

BMJ Open Workplace violence against paramedic personnel: a protocol for a scoping review

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To cite: Hokee MY, Makkink AW, Vincent-Lambert C. Workplace violence against paramedic personnel: a protocol for a scoping review. *BMJ Open* 2023;**13**:e067246. doi:10.1136/bmjopen-2022-067246

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2022-067246>).

Received 08 August 2022
Accepted 30 November 2022

ABSTRACT

Introduction There is evidence to suggest that violence against paramedic personnel is increasing. Several authors report adverse effects linked to exposure to workplace violence. There remain gaps in the knowledge related to specific aspects of workplace violence experienced by paramedics in the prehospital setting.

Methods and analysis This scoping review will consider evidence relating to workplace violence against paramedic personnel. All types of evidence will be considered, including quantitative and qualitative studies, systematic reviews, opinion papers, grey literature, text and papers as well as unpublished materials. This scoping review will be designed and conducted in accordance with the JBI methodology for scoping reviews. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews will guide the reporting process. Sources will include ERIC, Scopus, PubMed, CINAHL, Cochrane Library, ScienceDirect, Web of Science, Sabinet and the DOAJ as well as OpenGrey (<https://opengrey.eu/>). All sources published in English will be considered for inclusion and no date limit will be applied. The searching of the databases will begin 16 January 2023 and will be concluded by 30 January 2023. Three independent reviewers will conduct the study selection and data extraction process. In the event of disagreement related to a particular source, this will be resolved by discussion. The findings of the proposed review will be presented in a narrative style that uses diagrams and tables for reporting.

Ethics and dissemination This scoping review will use published literature available in the public domain and will involve no participants, meaning that ethical approval is not required. The findings of the proposed review will be published in topic relevant peer-reviewed journals and will be presented at associated conferences.

INTRODUCTION

The prehospital setting in which paramedics operate is recognised as a stressful environment with a high rate of occupation-related challenges and risks.¹ One of the risks that paramedics face is becoming victims of workplace violence (WPV). WPV can be defined as an incidence or situation whereby a staff member/s experience abuse, threats or are assaulted during working hours or within their working environment or on their way to

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This review will provide a comprehensive overview of workplace violence against paramedic personnel.
- ⇒ The search strategy will include reviewing nine electronic databases that index peer-reviewed literature. We will also search various sources of grey literature.
- ⇒ We will conduct our review in accordance with JBI methodology for scoping reviews and will use the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews to guide the reporting process.
- ⇒ Only articles published in English will be reviewed, which may introduce bias and limit generalisability.

work.² WPV against paramedics has been an issue for many years and there is evidence to suggest that the incidence has progressively been increasing throughout the world.^{1 3-6} Concerningly, although paramedic experiences of WPV are increasingly being reported, mitigation and preventative strategies appear to be either ineffective or lacking.^{5 7 8} Paramedics who have been exposed to and/or confronted by acts of violence have been found to experience higher levels of stress, a decrease in job satisfaction, increased anxiety, feelings of fear, anger and guilt and even a lack of empathy towards their patients.^{2 3 9 10}

WPV has been categorised into three common forms, namely; verbal violence, physical violence and sexual violence.⁹ Verbal violence has been identified as the most common form of WPV, followed by physical violence and sexual violence.^{9 11} There are several potential perpetrators of WPV against paramedics. The most common perpetrator remains the patient. However, other perpetrators include, but are not necessarily limited to family members, co-workers, bystanders and the general public who have also been linked to acts of violence against paramedics.^{9 11-13}

The high level of risks and stressors that lie within the prehospital environment



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are attributed to paramedics working in dangerous/hazardous environments, consistent exposure to traumatic scenes and situations, the physical demands required to work in this occupation, the strains and cycles of shift work and the organisational and leadership culture that exists within the industry.¹⁴ It has been reported that working in an environment with such a high level of risks and hazards can lead to the development of chronic stress which has been associated with substance abuse, anxiety, depression, burn-out and even suicide.¹⁵

The effects of WPV on paramedics have been reported to be both physically and psychologically damaging.² Paramedics who have been exposed to WPV have reported experiencing higher levels of stress, a decrease in job satisfaction, anxiety, feelings of fear, guilt, unwillingness to continue working and a lack of empathy towards patients.^{2 3 9 10} Overall, the effects of WPV on paramedics have potentially far-reaching consequences that include detrimental effects on paramedics, healthcare systems and patients.^{16 17}

