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The manifestations of the second victim of an adverse event: an analysis of nursing professionals from a public hospital in Minas Gerais

As manifestações de segunda vítima de evento adverso: uma análise dos profissionais de enfermagem de um hospital público de Minas Gerais

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ABSTRACT

Introduction: Health care can result in adverse events that directly affect patients' health and their experience in health care, and can cause deaths, permanent and temporary sequelae, psychological distress to patients, their families and health professionals, in addition to raising costs of medical assistance services. Among the ills related to the occurrence of adverse events are the losses suffered by health professionals who are involved in an adverse event, referred to in the literature as "second victim". These individuals experience profound psychological effects, such as anger, guilt, inadequacy, depression, and suicide, due to real or perceived flaws. **Objective:** to identify the manifestations, in the face of the occurrence of an adverse event, of nursing professionals in a hospital and their relationship with the phenomenon of the second victim. **Method:** a cross-sectional and explanatory study was carried out, using quantitative methods. The instrument used was the Hospital Survey on Patient Safety Culture questionnaire (HSOPSC). Questions to define the population profile and to characterize adverse events based on the Notivisa adverse event notification system of Anvisa (National Health Surveillance Agency) were added. The population consisted of 203 nursing professionals involved in direct assistance to patients at a general, public hospital, of high relevance for the care of the population of the northwest region of Minas Gerais. **Results:** The sample was predominantly female (85%), with an average age of 40.7 years, with 74% nursing technicians, 25% nurses and 1% nursing assistants. 60% (n. 119) of the professionals reported to have been involved in at least 1 adverse event in the last 2 years. Of these, the majority were with slight damage (47%) and without damage (24%). They also reported that 75% of the events were notified to the Risk Center. Most professionals (55%) who were involved in an adverse event presented at least one type of physical and/or psychological manifestation. Anxiety was the most reported manifestation (24%). If we consider the cases in which the adverse event caused moderate, severe or death damage (n. 36), only 22% of the professionals were indifferent; other professionals showed anxiety (33%), irritation (25%), insomnia (5%), loss of appetite (5%), difficulty in returning to routine (5%) and other experiences (28%), worry, frustration, fear, indignation and greater attention at work. Three professionals (3%) reported that they needed to seek specialized emotional assistance. **Conclusions:** The results of this study, in accordance with what the literature on this issue presents, demonstrate how harmful and impactful for a health professional can be the experience of the phenomenon of the second victim. These effects can be aggravated if a culture of punishment and reprimand for failures prevails in the health Institution.

KEYWORDS: Adverse Event; Occupational Safety; Nursing

RESUMO

Introdução: A assistência à saúde pode resultar em eventos adversos (EA) que atingem diretamente a saúde do paciente e sua experiência no cuidado à saúde, podendo causar

