime preventative factor, which should be complemented by simulation scenarios, the development of disaster and emergency plans, as well as psychological support for professionals, including cognitive-behavioral therapy and meditation[2].

Conclusions

Healthcare professionals working in urgent and emergency care, both in pre-hospital and in-hospital settings, constantly face critical and traumatic situations that demand high-quality care. This continuous exposure can negatively impact their psychological and mental health. Among these professionals, nurses are particularly vulnerable, demonstrating a higher propensity for developing psychiatric disorders following disaster situations, possibly due to the more intense emotional bonds they establish with victims.

To minimize this negative impact, it is fundamental to invest in education and simulation as strategies for skill acquisition and development, particularly in leadership and communication. Early recognition of psychological and mental manifestations is also crucial, enabling a rapid and appropriate response to professionals' needs. Furthermore, individual strategies such as stress management, the promotion of physical and social activities, and the prioritization of basic needs are imperative for preserving the emotional well-being of nurses. Therefore, it is recommended that healthcare institutions adopt policies implementing regular training programs focused on emotional and leadership competencies, establish protocols for continuous mental health monitoring and guarantee access to psychological support services. Supportive work environments that encourage breaks, physical activity and social support can contribute significantly to the mental health of the team.

To advance knowledge in this field, we suggest conducting studies that assess the long-term impact of educational and simulation interventions on nurses' mental health, as well as the effectiveness of institutional psychological support programs in reducing burnout and post-disaster psychiatric disorders. It is also crucial to investigate the factors that act as facilitators or barriers to the emotional protection of different healthcare professionals exposed to traumatic situations.

References

1. Naushad V, Bierens J, Nishan K, Firjeeth C, Mohammad O, Maliyakkal A, et al. A systematic review of the impact of disaster on the mental health of medical responders. Prehosp Disaster Med. 2019;34(6):632-43. Available from: https://doi.org/10.1017/S1049023X19004874

2. Rodriguez-Arrastia M, García-Martín M, Villegas-Aguilar E, Ropero-Padilla C, Martin-Ibañez L, Roman P. Emotional and psychological implications for healthcare professionals in disasters or mass casualties: A systematic review. J Nurs Manag. 2021;30(1): 298-309. Available from: https://doi.org/10.1111/jonm.13474

3. Smith E, Walker T, Burkle F. Lessons in post-disaster self-care from 9/11 paramedics and emergency medical technicians. Prehosp Disaster Med. 2019;34(3). Available from: https://doi.org/10.1017/s1049023x19004382

4. Assembleia da República. Lei n.º 27/2006. Diário da República. N.º 126, Série I. 3 Jul 2006.

5. Instituto Nacional de Emergência Médica. Situação de Exceção. 1.ª ed. Lisboa: INEM; 2012.

6. Manfrini G, Heidemann I, Costa F, Silva H, Lopes S. Impactos psicossociais sobre trabalhadores da saúde: narrativas 10 anos após o desastre. Saúde Soc. 2023;32(2). Available from: https://doi.org/10.1590/s0104-12902023210739pt

7. Queirós C. Saúde mental nas pandemias e catástrofes: o risco do adoecer psicológico. Territorium. 2023;30(1):61-75. Available from: https://doi.org/10.14195/1647-7723_30-1_5

8. Veenema T, DeRuggiero K, Losinski L, Barnett D. Hospital administration and nursing leadership in disasters: an exploratory study using concept mapping. Nurs Adm Q. 2017; 41(2):151-63. Available from: https://doi.org/10.1097/NAQ.0000000000000224

9. Xue C, Shu Y, Hayter M, Lee A. Experiences of nurses involved in natural disaster relief: a meta-synthesis of qualitative literature. J Clin Nurs. 2020;29(23-24):4514-31. Available from: https://doi.org/10.1111/jocn.15476

10. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;372:n71. Available from: https://doi.org/10.1136/bmj.n71

11. Muysewinkel E, Vesentini L, Deynse H, Vanclooster S, Bilsen J, Van Overmeire R. A day in the life: psychological impact on emergency responders during the 22 March 2016 terrorist attacks. Front Psychiatry. 2024;15. Available from: https://doi.org/10.3389/fpsyt.2024.1353130

12. Skryabina E, Betts N, Amlôt R, Reedy G. Understanding the psychological impacts of responding to a terrorist incident. Eur J Psychotraumatol. 2021;12(1). Available from: https://doi.org/10.1080/20008198.2021.1959116

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AM: Study coordination, study design, data collection and analysis, review and discussion of results.
AB; CP; JF: Coordination of the study, review and discussion of the results.
All authors have read and agreed with the published version of the manuscript.

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