The available data on WPV against paramedic personnel presents a unique opportunity to gather, analyse, organise, consolidate and present current data, views and opinions related to paramedic WPV. Such endeavours are seen as valuable as they form a foundation and focus for further research and the outcomes may assist paramedics and emergency service managers to identify interventions that can reduce the risk of their staff experiencing WPV. The aim of this scoping review will be to systematically map the literature, identify key concepts; gaps in the research; and types and sources of evidence to inform practice, policy-making and research regarding WPV against paramedic personnel. A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews, and Joanna Briggs Institute (JBI) Evidence Synthesis was conducted, and no current or in-progress systematic reviews on the topic were identified.

Review question(s)

What has been reported in the literature about WPV against paramedic personnel?

The following subquestions will be addressed:

1. What are the common forms and causes of WPV against paramedic personnel that have been reported?
2. Who are the perpetrators of WPV against paramedic personnel?
3. What are the negative effects of WPV on paramedic personnel?
4. What strategies have been suggested or are currently being used to mitigate and/or prevent WPV against paramedic personnel?

METHODS

The proposed scoping review will be conducted in accordance with JBI methodology for scoping reviews and will use the PRISMA extension for Scoping Reviews (PRISMA-ScR) to guide the reporting process.^{18–20}

Inclusion criteria

Participants

This scoping review will consider evidence that includes WPV against paramedic personnel as well as WPV that occurs within the prehospital setting. Various terms are used for persons who operate in the prehospital environment, and although “paramedic” seems to be most common internationally and will form the basis of our search; we will also include other commonly used terms. These will include variations of the following: “emergency medical technician”, “emergency care worker”, “emergency care personnel”, “prehospital worker”, “prehospital healthcare worker” and “ambulance worker” as well as any other relevant terms.

Concept

This review will consider studies that are related to WPV against paramedic personnel and WPV that occurs within the prehospital setting. When considering and reviewing studies, there will be a focus on the common forms of WPV that paramedic personnel have reported on, as well as the perpetrators who are committing acts of WPV against paramedic personnel. Studies will also be included if there is a focus on the negative effects of WPV on paramedic personnel. Negative effects will include any form of emotional, psychological, or physical abuse that paramedic personnel may experience during or after a violent encounter with a perpetrator. Lastly, the researchers will be considering all types of interventions and mitigation strategies to prevent WPV against paramedic personnel. A brief review of literature has highlighted the need for better education and more research.

Context

This scoping review will consider evidence relating to WPV against paramedic personnel as well as WPV that occurs within the prehospital setting. Paramedic personnel is an umbrella term and all prehospital emergency healthcare workers will be included in the search strategy. Furthermore, the prehospital setting will be limited to incidents that occur outside of recognised healthcare facilities, such as hospitals, clinics or primary healthcare facilities. Prehospital will include incidents that may occur in the patient’s home, working or social environments as well as in other public spaces where the paramedic may be performing their duties.

Types of sources

Given that WPV against paramedic personnel is not a new phenomenon, we will include all published studies and grey literature without any date restrictions. This scoping review will consider all relevant and published study designs from any country and/or emergency medical service (EMS) system including qualitative, quantitative and mixed-methods designs. Qualitative designs that will be considered will include, but will not be limited to, phenomenological, ethnographical, grounded theory, qualitative description and action research designs.

Systematic reviews that meet the criteria for inclusion will also be considered. Grey literature such as text and opinion papers, along with editorials, ethical or reflective papers will also be considered for inclusion into this scoping review. Appropriate unpublished research, such as research data that has not been published, institutional and government protocols or guidelines, reports and other relevant documents will also be considered.

Search strategy

The initial search keywords to be used will include “workplace”, “violence” and “paramedic” with their synonyms and related terms. The search strategy was developed by two of the researchers in collaboration with an experienced librarian with the aim of locating published and unpublished sources. A preliminary search was carried out in MEDLINE and is attached as online supplemental appendix 1. The terminology contained within the titles found during the initial search will be used to supplement the proposed search strategy and in doing so to develop a more comprehensive search strategy. The search strategy will be adapted as necessary and the reference lists of articles that meet the inclusion criteria will also be scanned to identify additional papers.¹⁸ Studies published in English, as well as those that are able to be translated will be included. There will be no lower date limit applied to ensure that the greatest number of studies that meet the inclusion criteria are captured for consideration. The searching of the databases will begin 16 January 2023 and will be concluded by 30 January 2023.