mortes, sequelas definitivas e temporárias, sofrimento psíquico aos pacientes, a seus familiares e aos profissionais de saúde, além de elevar o custo assistencial. Dentre os problemas relacionados à ocorrência dos EA estão os prejuízos sofridos pelos profissionais de saúde que se envolvem em um EA, denominados na literatura como "segunda vítima". Estes indivíduos experimentam efeitos psicológicos profundos, como raiva, culpa, inadequação, depressão e suicídio, devido a falhas reais ou percebidas. **Objetivo:** Compreender as manifestações dos profissionais de enfermagem de um hospital frente a ocorrência de EA e a relação com o fenômeno da segunda vítima. **Método:** Foi realizado um estudo transversal e explicativo, com métodos quantitativos. O instrumento utilizado foi o questionário *Hospital Survey on Patient Safety Culture* (HSOPSC), acrescido por questões para definição do perfil da população e para caracterização dos EA baseados no sistema de notificação de eventos adversos (Notivisa) da Agência Nacional de Vigilância Sanitária. A população foi composta por 203 profissionais de enfermagem envolvidos na assistência direta aos pacientes de um hospital geral, público, de alta relevância para o atendimento da população da região noroeste de Minas Gerais. **Resultados:** A amostra foi predominante feminina (85%), com idade média de 40,7 anos, sendo 74% técnicos de enfermagem, 25% enfermeiros e 1% auxiliares de enfermagem. Relataram ter se envolvido em pelo menos um EA nos últimos dois anos, 60% dos profissionais entrevistados. Destes, a maioria foi com dano leve (47%) e sem danos (24%). Informaram também que 75% dos eventos foram notificados ao Núcleo de Risco. A maior parte dos profissionais (55%) que se envolveu em um EA apresentou pelo menos um tipo de manifestação física e/ou psicológica. Ansiedade foi a manifestação mais relatada (24%). Se consideramos os casos em que o EA causou dano moderado, grave ou óbito (n = 36), apenas 22% dos profissionais se mostraram indiferentes, os demais apresentaram ansiedade (33%), irritação (25%), insônia (5%), perda de apetite (5%), dificuldade em retornar a rotina (5%) e, dentre outras (28%), preocupação, frustração, medo, indignação e maior atenção no trabalho. Três profissionais (3%) relataram ter sido necessário buscar assistência emocional especializada. **Conclusões:** Os resultados deste estudo, em conformidade com o que a literatura apresenta sobre esta problemática, demonstrou o quão deletéria e impactante para um profissional de saúde pode ser a experiência do fenômeno da segunda vítima. Esses efeitos podem ser agravados se na instituição de saúde predomina uma cultura da punição e repreensão pelas falhas cometidas.

PALAVRAS-CHAVE: Evento Adverso; Segurança Ocupacional; Enfermagem

INTRODUCTION

Health care can result in adverse events (AE) that directly affect the patient's health and their experience in health care, which can cause deaths, permanent and temporary sequelae, psychological distress to patients, their families and health professionals, in addition to increasing the cost of care[1].

Based on the definitions of Resolution of the Collegiate Board (RDC) nº 36, of July 25, 2013, of the Brazilian National Health Surveillance Agency (Anvisa), an AE is an incident that resulted in damage to health, and damage can be considered when there is impairment of the structure, function of the body and/or any effect arising from it, including disease, injury, suffering, death, disability, or dysfunction, and may, thus, be physical, social or psychological[2].

The literature addresses the repercussion of AEs both for the patient and for the professional involved in the occurrence, it calls the patient who suffers the AE as "first victim" and as "second victim" professionals who experience profound psychological effects, such as: anger, guilt, inadequacy, depression, and suicide, triggered by the occurrence of the AE. The threat of disciplinary action can accentuate these feelings of being a second victim and can lead to a loss of confidence in their ability to work[3].

In 2000, in the British Medical Journal editorial, the term "second victim" appeared for the first time in an article about the impact of errors on the professionals involved. The term was used by Albert Wu to refer to the healthcare professional involved in an unavoidable AE who is traumatized by this experience or who is unable to deal emotionally with the situation[4].

Later, in 2009, a formal definition for the expression "second victim" was given by Scott et al.[5] and this was adopted for this research:

A second victim is a health care provider involved in an unanticipated adverse patient event, medical error and/or a patient-related injury who become victimized in the sense that the provider is traumatized by the event. Frequently, second victims feel personally responsible for the unexpected patient outcomes and feel as though they have failed their patients, second-guessing their clinical skills and knowledge base5.

Costa et al.[6] ensured that the practice of blaming the professional for the occurrence of an AE is predominant in health institutions, thus consolidating a punitive culture. This organizational climate provides the work team with a lack of knowledge about patient safety and discards possible learning generated from the identification of an AE. In addition, these individuals manifest negative feelings for fear of suffering punishment and still feel shame, frustration, and guilt.

A punitive culture can contribute to the self-perception of psychological, physical, and professional suffering related to professionals involved in serious AEs, that is, second victims, which can demonstrate the absence of organizational support[7]. The fear of punishment makes health professionals reluctant to report the occurrence of AE[8].

