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TIPOS DE DESCONFORTO E INTERVENÇÕES PRÉ-HOSPITALARES ADMINISTRADAS ÀS VÍTIMAS DE TRAUMA: PROTOCOLO DE REVISÃO SCOPING

TYPES OF DISCOMFORT AND PRE-HOSPITAL INTERVENTIONS ADMINISTERED TO TRAUMA VICTIMS: SCOPING REVIEW PROTOCOL

TIPOS DE MALESTAR E INTERVENCIONES PREHOSPITALARIAS A LAS VÍCTIMAS DE TRAUMATISMOS: PROTOCOLO DE REVISIÓN SCOPING

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RESUMO

Introdução: Trauma é uma das principais causas de morte e incapacidade no mundo. As vítimas, além da dor aguda provocada pelo evento traumático, experienciam outros tipos de desconforto durante o socorro pré-hospitalar, como frio, ansiedade e medo, que podem agravar o estado geral e dificultar o cuidado.
Objetivo: Identificar os tipos de desconforto relatados por vítimas de trauma e mapear as intervenções farmacológicas e não farmacológicas realizadas no contexto pré-hospitalar para o seu alívio.
Métodos: Será realizada uma revisão de acordo com a metodologia do Instituto Joanna Briggs (JBI). Incluir-se-ão estudos quantitativos, qualitativos e revisões sistemáticas, sem restrição temporal, em português, inglês e espanhol. Serão utilizadas as bases de dados MEDLINE (PubMed), CINAHL (EBSCO), Scopus, Embase, APA PsycINFO (EBSCO), JBI Evidence Synthesis, e Cochrane Database, assim como o Repositório Científico de Acesso Aberto de Portugal (RCAAP), o OpenGrey e o Banco de Teses da CAPES, pela relevância e qualidade dos estudos que habitualmente apresentam. A extração dos dados será conduzida por dois revisores independentes.
Resultados: Identificar desconfortos mais comuns sentidos pelas vítimas de trauma no pré-hospitalar e principais intervenções administradas para mitigá-los, organizando essas informações de forma sistemática e integrada.
Conclusão: Os resultados deste estudo contribuirão para uma melhor compreensão do impacto dos desconfortos no cuidado pré-hospitalar e ajudarão a orientar práticas futuras, reduzindo lacunas no conhecimento e promovendo cuidados mais eficazes e humanizados.

Palavras-chave: desconforto; traumatismo múltiplo; assistência pré-hospitalar

ABSTRACT

Introduction: Trauma is a leading cause of death and disability worldwide. In addition to acute pain caused by trauma, victims often face discomforts during pre-hospital care, such as cold, anxiety, and fear, which may worsen their condition and hinder care.
Objective: To identify the types of discomforts reported by trauma victims and map pharmacological and non-pharmacological interventions for relief in pre-hospital settings.
Methods: A review will be conducted using the Joanna Briggs Institute (JBI) methodology. Quantitative and qualitative studies, as well as systematic reviews, will be included, without time restrictions, in Portuguese, English, and Spanish. Databases such as MEDLINE (PubMed), CINAHL (EBSCO), Scopus, Embase, APA PsycINFO (EBSCO), JBI Evidence Synthesis, and Cochrane Database will be used. Unpublished studies will be searched in the Scientific Open Access Repository of Portugal (RCAAP), OpenGrey, and the CAPES Theses Database due to their relevance and study quality. Data extraction will be performed by two independent reviewers.
Results: The study aims to identify common discomforts experienced by trauma victims and the interventions applied to alleviate them, presenting this information systematically.
Conclusion: The results of this study will contribute to a better understanding of the impact of discomforts on pre-hospital care and help guide future practices, reducing knowledge gaps and promoting more effective and humanized care.

Keywords: discomfort; multiple trauma; prehospital care

RESUMEN

Introducción: El trauma es una causa principal de muerte e incapacidad en el mundo. Además del dolor agudo, las víctimas experimentan otros tipos de incomodidad durante la atención prehospitalaria, como frío, ansiedad y miedo durante la atención prehospitalaria, lo que puede agravar su estado y dificultar el cuidado.
Objetivo: Identificar los tipos de las incomodidades reportadas por víctimas de trauma y mapear intervenciones farmacológicas y no farmacológicas en el contexto prehospitalario para su alivio.
Métodos: Se realizará una revisión según la metodología del Instituto Joanna Briggs (JBI). Se incluirán estudios cuantitativos, cualitativos y revisiones sistemáticas, sin restricciones temporales, en portugués, inglés y español. Las bases de datos incluyen MEDLINE (PubMed), CINAHL (EBSCO), Scopus, Embase, APA PsycINFO (EBSCO), JBI Evidence Synthesis y Cochrane Database. Estudios no publicados serán buscados en RCAAP, OpenGrey y el Banco de Tesis de CAPES, seleccionados por su relevancia y calidad. La extracción de datos será realizada por dos revisores independientes.
Resultados: Se identificarán las incomodidades más comunes que sienten las víctimas de trauma en el contexto prehospitalario y las intervenciones aplicadas para mitigarlas, organizando la información de manera sistemática.
Conclusión: Los resultados de este estudio contribuirán a una mejor comprensión del impacto de las incomodidades en la atención prehospitalaria y ayudarán a orientar prácticas futuras, reduciendo brechas en el conocimiento y promoviendo una atención más eficaz y humanizada.

