Impact of adverse events on healthcare professionals as second victims: an analysis of scientific evidence

Impacto dos eventos adversos sobre profissionais de saúde como segunda vítima: análise das evidências científicas

Impacto de los eventos adversos en los profesionales de la salud como segundas víctimas: análisis de la evidencia científica

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RESUMO

Objetivo: Mapear as evidências científicas acerca dos impactos dos eventos adversos em profissionais de saúde na condição de segunda vítima nos serviços de saúde. **Métodos**: Revisão de escopo seguindo recomendações do Joanna Briggs Institute e diretrizes PRISMA-ScR, com busca em PubMed/MEDLINE, BVS e SciELO em março de 2026, resultando em 14 artigos incluídos publicados entre 2020 e 2025. **Resultados**: Identificaram-se três dimensões de impacto: psicológica (culpa, ansiedade, TEPT, isolamento social), física (distúrbios do sono, exaustão, cefaleia) e profissional (redução da autoeficácia, intenção de abandono, absenteísmo). A segunda vítima constituiu fenômeno multidimensional prevalente, particularmente em ambientes de alta intensidade. **Conclusão**: Respostas institucionais são insuficientes, sendo imperativo implementar programas estruturados de suporte, fortalecer culturas de segurança justa, incorporar o tema nos currículos de formação em saúde e desenvolver pesquisas contextualizadas para a realidade brasileira e latino-americana.

Descritores: Segunda Vítima; Evento Adverso; Pessoal de Saúde; Segurança do Paciente; Revisão de Escopo.

ABSTRACT

Objective: To map scientific evidence regarding the impact of adverse events on healthcare professionals as second victims in health services. **Methods**: Scoping review following Joanna Briggs Institute recommendations and PRISMA-ScR guidelines, with searches in PubMed/MEDLINE, BVS, and SciELO in March 2026, resulting in 14 included articles published between 2020 and 2025. **Results**: Three dimensions of impact were identified: psychological (guilt, anxiety, PTSD, social isolation), physical (sleep disorders, exhaustion, headache), and professional (reduced self-efficacy, intention to leave, absenteeism). Second victimhood constituted a multidimensional and prevalent phenomenon, particularly in high-intensity environments. **Conclusion**: Institutional responses are insufficient, making it imperative to implement structured support programs, strengthen just safety cultures, incorporate the topic into health education curricula, and develop contextualized research for Brazilian and Latin American reality.

Descriptors: Second Victim; Adverse Event; Health Personnel; Patient Safety; Scoping Review.

RESUMEN

Objetivo: Mapear las evidencias científicas sobre el impacto de los eventos adversos en profesionales de salud en la condición de segunda víctima en los servicios de salud. **Métodos**: Revisión de alcance siguiendo recomendaciones del Instituto Joanna Briggs y directrices PRISMA-ScR, con búsqueda en PubMed/MEDLINE, BVS y SciELO en marzo de 2026, resultando en 14 artículos incluidos publicados entre 2020 y 2025. **Resultados**: Se identificaron tres dimensiones de impacto: psicológica (culpa, ansiedad, TEPT, aislamiento social), física (trastornos del sueño, agotamiento, cefalea) y profesional (reducción de la autoeficacia, intención de abandono, absentismo). La segunda víctima constituyó un fenómeno multidimensional prevalente, particularmente en ambientes de alta intensidad. **Conclusión**: Las respuestas institucionales son insuficientes, siendo imperativo implementar programas estructurados de apoyo, fortalecer culturas de seguridad justa, incorporar el tema en los currículos de formación en salud y desarrollar investigaciones contextualizadas para la realidad brasileña y latinoamericana.

Descriptores: Segunda Víctima; Evento Adverso; Seguridad del Paciente; Revisión de Alcance.