The manifestations presented by the second victims may differ from individual to individual, however it is common to observe:

confusion, reduced ability to concentrate, drowsiness, feelings of guilt, anxiety, low self-esteem, difficulty enjoying restful sleep, frequent recall of the event, mood swings, and insecurity in clinical decision-making. Such reactions can last for a few days or weeks, however, in some cases they can persist for months or even for the entire life of the individual[9].

Quillivan et al.[7] reported that the experiences of second victims can affect not only the well-being of health professionals but can also compromise patient safety. Several factors associated with a professional's ability to deal with having been involved in a patient safety event are also components of a strong patient safety culture. In this way, the support generated by the patient safety culture can reduce the trauma suffered by second victims. In this research with 358 nurses from a pediatric hospital, it was shown that the non-punitive response to errors was significantly associated with reductions in the dimensions of psychological, physical, and professional suffering. The study draws attention to the difference between the need for support presented by the second victim and the assistance provided by the institution. It also ratifies the need for greater transparency in the investigation of AE.

For Ullstrom et al.[10], in a study with 21 health professionals from a Swedish university hospital who underwent an AE, the authors demonstrated emotional distress as a direct consequence of the AE and that the impact of this suffering on the health professional was closely related to the institution's response to the event. Most of the interviewees did not receive institutional assistance or, when they did, it was unstructured and not systematized. In turn, institutional negotiations rarely provided proper and timely feedback to the parties involved. Ineffective support and lack of feedback made it even more complex to emotionally process the event and bring it to an end.

The intensity of the impact of the second victim's experience may be related to the severity and outcome of the event, as well as to the health professional's own personality traits, previous beliefs and expectations, and coping strategies after being involved in the event. The type of culture prevailing in the institution can also intensify or protect against trauma related to the second victim[7].

In a systematic review with 41 studies, Seys et al.[11] showed a prevalence of second victims of AE between 10.4% and 43.3%, emotional, cognitive, and behavioral manifestations being the most common types of reactions. In Spain, about 2% of individuals who experienced the second victim of an AE, decided to definitively abandon the profession[9].

Just as the punitive culture intensifies the damage of the second victim's experience, positive perceptions of a hospital's patient safety culture can alleviate the suffering of the professional who was involved in an AE. Quillivan et al.[7] maintained that the successful confrontation of involvement in security events increases as there is an opening for discussion of events, thus making it possible to generate constructive changes in healthcare delivery practices. They also argued that receiving support or encouragement from co-workers and supervisors can contribute to the affected person's emotional coping after an AE.

In Brazil, studies on the phenomenon of the second victim of AE are still incipient. The carrying out of this research aims to contribute to the construction of knowledge about the subject of the second victim in the national context, given that most publications on this topic are foreign.

The objective of the research was to understand the manifestations of the nursing professionals of a hospital in front of the occurrence of AE and its relationship with the phenomenon of the second victim of AE, and to identify the profile of the population and the factors related to the occurrence of the AEs. The choice of the nursing population as an object of study was based on the fact that this is the largest professional contingent within a hospital, in addition to representing the category that most performs direct patient care activities and, therefore, is more likely to participate in an AE.

METHOD

This is a cross-sectional and explanatory study, with quantitative methods. For Hochman et al.[12], a cross-sectional study is one in which "[...] the exposure to the factor or cause is present to the effect at the same moment or time interval analyzed [...]", and an explanatory study is one in which the researcher seeks to deepen the understanding of reality by explaining the reasons for the phenomena and their causes[13]. In this perspective, this study aimed to know and explain in depth the impacts involved in the phenomenon of the second victim in the nursing population.

The study setting is a general, public hospital of high relevance for the care of the population of the Northwest Extended Region of Minas Gerais. Located in Patos de Minas, it is a reference for medium to high complexity care for the 33 municipalities, with 120 operational beds and 833 employees, with 350 nursing professionals directly linked to patient care, according to information from the staffing of the institution.