Palabras clave: incomodidad; traumatismo múltiple; atención prehospitalaria

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INTRODUCTION

Trauma is one of the leading causes of death and disability worldwide, affecting individuals of all ages (World Health Organization, 2022) and results from various events, including traffic accidents, falls, physical assaults, sports injuries, and natural disasters (Byun et al., 2015). These incidents lead to injuries ranging from simple fractures to complex traumas involving multiple body systems (Ciechanowicz et al., 2020).

In this context, prehospital care is crucial for the survival and recovery of trauma victims. The initial period, from the time of the accident until arrival at the hospital, is essential for patient stabilization and transport. During this phase, pre-hospital healthcare professionals perform critical interventions to minimize injury and improve prognosis. However, trauma victims frequently experience various types of discomfort, which can exacerbate their overall condition and complicate care (Abhilash & Sivanandan, 2020).

Several types of discomfort have already been identified in trauma victims in the pre-hospital setting, such as pain, cold, fear, anxiety, and others that need further exploration. Pain is the most common complaint among trauma victims, which may result directly from injuries such as fractures, lacerations, and bruises or from necessary stabilization procedures, such as intravenous catheter insertion and immobilization (Mota et al., 2022). In many cases, trauma victims are exposed to adverse environmental conditions, especially when incidents occur outdoors, potentially leading to thermal discomfort, such as cold. This can develop rapidly, exacerbating the state of shock and increasing the risk of complications. It can also intensify the sensation of pain and contribute to overall discomfort (van Veelen & Brodmann Maeder, 2021).

Experiencing a traumatic event is often accompanied by significant anxiety. Uncertainty about the extent of the injuries, fear of permanent disabilities, and concern for the well-being of others involved in the incident can contribute to elevated levels of stress and anxiety. This anxiety may hinder patient cooperation during rescue efforts and exacerbate the perception of pain (Jay, 1996). Measures such as the use of cervical collars, rigid stretchers, and limb immobilization are essential to prevent further damage. However, these interventions can cause significant discomfort, especially if maintained for extended periods. Immobilization can lead to physical discomfort as well as a sense of restriction and loss of control, contributing to emotional stress (Mota et al., 2022).

Fear is also commonly present in such incidents, being an emotional response among trauma victims. It may be related to the fear of death, pain, or potential long-term consequences. This emotional state can negatively influence the perception of pain and other discomforts, as well as complicate cooperation during rescue efforts. Fear can be exacerbated by a lack of information and uncertainty about the victim's health status (Mota et al., 2023).

The relationship between these discomforts is complex and interdependent. Pain can worsen anxiety and fear, which, in turn, can amplify the perception of pain. Discomfort caused by cold can intensify the sensation of pain and raise anxiety levels (Mota et al., 2020). While necessary, immobilization can heighten fear and anxiety due to feelings of restriction and helplessness. These interconnected factors not only affect the immediate well-being of the victim but can also influence their long-term recovery process (Mota et al., 2022).

Understanding the various types of discomfort experienced by trauma victims during pre-hospital care and the interventions applied to mitigate them is essential to developing more effective intervention strategies. By mapping and identifying these types of discomfort, it is expected to improve care practices, provide faster and more effective relief, and, consequently, enhance clinical outcomes and the patient's overall experience. Preliminary research conducted in the JBI Evidence Synthesis, Cochrane Database of Systematic Reviews, MEDLINE, and CINAHL databases indicated that there are no published or ongoing Scoping Reviews on this topic. Although systematic reviews addressing certain interventions exist, they focus on specific trauma mechanisms without covering the broader issue. The lack of knowledge about interventions used to alleviate discomfort in trauma victims more generally represents a significant gap in pre-hospital care. Thus, it is crucial to conduct a comprehensive mapping of discomforts and existing interventions.

The purpose of this review is to identify the distinct types of discomfort reported by trauma victims and map the interventions implemented in the pre-hospital setting to reduce discomfort in adults who have suffered trauma.

1. RESEARCH QUESTIONS

- What are the types of discomfort experienced by trauma victims in pre-hospital care?
- What pharmacological and non-pharmacological interventions are administered to mitigate the distinct types of discomfort in trauma victims during pre-hospital care?