REVISÃO

Introduction

Health care encompasses a set of actions, services, and interventions that, although they seek healing and well-being, are not free from risks. In this context, the report "To Err is Human" brought the issue of Adverse Events to the worldwide discussion.[1] Such occurrences are defined as incidents that result in unintentional harm to the patient, arising from care and not from the underlying disease, compromising safety and burdening health systems with increased length of hospital stay and hospital costs.[2-3]

The World Health Organization (WHO) indicates that approximately one in every ten hospitalized patients experiences an AE during health care and that more than 50% of these harms are preventable.[4] AEs can also be classified according to their severity as mild (minimal or temporary harm), moderate (the discomfort caused is sufficient to interfere with the patient's usual activities), severe (permanent harm or the need for surgical interventions), and fatal, when they result in the death of the individual, with risk management being important as a way to mitigate them.[2]

The magnitude of this problem is global. In low- and middle-income countries, these events are associated with approximately 134 million occurrences annually and 2.6 million deaths, reinforcing their significant impact on health systems.[3] National research indicates that the incidence of systemic failures remains high, evidencing the persistence of structural and human barriers that compromise patient safety and quality of care in various health care units.[5]

However, AEs do not exclusively affect patients and health systems. Professionals directly involved in these incidents also experience important repercussions on their physical and psychological health. In this context, the Second Victim phenomenon refers to the health professional who, when involved in a clinical error or an unexpected AE, experiences significant emotional distress, often associated with feelings of guilt, personal accountability, and trauma resulting from the outcome.[6]

Studies highlight that several factors contribute to the involvement of health professionals in AEs, such as work overload, absence of a safety culture and institutional support, failures in team communication, and aspects related to the work environment and work process.[7-8] Despite its severity, the Second Victim phenomenon remains invisible in health institutions and in the scientific field.[9]

The Second Victim experience can be understood as a dynamic and multiphase process that transcends the immediate response to the AE and extends along a trajectory marked by psychological distress and attempts at reframing. In this context, Scott described six phases of this experience, ranging from the initial impact to the recovery process.[10] Thus, the health professional involved in an AE goes through chaos and the immediate response to the incident, the occurrence of intrusive reflections, the search for restoration of personal integrity, and coping with institutional judgments and investigations, until reaching some level of emotional support. In the final phase, three outcomes are possible: surviving the event, leaving the profession, or experiencing emotional and professional growth.[10]

In view of the above, it is emphasized that investigating the repercussions of the impacts of AEs on health professionals related to the second victim phenomenon in health services is essential to promote a psychologically safe work environment and ensure that support for the professional is not neglected in favor of a punitive culture.

Thus, this study aims to map the scientific evidence regarding the impacts of AEs on health professionals in the condition of second victims.

Methodology

The present study is characterized as a Scoping Review, conducted according to the methodological recommendations of the Joanna Briggs Institute (JBI) for knowledge synthesis and guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines, with the aim of ensuring methodological rigor, transparency, and reproducibility of the investigative process. The protocol was registered on the Open Science Framework (OSF; Center for Open Science, Charlottesville, United States) platform under DOI number: 10.17605/OSF.IO/59XNU (access link: https://osf.io/59xnu/overview).

The development of the review occurred in six sequential and interdependent stages, as recommended by the JBI framework. In the first stage, the guiding question was developed based on the PCC strategy (Population, Concept, and Context), appropriate for scoping reviews that aim to map the extent of the literature, being defined as follows: P (Population) = health professionals; C (Concept) = impacts of AEs related to the second victim condition; and C (Context) = health services. Based on this structure, the following research question was established: What do the scientific evidence describe about the impacts of AEs on health professionals in the condition of second victims in health services?

The second stage comprised the definition of information sources, descriptors, and search strategies. The bibliographic search was conducted in March 2026 in the Medical Literature Analysis and Retrieval System Online (PubMed/MEDLINE), Virtual Health Library (VHL), and Scientific Electronic Library Online (SciELO) databases. To construct the search strategies, controlled descriptors and free terms were used (Chart 1), combined using the Boolean operators AND and OR.

Chart 1: Search strategies used in the databases selected for the scoping review.