This hospital is managed by Hospital Foundation of the state of Minas Gerais (FHEMIG), which is linked to the Secretariat of Health of Minas Gerais (SES MG) and is a provider of services of secondary and tertiary complexity exclusively for the Unified Health System (SUS).

The population chosen for this research consisted of nursing professionals involved in the direct care of patients at the aforementioned hospital. The minimum sample consisted of 184 participants, according to the statistical calculation with 95% reliability and a 5% margin of error.

The sample selection occurred for convenience during working hours and digitally. After agreeing to participate in the research by signing the Free and Informed Consent Form (ICF) or signaling "yes, I accept" in the digital ICF, the questionnaire was made available in the printed version or online form. Data collection

took place from January to June 2020, with the participation of 203 professionals, representing 58% of the eligible sample.

The theoretical framework was obtained from the bibliographic survey of articles, theses and books on the researched topic, through the Journal Portal of the Coordination for the Improvement of Higher Education Personnel (Capes), Google Scholar, and Virtual Health Library (BVS), using the descriptors "adverse event", "safety culture", "second victim", and "nursing" for the search. The cohort period of the bibliographic sample was defined based on the publication of the benchmark in patient safety: To Err is Human: Building a Safer Health System in the year 2000, in which the authors Kohn et al.[14] brought to light the impressive impact caused by AE resulting from failures in health care.

Two questionnaires were used to fully meet the research objectives. One of them was prepared by the researchers themselves with open and closed questions that addressed the participation or involvement with AE, the severity of this event, the occurrence of manifestations of the second victim, as well as the evaluation of the factors that contributed to the occurrence of the AE based on the classification of contributing factors of the AE notification form of Notivisa, Anvisa's AE notification system. The other instrument was the Hospital Survey on Patient Safety Culture (HSOPSC), which assesses how the safety culture is perceived by the participants. The HSOPSC questionnaire is widely applied in its home country, the United States, and in other countries where it has been adapted and validated. In Brazil, it was adapted and validated by Reis et al.[15] and is available in the public domain. This research instrument, which was developed and validated by the Agency for Health Care Research and Quality (AHRQ), It is structured in twelve dimensions of patient safety culture, where seven address aspects within the work sector, three within the hospital environment, and two with outcome variables[16]. The choice of this instrument was based on its free availability, its extensive use in different cultural contexts and the psychometric properties of this questionnaire.

The study was approved by the ethics committees of the educational institution (CAAE: 22595219.3.0000.5152) and FHEMIG (CAAE: 22595219.3.3002.5119). All research participants were guaranteed anonymity.

Data obtained from the questionnaire were allocated to an electronic database in Microsoft Office Excel® 2016 and analyzed in terms of absolute numbers, percentages, means, and prevalence. Using the Past 4.03 software, the correlations between the variables were evaluated using Pearson's R Test, where a coefficient of 0.8 to 1 would indicate a strong relationship between the variables, as can be seen in the results presented below.

RESULTS AND DISCUSSION

As explained in the methodology, of the 350 nursing professionals who were invited to participate in the research, 203 (58%) answered the questions, and all in their position/function had interaction or direct contact with patients. It was observed that the extension of the research instrument, which demanded considerable time from the participant to answer it, discouraged some professionals from participating in the study. In a very similar study carried out by Burlison et al.[17] with health professionals and with the application of the HSOPSC instrument of the AHRQ and the Support and Experience Tool of the Second Victim (SVEST), the survey response rate was only 305 (31%) professionals, which is considerably lower than that obtained in this survey. The greater representativeness of the sample aims to establish a more reliable panorama of the researched situation.

The sociodemographic characteristics of the study participants are shown in Table 1, in which, for the percentage calculation, only valid responses from each category were considered and the fields not informed were disregarded. Thus, it is possible to verify that the sample was predominantly female 171 (85%). This fact was already expected, considering that Nursing is a profession culturally exercised mostly by women[18]. Regarding age, the median was 40 years, and the average was 40.8 years. The youngest participant was 20 years old and the oldest was 66 years old. The largest portion was between 31 and 40 years old, 91 (46%), demonstrating the predominance of a younger population.