2. INCLUSION CRITERIA

Participants

The review will include studies involving adults aged 18 years or older who are trauma victims in pre-hospital care, regardless of gender or any other personal characteristics. Trauma victims will include individuals with injuries caused by falls, traffic accidents, physical assaults, penetrating injuries, and burns (Nogueira, 2014).

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Concept

This review will consider two main concepts: i) the overall discomfort caused by trauma and ii) the interventions applied to relieve each type of discomfort during pre-hospital care. This Scoping Review will cover all interventions, both pharmacological and non-pharmacological, that have been implemented and evaluated by pre-hospital care professionals, such as nurses, physicians, paramedics, emergency technicians, and police, among others, with the goal of reducing discomfort in trauma victims. The term "discomfort" refers to an unpleasant sensation in the body, which may include pain or other undesirable physical or psychological sensations, such as fatigue, dyspnea, or insomnia (Ashkenazy & Ganz, 2019). In this review, we will focus on discomfort resulting from trauma without limiting it to its precipitating mechanism.The interventions considered will include any treatment provided in pre-hospital care, taking into account characteristics such as mechanism of action, duration, dose, frequency, possible adverse reactions, and contraindications. In addition, the trauma mechanism will also be considered.

Context

The clinical context will be restricted to emergency care in a pre-hospital setting. This type of care involves providing critical care in situations with limited resources and in a physically challenging environment, representing the first stage of the trauma care system (Bäckström & Alvinius, 2024). Pre-hospital care is provided at the scene of the incident and during transport to the hospital, following specific protocols, triage, clinical guidelines, and procedures for the transition of care. The average pre-hospital care time for trauma victims can vary significantly, ranging from minutes to several hours, depending on the complexity of care needed and the distance to the hospital (Mota et al., 2021).

3. TYPES OF SOURCES

Quantitative and qualitative studies, primary studies, and systematic reviews will be included. In the quantitative field, experimental studies, such as randomized and non-randomized clinical trials, quasi-experimental studies, and retrospective observational studies, will be considered. Regarding qualitative studies, those using qualitative data, such as phenomenological studies, grounded theory, and ethnographic design, will be included. Systematic reviews regardless of whether they include meta-analyses or meta-syntheses, comprehensive systematic reviews, and mixed-methods reviews will also be considered. In addition, this review will include texts and literature based on opinion or narrative, as well as non-empirical research.

4. METHODS

The proposed review will be conducted according to the JBI methodology for Scoping Reviews (Peters et al., 2020) and in compliance with the PRISMA-ScR extension (Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews) (Tricco et al., 2018). The current protocol has been prepared following the PRISMA-P guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols) (Moher et al., 2015).

This scoping review protocol is registered with the Open Science Framework (https://osf.io/pwz98/).

Search Strategy

A three-step search strategy will be employed in this review to identify published and unpublished studies. Initially, a preliminary search will be conducted in MEDLINE (PubMed) and CINAHL (EBSCO) to identify articles on the topic. The terms found in the titles, abstracts, and indexing terms of these articles will be analyzed to develop a detailed search strategy for MEDLINE (PubMed), including the identified keywords and indexing terms (Table 1). This initial process is crucial to ensure that the search is comprehensive and that all relevant terms are considered. In the second step, the search will be expanded to all databases using the previously identified keywords and indexing terms, ensuring a broader coverage of the available literature. Additionally, any new keywords or terms identified during this phase will be incorporated into the search strategy. In the final step, the reference lists of all included reports and articles will be examined for additional studies. This stepwise approach is designed to maximize the search's effectiveness and minimize the risk of missing relevant studies.

The databases to be searched will include MEDLINE (PubMed), CINAHL (EBSCO), Scopus, Embase, APA PsycINFO (EBSCO), JBI Evidence Synthesis, and Cochrane Database. The inclusion of a wide range of databases aims to ensure that the review encompasses a diversity of sources and perspectives. The search for unpublished studies will cover the Scientific Repository of Open Access of Portugal (RCAAP), OpenGrey, and CAPES Theses Bank. These repositories are selected for their relevance and the quality of studies they typically present.

Published and unpublished studies in English, Spanish, and Portuguese will be included, with no time restrictions. Studies in other languages will be excluded due to time and financial constraints for translations. This linguistic selection ensures a broad range of studies is included while recognizing the project's practical limitations. The described approach aims to guarantee a thorough and rigorous review, significantly contributing to the existing knowledge.