The repositories and databases that will be searched will include CINAHL (EBSCO), Education Resources Information Centre (ERIC), Scopus, Cochrane Library, PubMed and the Directory of Open Access Journals. Grey literature and secondary sources that will also be in the search will include Google (Google books and Google Scholar), ProQuest, OpenGrey (<https://opengrey.eu/>), worldwidescience.org and various university dissertation and thesis repositories. The search strategy for grey literature will differ from the published databases and involve the researchers searching through grey literature databases as well as websites of organisations that are relevant to the topic and keywords.

Study selection

The initial search results will be exported into the appropriate format and imported into Excel where the data will be organised by the principal investigator (PI). Each of the three independent reviewers will be sent a copy of the final title and abstract sheet where they will have an option to screen and include or exclude the title using a voting button. This will be performed for both published literature and grey literature. A summary sheet will capture the votes and where there are conflicts, these will be resolved by discussion. The final list of selected titles and abstracts will inform the search for full titles. Potentially relevant studies will be retrieved in full, and their article details imported into Mendeley 2.74.0 (Mendeley,

Elsevier, Netherlands). Selected full-text sources will be imported into Atlas.ti (V.8, ATLAS.ti Scientific Software Development, Berlin, Germany) for analysis. The full text of selected articles will be assessed in detail against the inclusion criteria by three independent reviewers. Reasons for exclusion of full-text studies that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the study selection process will be resolved through discussion. The results of the search and study selection and inclusion process will be reported in full in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Scoping Reviews (PRISMA-ScR) flow diagram.^{18–20}

Data extraction

Data will be extracted from studies included in the scoping review by three independent reviewers using the JBI Manual for Evidence Synthesis (online supplemental appendix 2).¹⁹ We will also use a self-developed data extraction tool (online supplemental appendix 3). Data extracted will include the relevant study-specific information—article title, author(s), journal or other source, year of publication, origin/country of origin, aims/purpose, study population and sample size, context, methodology/methods, intervention type/duration, comparator, outcome measures, outcomes and key findings that relate to the scoping review question/s.

Having searched and collected the relevant evidence and literature surrounding WPV against paramedic personnel, the next step will be to ‘chart’ the data. The charting of the data has been seen as technique whereby data is synthesised and interpreted with key issues and themes highlighted.²¹ By charting the data, this provides the researcher as well as the readers with a greater insight into the evidence and literature that was used in developing and producing the scoping review and may even assist readers who need to make crucial decisions based on the findings of the study.²¹

Data analysis and presentation

Data from the included sources will be extracted using Atlas.ti where the information will be organised according to each of the research questions. There are several benefits to using computer-assisted qualitative data analysis software (CAQDAS) when organising the data from included sources.²² We will use strategies described by Smit and Scherman where we will code information in the articles, categorise these codes and create code groups and themes by revisiting the research questions.²³ We will use the code groups and themes to map the different aspects of WPV as well as any evidence gaps. Where there is missing data within the data extraction table, we will indicate this with ‘missing’. We will then use the data from Atlas.ti to generate a narrative summary that will accompany the tabulated results and how they link with the review objectives and questions. Articles and literature from grey

literature and published literature will be separated and displayed as part of the data analysis and presentation, however it will be combined and reported together for the results and discussion of the scoping review.

Patient and public involvement

Patients and/or public were not involved in the design of this scoping review protocol.

ETHICS AND DISSEMINATION

This scoping review will use published literature available in the public domain and will involve no participants, meaning that ethical approval is not required. The findings of the proposed review will be published in topic relevant peer-reviewed journals and will be presented at associated conferences. This scoping review will collect, chart and synthesise data in published and grey literature in the public domain meaning that ethical approval is not required. We anticipate this review will highlight areas where there are gaps in the information available on WPV against paramedic personnel that may be explored in future studies. The results will also provide essential information to paramedic personnel, emergency services and policy makers related to WPV against paramedic personnel. We will publish our findings in a peer-reviewed journal and will also present these results at relevant conferences.