Regarding the professional category, 149 (74%) are nursing technicians, 51 (25%) are nurses, and one (1%) is a nursing assistant. An identical profile was found by Costa et al.[6] in a study with the nursing staff of a public hospital in the state of Paraná, Brazil.

Regarding academic training, the majority (75; 38%) had completed High School, followed by Higher Education, with 57 (29%) having a *lato sensu* graduate degree (Specialization). Although 151 (75%) professionals hold positions that require only a high school level, many had a degree in higher education. This same academic profile was also found by Costa et al.[6] in a similar survey in a public hospital where most nursing technicians had a degree.

The average time working in the current function/specialty was 14 years, with the lowest being 1 year and the longest being 47 years. This data tends to demonstrate the experience in the exercise of the profession. Another important aspect was that most professionals, 163 (81%), had an effective employment bond and 149 (82%) worked exclusively in this institution. Also demonstrating the permanence of employment relationships, most professionals worked at the institution for 6 to 10 years (86; 43%) and worked for 1 to 5 years in the sector in which they are currently assigned (75; 37%).

This characteristic concerns the public tender carried out, in which most of the nursing human resources were renewed in 2010. The effective nature of the work regime is an important factor for low turnover, stability of routines, and retention of institutional knowledge. The high rate of professionals who worked exclusively in this hospital may represent a greater sense of belonging and identification with that place and knowledge of the local reality[18].

Table 1. Patos de Minas (MG): sociodemographic characteristics of respondents, 2019.

Variable	Category	n.	%
Sex	Female	171	85
	Male	31	15
Age	20-30 years	15	7
	31-40 years	91	46
	41-50 years	59	30
	> 51 years	34	17
Professional category	Nursing assistant	2	1
	Nursing technician	149	74
	Nurse	51	25
Academic training	Incomplete first degree (Basic Education)	1	1
	Incomplete second degree (High School)	1	1
	Complete second degree (High School)	75	38
	Incomplete superior education	30	15
	Complete superior education	32	16
	Graduate (Specialization Level)	57	29
	Graduate (Master's or Doctoral Level)	2	1
Type of contract	Effective	163	81
	Contract	38	19
Stocking sector	Outpatient	5	2
	Surgery	58	29
	Clinic (non-surgical)	18	89
	Multiple hospital units/No specific unit	9	4
	Obstetrics	35	17
	Pediatrics	8	4
	Emergency sector	18	9
	Intensive care unit	52	26

Source: Elaborated by the authors, 2021.
MG: Minas Gerais.

Regarding the hours worked weekly, 102 (51%) participants work in this hospital from 40 to 59 h, followed by 85 (42%) who work from 20 to 39 h. In the institution, 30 and 40 h contracts are adopted for nursing. The literature associates long working hours with a higher incidence of AE, due to professional fatigue[19].

With the intention of accurately portraying the perception of nursing on the subject in question, the application of the research sought to reach the highest rate of participants, however some sectors showed lower adherence. The surgery sectors represented the highest absolute number of participations with 58 respondents, in view of having the largest contingent of professionals. No sector was left without participation. In terms of representativeness, the Neonatal Intensive Care sector stood out, with a 99% share compared to the total number of workers in the sector. The representativeness of each sector may be associated with the degree of relevance that professionals credit to the research topic, work overload making it difficult for individuals to pause their activities to answer the questionnaire, extension of the instrument used, individual factors, among others.

Most nursing professionals, 119 (60%), reported having been involved in at least one AE in the last 2 years. Being that 81 (68%) of these events were without damage or with light damage; 31 (26%) with moderate or severe damage; three (2%) led to the patient's death and four (3%) did not report the severity of the event. According to the results, 67 (56%) events were reported to the Risk Center, which is the body responsible for managing patient safety actions in this hospital and reporting to Anvisa, through Notivisa, of all AEs that occurred in the institution, 32 (27%) of the professionals were not informed if the event had been reported.