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Table 1 - MEDLINE (PubMed): Searched on october 19, 2024

Search	Query	Records retrieved
#1	((((((((((((((Pain[MeSH Terms]) OR (psychological distress[MeSH Terms])) OR (multiple trauma[MeSH Terms])) OR (burns[MeSH Terms])) OR (Pain[Title/Abstract])) OR (discomfort[Title/Abstract])) OR (hurt[Title/Abstract])) OR (anxiety[MeSH Terms])) OR (fear[MeSH Terms])) OR (penetrating injuries[Title/Abstract])) OR (pharmacological measures[Title/Abstract])) OR (iatrogenic injury[Title/Abstract])) OR (uncomfortable[Title/Abstract])) OR (bone fracture[Title/Abstract])) OR (polytrauma[Title/Abstract])	1,284,250
#2	((((((((((((((((((((((((biofeedback psychology[MeSH Terms]) OR (imagery psychotherapy[MeSH Terms])) OR (cognitive behavior therapy[MeSH Terms])) OR (cryotherapy[MeSH Terms])) OR (musculoskeletal manipulations[MeSH Terms])) OR (relaxation[MeSH Terms])) OR (music therapy[MeSH Terms])) OR (therapeutic touch[MeSH Terms])) OR (massage[MeSH Terms])) OR (acupuncture points[MeSH Terms])) OR (acupressure[MeSH Terms])) OR (non-pharmacological[Title/Abstract])) OR (immobilisation[Title/Abstract])) OR (distraction[Title/Abstract])) OR (family presence[Title/Abstract])) OR (psychosocial intervention[Title/Abstract])) OR (massage[Title/Abstract])) OR (music[Title/Abstract])) OR (progressive relaxation[Title/Abstract])) OR (biofeedback[Title/Abstract])) OR (cognitive behavior therapy[Title/Abstract])) OR (acupunctur[Title/Abstract])) OR (cryotherapy[Title/Abstract])	218,048
#3	(((((((((ambulances[MeSH Terms]) OR (emergency medical technicians[MeSH Terms])) OR (air ambulances[MeSH Terms])) OR (emergency medical services[MeSH Terms])) OR (emergency responders[MeSH Terms])) OR (emt[Title/Abstract])) OR (field triage[Title/Abstract])) OR (out-of-hospital[Title/Abstract])) OR (HEMS[Title/Abstract])) OR (prehospital emergency care[MeSH Terms])	237,378
#4	#1 AND #2 AND #3	286
Language limits (English, French, Spanish and Portuguese)		268

Study Selection

The collected references will be organized and managed using Rayyan Intelligent Systematic Review software, located in Cambridge, USA, and Doha, Qatar, with the removal of duplicate results. The selection of relevant results will begin with the review of titles and abstracts by two independent reviewers with experience in trauma care, following the previously defined inclusion criteria. In the next step, the full texts of the selected studies will be analyzed in detail, again by two independent reviewers, using the same inclusion criteria. Studies that do not meet the established criteria will be discarded, and the reasons for this exclusion will be documented in one of the appendices of the scoping review. In case of disagreements between the reviewers, these will be resolved through discussion and consensus. The methodological quality assessment of the included studies will not be conducted, as this is a scoping review. The entire research process will be described narratively and also presented schematically through a flow diagram, following the PRISMA model, utilizing the PRISMA-ScR extension specific for scoping reviews (Page et al., 2021). This diagram will detail the research process, the selection of results according to the inclusion criteria, and the removal of duplicate results.

Data Extraction

Data extraction from each article, including details about the study participants, concept, context, and methods, will be performed using a modified version of the JBI data extraction instrument (Table 2). To ensure that all important data is gathered and that there is consistency in the analysis among the reviewers, this tool will be tested independently on three of the included studies, and the results will be compared and discussed among the reviewers. If necessary, the extraction tool may be adjusted throughout the review. Data extraction will be conducted independently by two reviewers (FM and XX). If disagreements arise between the reviewers, these will be resolved with the help of a third reviewer (MM). If necessary, the authors of the included studies will be contacted for further information or data clarification.

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Table 2 - Data Extraction Instrument

Details and Characteristics of the Studies
Title, Journal, Year, Author
Country
Context
Participants
Study Type
Collected Results
Type of Trauma
Type of Discomfort Experienced
Interventions Applied to Reduce Discomfort

Data Analysis and Presentation

The organization and synthesis of the information will be conducted using tables and charts to facilitate the reader's understanding. The data will be presented schematically in a table, complemented by charts providing a descriptive summary of the articles included in the review. The conclusions of the selected studies will be presented through a narrative summary.

Subsequently, the obtained results will be categorized according to their similarities, aligning with the objectives and research questions established in this protocol.

In general terms, the presentation of the data will allow for the identification, characterization, and summarization of the available knowledge regarding the discomfort experienced by trauma victims and the interventions applied to mitigate it.

AUTHORS' CONTRIBUTION

Conceptualization, F.M.; investigation, F.M., M.M., M.R.S. and M.C.B.; methodology, F.M., M.M., M.R.S. and M.C.B.; project administration, F.M.; writing-original draft, F.M.; writing-review and editing, F.M., M.M., M.R.S. and M.C.B.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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