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Contributors AWM and YMH conceived the design and methodology, registered the scoping review protocol and drafted the initial manuscript. CV-L reviewed the manuscript and suggested changes where relevant. All authors read and approved the final manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

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REFERENCES

- Maguire BJ, Browne M, O'Neill BJ, et al. International survey of violence against EMS personnel: physical violence report. *Prehosp Disaster Med* 2018;33:526–31.
- Coskun Cenk S. An analysis of the exposure to violence and burnout levels of ambulance staff. *Turk J Emerg Med* 2019;19:21–5.
- Sheikhbardsiri H, Afshar PJ, Baniyasi H, et al. Workplace violence against prehospital Paramedic personnel (City and road) and factors related to this type of violence in Iran. *J Interpers Violence* 2022;37:1–16.
- Maguire BJ, O'Meara P, O'Neill BJ, et al. Violence against emergency medical services personnel: a systematic review of the literature. *Am J Ind Med* 2018;61:167–80.
- Khan MN, Haq ZU, Khan M, et al. Prevalence and determinants of violence against health care in the metropolitan city of Peshawar: a cross sectional study. *BMC Public Health* 2021;21:330.
- Touriel R, Dunne R, Swor R, et al. A pilot study: emergency medical Services-Related violence in the out-of-hospital setting in Southeast Michigan. *J Emerg Med* 2021;60:554–9.
- Hosseiniakia SH, Zarei S, Najafi Kalyani M, et al. A cross-sectional multicenter study of workplace violence against prehospital emergency medical technicians. *Emerg Med Int* 2018;2018:1–5.
- Maguire BJ, O'Neill BJ, O'Meara P, et al. Preventing EMS workplace violence: a mixed-methods analysis of insights from assaulted medics. *Injury* 2018;49:1258–65.
- Bigham BL, Jensen JL, Tavares W, et al. Paramedic self-reported exposure to violence in the emergency medical services (EMS) workplace: a mixed-methods cross-sectional survey. *Prehosp Emerg Care* 2014;18:489–94.
- Wang P-Y, Fang P-H, Wu C-L, et al. Workplace violence in Asian emergency medical services: a pilot study. *Int J Environ Res Public Health* 2019;16:3936–18.
- Gormley MA, Crowe RP, Bentley MA, et al. A national description of violence toward emergency medical services personnel. *Prehosp Emerg Care* 2016;20:439–47.
- Thomas BJ, O'Meara P, Edvardsson K, et al. Barriers and opportunities for workplace violence interventions in Australian paramedicine: a qualitative study. *Australasian Journal of Paramedicine* 2020;17:1–9.
- Phillips JP. Workplace violence against health care workers in the United States. *N Engl J Med* 2016;374:1661–9.
- Boland LL, Kinzy TG, Myers RN, et al. Burnout and exposure to critical incidents in a cohort of emergency medical services workers from Minnesota. *West J Emerg Med* 2018;19:987–95.
- Vigil NH, Grant AR, Perez O, et al. Death by Suicide-The EMS profession compared to the general public. *Prehosp Emerg Care* 2019;23:340–5.
- Kang J-H, Sakong J, Kim JH. Impact of violence on the burnout status of paramedics in the emergency department: a multicenter survey study. *Australas Emerg Care* 2022;25:147–53.
- Sahebi A, Golitaleb M, Jahangiri K. Occupational burnout in pre-hospital emergency personnel in Iran: a systematic review and meta-analysis. *Iran J Nurs Midwifery Res* 2021;26:11–17.
- Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med* 2018;169:467–73.
- Peters MDJ, Godfrey CM, Khalil H, et al. Guidance for conducting systematic scoping reviews. *Int J Evid Based Healthc* 2015;13:141–6.
- Peters MDJ, Marnie C, Tricco AC, et al. Updated methodological guidance for the conduct of scoping reviews. *JBI Evid Synth* 2020;18:2119–26.
- Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005;8:19–32.
- Smit B, Scherman V. Computer-Assisted qualitative data analysis software for scoping reviews: a case of ATLAS.ti. *Int J Qual Methods* 2021;20:160940692110191–3.