The high incidence of professionals involved in AE was already expected, given the large number of procedures performed directly on the patient. For Quillivan et al.[7], nursing provides most direct patient care in hospital settings, in addition to having the most prevalent members of a hospital's clinical staff.

In light of the classification of contributing factors presented in Notivisa, the participants indicated their assessment of the causes involved with the occurrence of the AE. The main factor pointed out was the professional, that is, the occurrence of the AE was related to the attitudes of the professional who performed the procedure, such as: lack of technical skill, omission, distraction, failure to perform, and non-compliance with standards. This finding is associated with a culture of guilt that society itself sustains, in which failure, in most cases, is associated with the individual involved in the occurrence and not with the work process. Tartaglia and Matos[21] demonstrated in their work the toxic habit of blaming health professionals for identified errors and failures and of defending that patient safety depends on adequate tools and environment to perform the necessary tasks.

The other causes identified as determining conditions for the occurrence of AE were the factors involving: the patient (risk behavior, non-observance of the guidelines given by the team, linguistic difficulties, etc.), cognitive factors (failure of perception and/or understanding), and factors involving communication (method of communication, absence or failure of information during shift change, absence or error in medical records, and illegible information).

It is important to consider that the fact that "factors involving communication" have been identified as one of the main causes for the occurrence of these AEs has an important relationship with the demonstration of fragility in the "openness for communication" dimension, since this dimension of the safety culture reached only 51% of positive responses. This dimension showed a strong positive correlation with the dimensions "management support for patient safety" (0.99), "teamwork between units" (0.93), "non-punitive response to errors" (0.83), and "frequency of event reports" (0.82), thus demonstrating the strong influence that management support, work between sectors, non-punitive attitudes towards failures, and the frequency of AE notifications exert on the institution's communication.

The way in which the Institution treated the AE (Table 2) was unknown to 55 (47%) professionals. This result corroborates the fact that only 54% of the professionals responded positively to the dimension of the safety culture "return of information and communication about the error", emphasizing the team's perception of the institution's weaknesses in reporting on the occurrence of AE and the changes implemented from the AE reports, as well as promoting discussions on measures to mitigate these failures. In the case of those participants who knew how the institution treated the AE, 22 (19%) reported that a routine or protocol review/preparation took place, 20 (17%), that there was training and 17 (15%), that there was no action.

Deepening the analysis in relation to the 17 (15%) events that did not generate any action on the part of the Institution, we identified that in one event that was reported there was slight damage, in four there is no information about the notification to the Risk Center and 12 events were not reported. The number of unreported events is high. This data is even more alarming if we consider that four of these 12 events caused serious damage, that is, the patient presented symptoms with "[...] need for intervention for life support, or major clinical/surgical intervention, causing a decrease in life expectancy, with great damage or permanent or long-term loss of function"[20]. The fact that events with a serious outcome were not reported highlights the fragility of the institution's safety culture and the need for urgent intervention to change the scenario.

Regarding the events with serious damage (n = 13) and death (n = 3), we identified that in two occurrences there is no information whether there was a notification to the Risk Center. Of the nine events that were reported, four professionals were unable to inform whether any action had been taken by the Institution; two triggered the elaboration or review of a routine/protocol; in one there was communication to the Ethics Committee; one, an administrative disciplinary action was initiated; and one informed that they participated through an interview in the AE investigation, but does not know whether an administrative disciplinary action was initiated.