Database	Search strategies
PubMed/MEDLINE	(("Second Victim"[Title/Abstract] OR "second victim phenomenon"[Title/Abstract]) AND ("Medical Errors"[Mesh] OR "Patient Safety"[Mesh] OR "adverse event*"[Title/Abstract] OR "medical error*"[Title/Abstract] OR "patient safety incident*"[Title/Abstract]) AND ("Health Personnel"[Mesh] OR "healthcare professional*"[Title/Abstract] OR nurse*[Title/Abstract] OR physician*[Title/Abstract] OR "health workers"[Title/Abstract]))
BVS	(("segunda vítima" OR "second victim" OR "segunda victima")) AND (("evento adverso" OR "eventos adversos" OR "adverse event*" OR "medical error*" OR "patient safety incident*")) AND (("profissionais de saúde" OR "trabalhadores da saúde" OR "health personnel" OR "healthcare professional*" OR nurse* OR physician*))
SciELO	("second victim" OR "segunda vítima" OR "segunda victima") AND ("adverse event" OR "adverse events" OR "medical error" OR "medical errors" OR "patient safety incident" OR "patient safety incidents" OR "evento adverso" OR "eventos adversos" OR "erro médico" OR "erros

	médicos") AND ("health personnel" OR "healthcare workers" OR "health professionals" OR "profissionais de saúde" OR "profissional de saúde" OR enfermagem OR enfermeiro* OR médicos OR médico* OR nursing OR nurse* OR physician*)

Source: Prepared by the authors 2026.

Thus, in the third stage, the study eligibility criteria were established. The inclusion criteria considered primary studies published between 2020 and 2025, available in full text, without language restrictions, that addressed the impacts of AEs on health professionals from the perspective of the second victim phenomenon. Editorials, letters to the editor, comments, opinion studies, psychometric studies, studies involving health sciences students, as well as research that did not answer the guiding question or did not include the population of interest were excluded.

In the fourth stage, the search was conducted in the databases, and the identified references were managed. The records were exported to the Rayyan® software, which was used for organization, identification of duplicates, and the study selection process. The fifth stage consisted of screening the studies by reading titles and abstracts, performed by two independent reviewers, according to the established eligibility criteria. Disagreements between the reviewers were resolved by consensus; there was no need for a third reviewer, as there were no conflicts. After this stage, potentially eligible studies were subjected to full-text reading for detailed assessment regarding thematic relevance and methodological appropriateness as proposed.

In the sixth stage, the included studies were evaluated based on the JBI recommendations. For this purpose, an instrument was developed to extract and map information regarding the title, authorship, year of publication, country of origin, database, methodological design, main impacts, and repercussions identified in the studies.

Additionally, for the organization and qualitative interpretation of the findings, the Content Analysis proposed by Bardin11 was used, developed in three phases: pre-analysis, exploration of the material, and treatment of the results with inference and interpretation. In the pre-analysis, a floating reading of the included studies was performed, aiming at familiarization with the textual corpus and definition of the units of analysis. Subsequently, the material was explored through coding and grouping of the contents according to thematic similarity. Finally, the data were critically and reflexively interpreted, allowing for a discussion grounded in current scientific literature.

For the presentation of the results, synoptic tables were prepared. The findings were organized into analytical dimensions, constructed based on the recurrence and similarity of the contents identified in the included studies.

Regarding ethical aspects, it is recorded that this scoping review research was developed based on secondary data in the public domain, derived from previously published studies, and did not involve the direct participation of human beings. Therefore, review by a Research Ethics Committee was waived, in accordance with Resolution No. 466/2012 of the National Health Council, which regulates research involving human beings.[12] Furthermore, ethical principles related to academic integrity were respected through appropriate citation and referencing of the authors and studies included in the review.