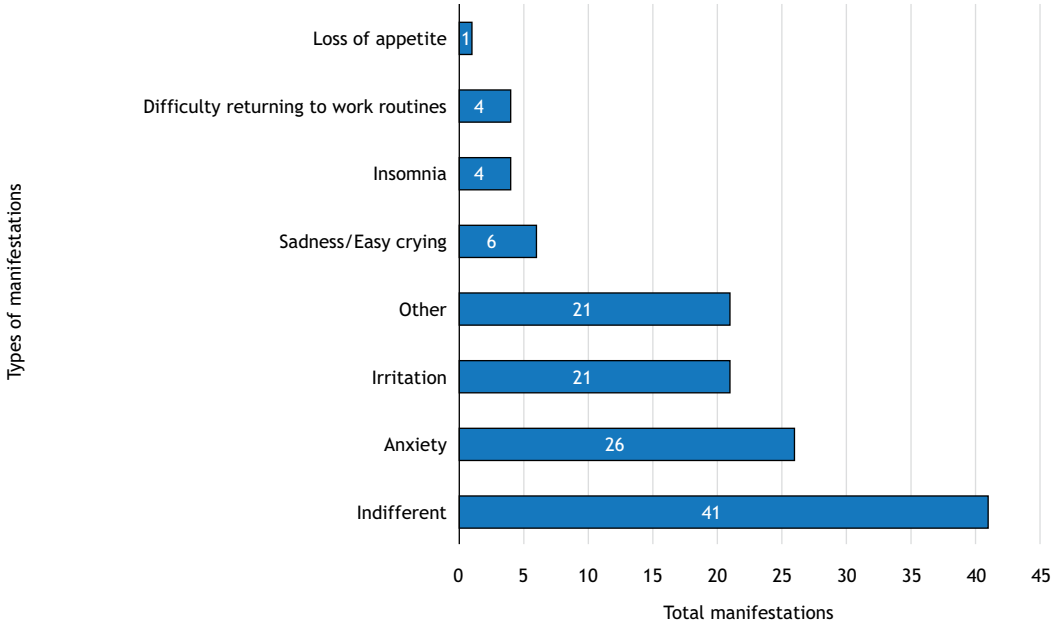
In a study carried out with nursing comparing the safety culture with the perception of the phenomenon of the second victim, it was identified that the perceptions of a deficient patient safety culture are associated with increased clinical, physical, and professional suffering[7].

An approach to the punitive culture in Brazil was presented through documentary research, from 1995 to 2010, with data collected from 13 ethical-disciplinary actions received by the Regional Nursing Council of Bahia (Coren-BA), where health organizations stood out as whistleblowers of AE committed by nursing professionals[21].

Table 2. Patos de Minas (MG): how the institution dealt with the adverse event, 2019.

Actions	%	n.
Did not know how to report	47	55
Developed or revised routine/protocol	19	22
Promoted training	17	20
Tão houve ação	15	17
Other	3	4
Initiated disciplinary action	1	1
Reported to the ethics committee	1	1

Source: Elaborated by the authors, 2021.
MG: Minas Gerais.



Source: Elaborated by the authors, 2021.
MG: Minas Gerais.

Figure. Patos de Minas (MG): types of manifestations presented by nursing professionals, 2019.

Of the 119 who had been involved with AE in the last two years, the majority (55%) had at least one type of physical and/or psychological manifestation; 33% of professionals were indifferent; and 11% did not answer this question. Anxiety was the most reported manifestation (24%), as can be seen in the Figure.

In the systematic review performed by Seys et al.[11], the prevalence of second victims after an AE ranged from 10.4% to 43.3%. In the Italian study carried out by Pieretti et al.[22] with a group of 240 health professionals, the prevalence of second victims was 35.4%.

In another survey similar to this one, carried out with 303 health professionals from a pediatric hospital on the psychological and physical symptoms related to the second victim and the quality of support resources, it was identified that approximately 30 (10.3%) respondents had physical manifestations and 22 (7.4%) had psychological symptoms after involvement in an AE[17].

We did not identify national surveys to compare the results. Unfortunately, there is still a gap in the national literature regarding terminology, the prevalence of the second victim phenomenon in health organizations, as well as the identification of damages and its impact on the lives of professionals[23].

Analyzing the cases in which the AE caused moderate, severe damage, or death to the patient (n = 36), the data showed a reduction to 22% in the number of professionals indifferent to the occurrence of the AE, which is still an expressive index and that requires deeper investigation. The other professionals presented anxiety (33%), irritation (25%), insomnia (5%), loss of appetite (5%), difficulty in returning to routine (5%), among others (28%), such as concern, frustration, fear, indignation, and increased attention at work. It is important to highlight that three professionals (3%) reported that it was necessary to seek specialized emotional assistance.