Results and Discussion

Initially, 233 studies were found in PubMed/MEDLINE, 08 studies in the VHL, and 2 in SciELO, totaling 243 records. After applying the previously defined filters, 83 studies remained for screening. Of these, 08 studies were promptly excluded after removal of duplicates by the Rayyan software, resulting in 75 studies selected for the title and abstract reading stage. After this stage, 61 studies were excluded because they did not fit the research object or PPC. Thus, at the end of the selection process, the final sample consisted of 14 articles: 12 from Pumed/Medline, 01 from Lilacs/VHL, and 01 from Scielo. The process of identification, screening, eligibility, and inclusion of the studies is presented by means of a flowchart according to the PRISMA recommendations (Figure 1).

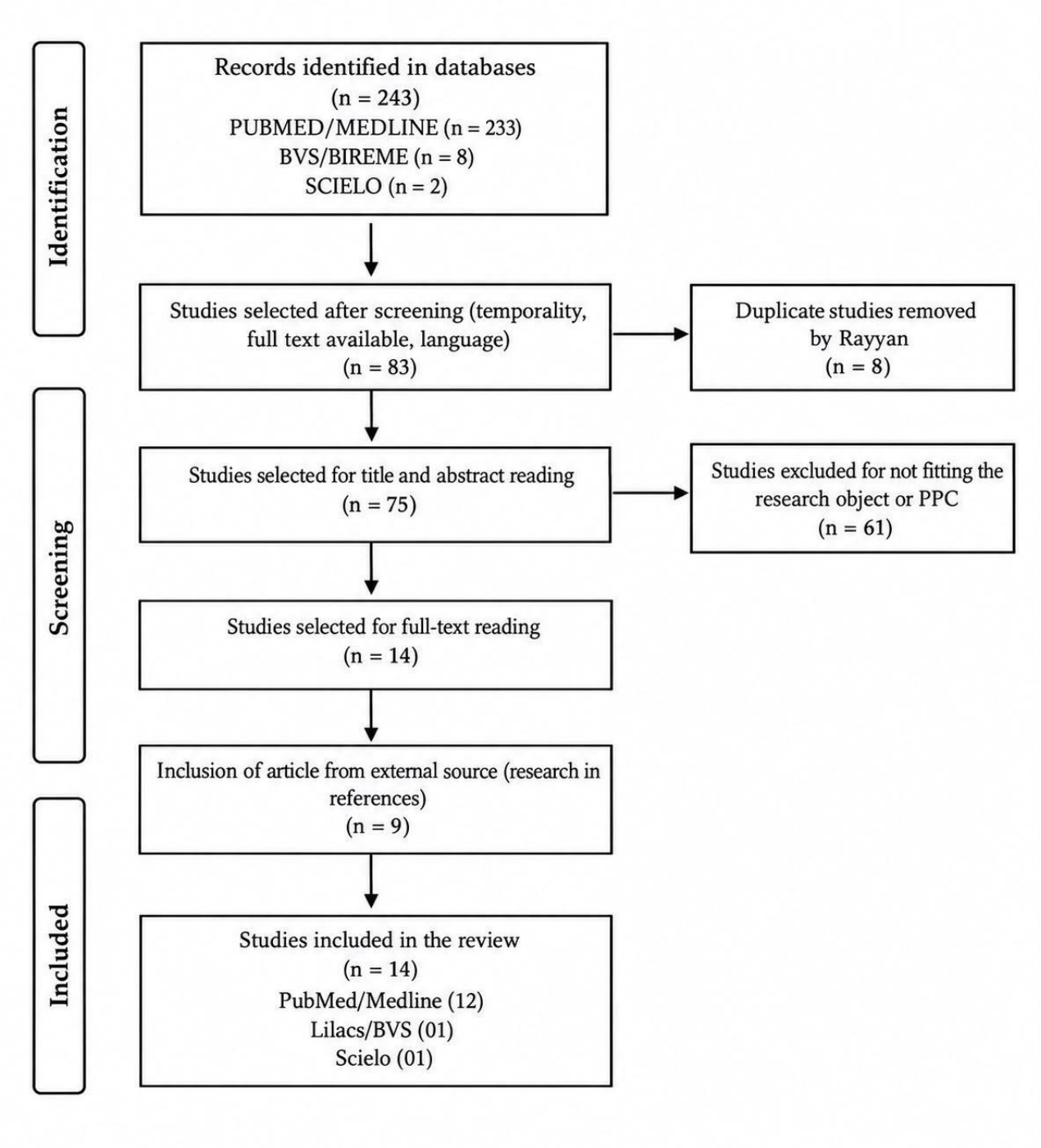


Figure 1. - PRISMA flowchart with the description of the stages of selection of identification sources. Source: Prepared by the authors, 2026. Caption: (n) – number.

Regarding the characterization of the selected studies, Chart 2 presents the synthesis of the final sample, which consisted of 14 scientific articles. A significant concentration of publications was observed in 2023 and 2024, reaffirming the timeliness of the topic and the growing interest of the academic community in the phenomenon. Geographically, the studies have a global scope, with publications originating from Europe (Germany and Spain), Asia (Singapore and China), and a relevant presence in Latin America, including countries such as Brazil and Chile. Regarding the methodological design, quantitative cross-sectional studies predominate, followed by descriptive qualitative research, focused on the perceptions of professionals from different categories and care settings. These studies support the findings regarding repercussions and support strategies, detailed in the subsequent stage of this analysis.

Chart 2: Characterization of the articles included in the research.

Id.	Article title	Authors/Year of publication	Database/Country	Methodological design
A1	The newly graduated nurse in the condition of second victim	Alevi *et al.* (2024).[13]	SciELO / Brazil	Quantitative, descriptive, and cross-sectional study
A2	The impact of second-victim syndrome on staff well-being and practice	Alishaq *et al.* (2025).[14]	PubMed / Qatar	Qualitative cross-sectional study
A3	Interventions to support nurses as second victims of patient safety incidents: A qualitative study of nurse managers' perceptions.	Järvisalo *et al.* (2024).[15]	PubMed/ Finland	Descriptive qualitative study
A4	Second Victim Syndrome Among Healthcare Professionals: A Systematic Review of Interventions and Outcomes	Ong *et al.* (2025).[16]	PubMed/ Singapore	Systematic review
A5	Second Victims among German Emergency Medical Services Physicians (SeViD-III-Study)	Marung *et al.* (2023).[17]	PubMed/ Germany	Quantitative cross-sectional study
A6	Second victim: experience and support measures perceived by healthcare professionals	Brunelli *et al.* (2023).[18]	PubMed/ Argentina	Quantitative, exploratory, and cross-sectional study
A7	A cross-sectional study on the second victim experience and support at Sarawak General Hospital	Kim *et al.* (2025).[19]	PubMed / Malaysia	Quantitative cross-sectional study
A8	Second Victim Phenomenon in an Austrian Hospital before the Implementation of the Systematic Collegial Help	Krommer *et al.* (2023).[20]	PubMed / Austria	Descriptive quantitative cross-sectional study

	Program KoHi			
A9	Prevalence of Second Victims, Risk Factors, and Support Strategies among German Nurses (SeViD-II Survey)	Strametz *et al.* (2021).[21]	PubMed/ Germany	Quantitative cross-sectional study
A10	Second victim in intensive care unit: cross-sectional study	Caputo *et al.* (2024).[22]	BVS (LILACS)/ Argentina	Descriptive quantitative cross-sectional study
A11	Intraoperative adverse events among surgeons in Singapore: a multicentre cross-sectional study	Yaow *et al.* (2024).[23]	PubMed/ Singapore	Multicenter quantitative cross-sectional study
A12	Workers in critical care areas as second victims of SARS-CoV-2	Tejedor-Romero *et al.* (2022).[24]	PubMed/ Spain	Descriptive quantitative study (survey)
A13	Study on the influence of patient safety culture on the pain and turnover intention of Chinese nurses in adverse nursing events	Sun *et al.* (2023).[25]	PubMed / China	Quantitative cross-sectional study
A14	The second victim phenomenon among German emergency medical technicians: a cross-sectional study (SeViD-VIII)	Marung *et al.* (2025).[26]	PubMed/ Germany	Quantitative cross-sectional study

Source: repared by the authors, 2026. Caption: (Id) – identification.

Chart 3 presents the synthesis of the main impacts resulting from AEs on health professionals in the condition of second victims, as identified in the studies included in this scoping review. The findings were organized into three analytical dimensions: psychological, physical, and professional impacts, enabling visualization of the main repercussions associated with involvement in AEs in the care context. In addition to describing the identified manifestations, the chart also presents the distribution of studies that addressed each dimension, facilitating an understanding of the recurrence and scope of these repercussions in the scientific production analyzed.

Chart 3: Impacts resulting from AEs on health professionals in the condition of second victims, as identified in the included studies.

Impacts of AEs on health professionals in the condition of second victims	**Description of Repercussions**	**Identification of articles**
Impacts on psychological health	Feelings of guilt, shame, anxiety, emotional distress, fear, stress, moral distress, frustration, insecurity, social isolation, depressive symptoms, panic, post-traumatic stress disorder (PTSD), intrusive thoughts, loss of self-confidence, and persistent psychological distress.	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13 e A14

Impacts on physical health	Physical exhaustion, fatigue, insomnia, sleep disorders, headache, muscle pain, palpitations, physiological changes related to stress, extreme tiredness, and somatic manifestations associated with emotional distress.	A2, A3, A4, A5, A7, A8, A10, A11, A12 e A14
Impacts on professional life	Reduced professional confidence, fear of making new errors, decreased job satisfaction, absenteeism, impaired decision-making, decreased productivity, intention to leave the profession, work absence, burnout, professional turnover, and compromised quality of care.	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13 e A14

Source: Prepared by the authors, 2026.

Based on this analysis, guided by Bardin's assumptions[11], three axes of discussion were outlined, namely: 1) Psychological repercussions of AEs on health professionals in the condition of second victims; 2) Physical manifestations associated with occupational distress resulting from AEs; and 3) Professional impacts and occupational implications related to the second victim phenomenon.

Discussion

Health professionals face complex scenarios, dedicating themselves to long working hours with the aim of saving lives and ensuring patient safety. Human fallibility and the complex structure of health systems make AEs an unavoidable reality.

The "To Err is Human" report by the Institute of Medicine in 1999 estimated between 44,000 and 98,000 annual deaths in American hospitals attributable to preventable errors. The document demonstrated that errors in health care are rarely the result of individual negligence, but rather an expression of systemic failures.[1]

The consequences of an AE are not restricted to the patient and may also significantly affect the health professionals directly involved, who become recognized as Second Victims. The term, coined in 2000, refers to the psychological, emotional, and professional repercussions resulting from these events.[6] In this context, AEs may produce indirect effects on professionals, encompassing psychological, physical, and occupational dimensions.[27]

Not every AE makes the professional a second victim. This phenomenon depends on the degree of direct involvement, severity of the harm, individual characteristics, and nature of the support received.10 Some professionals activate resilience mechanisms that prevent the development of significant psychological distress.[28]

The trajectory of suffering experienced after an AE can be understood through a model that describes six phases of the Second Victim experience: (1) chaos and immediate response to the incident; (2) intrusive thoughts; (3) restoration of personal integrity; (4) search for a way to move forward; (5) search for emotional support; and (6) resolution, which may result in three outcomes: leaving the profession, surviving with difficulties, or post-traumatic growth.[10]

The phenomenon can also be understood from an organizational perspective, which emphasizes the role of institutional culture in the Second Victim experience.29 In addition, individual and systemic factors may modulate the intensity of the repercussions resulting from an AE, including aspects such as length of professional experience, professional category, and type of event involved.[30]

The included studies show that the second victim phenomenon represents a critical dimension of patient safety, organized into three thematic axes: psychological repercussions, physical manifestations, and occupational impacts.

Axis 1 – Psychological repercussions of AEs on health professionals

Psychological repercussions constitute the most documented core, identified in all included articles. Guilt emerges as the most prevalent manifestation (A2; A4; A5; A7; A8; A9; A10; A11; A13; A14), frequently disproportionate to the actual degree of responsibility, fueling a cycle of self-criticism that may progress to severe psychiatric conditions.[31]

The systematic review identified as A4 highlights that feelings of guilt, shame, anxiety, and depression may progress to post-traumatic stress disorder (PTSD) and moral distress.16 Furthermore, the absence of adequate support may favor the development of depression, professional exhaustion, PTSD, and suicidal ideation among professionals involved in AEs.[27]

Studies A5 and A14, conducted with physicians and emergency medical technicians in Germany, identified PTSD symptoms such as flashbacks, hypervigilance, intrusive thoughts, and concentration difficulties.17,26 Professionals in high-intensity environments appear to be particularly vulnerable.

Moral distress, evidenced in A4 and A6, emerges when the professional perceives a conflict between ethical obligation and contextual constraints. This distress is particularly intense among intensive care nurses.16,18 During the SARS-CoV-2 pandemic, workers in critical care units experienced acute stress, emotional exhaustion, and an increased sense of helplessness.[24]

Social isolation is part of the psychological picture. A3 describes isolation as a frequent protective reaction in response to fear of retaliation and judgment by colleagues, creating a cycle of "suffering in silence." Shame and fear of legal consequences, identified in A6, discourage the reporting of AEs.[15,31]

Study A1 with newly graduated nurses demonstrates greater vulnerability among professionals at the beginning of their careers, due to insufficient coping mechanisms. Manifestations of frustration, stress, and reduced quality of life were significant.[13]

tudies A7 and A8 indicate that psychological distress, guilt, and regret coexist and reinforce one another, increasing the impact on mental health when they are not recognized and addressed.[19-20]

Axis 2 – Physical manifestations associated with occupational distress

Physical manifestations constitute an equally relevant and frequently neglected dimension.[32] Sleep disorders are among the most recurrent manifestations, identified in A2, A7, A8, and A11, frequently triggered by intrusive thoughts. This deprivation deteriorates cognitive capacity, creating conditions for new errors.[14,19-20,23]

Physical exhaustion, documented in A2 and A12, manifests as back pain, headache, and tiredness. Chronic stress and cognitive rumination activate the hypothalamic-pituitary-adrenal axis, promoting inflammatory responses and autonomic dysfunctions.[14,26,29-30]

Palpitations and shortness of breath, identified in A4, illustrate the cardiovascular expression of stress, signaling persistent activation of the sympathetic nervous system, a response mediated by the sympathoadrenal axis that tends to become chronic with

prolonged exposure.[33] In emergency workers (A5; A14), repeated exposure increases the risk of chronicity, with 1 in every 7 frontline professionals developing PTSD.[34]

Among newly graduated nurses, physical manifestations such as headache and exhaustion are associated with concrete functional impairments in care performance, suggesting an objective impairment of work capacity.13,32 The reviewed literature does not address physical manifestations with the same depth as psychological manifestations, a methodological gap that deserves future attention.

Axis 3 – Professional impacts and occupational implications

The phenomenon extends to the workplace, compromising team dynamics, quality of care, and organizational sustainability. The intention to leave the profession was identified in multiple studies (A2; A3; A9, A13). Nurse managers report that fear of retaliation and post-AE panic result in a strong intention to leave, especially in the presence of a punitive organizational response.[14-15,19] This pattern aligns with findings among Chinese nurses with a desire to leave after AEs, modulated by a fragile culture.[25]

A strong safety culture is characterized by open communication, a non-punitive response, systematic reporting, and organizational learning. Fragile cultures, marked by silence, fear, and underreporting, are among the most deficient globally.[2,35]

The decline in self-efficacy and fear of high-risk procedures constitute relevant impacts. Professionals develop "technical paralysis" or "risk aversion" after an event, compromising quality of care and paradoxically increasing the risk of new errors.[10,14,23]

Increased turnover and negative impact on quality of care represent serious institutional consequences. The loss of experienced professionals disrupts teams, increases costs, and reduces efficiency, factors associated with poorer outcomes.[16,20]

Work absence among newly graduated nurses, frequently not communicated to managers, makes it difficult to accurately assess staffing needs and prevents early interventions.13 In intensive care units, fear and insecurity compromise professional availability.[22]

Fear of damage to professional reputation among surgeons adds complexity, where identity has historically been linked to technical performance.23,36 Interventions need to be sensitive to the particularities of each professional category. The feeling of professional inadequacy and fear of legal consequences inhibit the reporting of AEs, perpetuating conditions that favor new events.[19, 27]

Coping strategies and professional support

In view of these findings, the literature points to the urgent need for structured strategies at multiple levels. At the individual level, development of emotional regulation skills, clinical supervision, and psychotherapy constitute relevant resources.10,28 Strategies for physical impacts include early identification of musculoskeletal disorders, ergonomic interventions, and training programs adapted to professional specificities.[32,36]

t the organizational level, programs such as forYOU Team (University of Missouri) and Johns Hopkins (Maryland, USA) have demonstrated promising results in reducing distress and improving the safety culture.[27] In Brazil, Hospital Israelita Albert Einstein developed initiatives through institutional pathways directed toward second victims, with qualified listening and referral to support channels.[37] The Joint Commission

International validated in 2018 the importance of structures and protocols, recognizing that inadequate experience causes lasting harm.[38]

Study limitations

Methodological heterogeneity makes direct comparisons difficult. The predominance of self-report scales is susceptible to social desirability bias. The concentration on European and Asian contexts limits generalizability. In Brazil, the literature is incipient and institutionalized programs are limited. The focus on nurses and physicians leaves gaps regarding other professional categories.

Recommendations for professional practice and academic training

For professional practice, the implementation of institutional protocols for the identification and support of second victims integrated into AE reporting systems is recommended. Institutions should invest in training leaders for early recognition and the creation of safe spaces for emotional reporting, without judgment. The transition from a punitive culture to a just culture is fundamental.

For academic training, inclusion of the phenomenon in undergraduate and graduate curricula is recommended as a transversal component in patient safety, professional ethics, and workers' health. Students should recognize suffering resulting from AEs as part of the professional experience and identify support resources. Clinical simulations involving emotional management after an AE are valuable tools.

Projections for future research

Future studies should prioritize the construction and validation of instruments adapted to different cultural contexts and professional categories. In Brazil and Latin America, research on prevalence and outcomes is urgent to support public policies. Longitudinal research is necessary to understand the temporal trajectory of suffering. Investigation of interventions in resource-limited contexts and crisis situations (pandemics, disasters) represents a priority area. Studies on the effectiveness of educational interventions among students and residents may contribute to preventing the phenomenon at the formative stage.

Conclusion

The findings demonstrate that involvement in an AE produces significant repercussions in the psychological, physical, and professional dimensions of health workers, establishing the second victim as a prevalent reality. Emotional distress expressed through guilt, anxiety, PTSD, and moral distress constitutes the most documented core, frequently accompanied by physical manifestations such as sleep disorders and exhaustion that compromise work capacity.

At the professional level, impacts are manifested in reduced self-efficacy, increased intention to leave, absenteeism, and deterioration of care, with repercussions on teams and organizations. Recurrence across different countries and professional categories reinforces the universal nature of the phenomenon.

he second victim is multidimensional and underestimated in health institutions, with institutional responses being insufficient. It is essential to invest in structured support programs, strengthen the safety culture and just culture, promoting safer, more humane, and blame-free environments. It is imperative to incorporate the topic into health education curricula and develop research contextualized to the Brazilian and Latin American reality.

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Declaration of Conflict of Interest

The authors declare that there is no conflict of interest.

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