In a survey carried out in 33 Belgian hospitals with healthcare professionals to assess the psychological impacts after involvement in an AE, it has been shown that the psychological impact is greater when the damage suffered by the patient is more severe and when health professionals feel responsible for what happened[24].

Regarding the reporting of AEs to the Risk Center, most participants in this research, 99 (51%), reported not having made any AE notification in the last 12 months; 45 (23%) made one to two notifications. Of the 96 (49%) professionals who reported at least one AE in the last 12 months, 44 (46%) were nurses, 50 (52%) were nursing technicians, and two (2%) were nursing assistants. Of those who did not report any event in the last year, seven (7%) were nurses (all with more than 6 years of work in the hospital) and 92 (93%) were nursing technicians.

This issue of underreporting of AE was also analyzed in an integrative review of national publications that portrayed the main causes for the lack of communication: fear of reporting; notification focused only on more serious events; lack of knowledge on the subject or how to notify; and centralization of the notification in the professional nurse[25]. In our results, a strong positive correlation was identified between the dimension "frequency of event reports" with the dimensions: "return of information and communication about the error" (0.91), "adequacy of professionals" (0.85), "management support for patient safety" (0.84) and "openness for

communication", strengthening the understanding that, for an adequate notification practice, the environment must be based on the support of senior management, with favorable spaces for listening and discussing failures and that the staffing is adequate to the work demands.

The results of positive responses to the safety culture dimensions showed that only 22% of the participants believe that their errors, mistakes, or failures will not be used against them and 27% that, when an AE occurs, the focus given by the Institution is on the problem and not on the individual involved in the occurrence. The portion of professionals who are concerned that their errors, mistakes, or failures are recorded in their job files predominates (74%). It is worth mentioning that punitive behavior on the part of health institutions, in response to the occurrence of an AE, generates distrust and fear in professionals, in addition to favoring the concealment of mistakes and failures committed[26].

According to Quillivan et al.[7], a non-punitive response to errors is capable of mitigating the negative effects of the second AE victim phenomenon. Support interventions for second victims serve as protective factors that can improve coping skills and optimize the recovery of healthcare professionals who are impacted by an AE[17].

Considering the support and support needs of professionals involved in AE, the respondents defined that the priority action is the promotion of a safe environment (equipment/physical structure) (1). Second, improve internal communication (2); third, promoting psychological assistance/Establishing patient safety protocols (3). Subsequently, by priority: improving the handling of AE (4); eliminate the punitive culture (5); provide psychiatric care (6); and optimize AE reporting tools (7). It was also suggested to train the entire team, encourage teamwork, encourage the team to notify events, and maintain complete work schedules.

In this context, the international literature presents a range of support programs for second victims, such as: the programs forYOU, developed by the University of Missouri, the Resilience in Stressful Events (RISE) of the Johns Hopkins Hospital, the Center for Professional and Peer Support (CPPS) at Brigham and Women's Hospital and Medically Induced Trauma Support Services (MITSS), in addition to individual and collective actions and interventions. These strategies have in common the purpose of meeting the needs of health professionals in a systematic way[23].

A survey conducted in 2017 in which professionals linked to the patient safety sector of intensive care hospitals in Maryland, in the United States, were interviewed, highlighted numerous barriers that prevent doctors, nurses, and other health professionals from seeking help after an AE occurs. The main barriers included fear of breach of confidentiality and negative judgment by peers. Therefore, it is important that support programs for second victims are implemented, seeking to overcome these barriers and bring together all health professionals[21].

According to the recent systematic review of 64 articles, carried out by Quadrado et al.[23], the findings on the second victim theme demonstrated the interest of researchers in promoting consistent evidence to clarify this phenomenon. However, in the national scenario, research involving support strategies for second victims were not identified, revealing an important gap between the knowledge produced internationally and in Brazil, which is probably reflected in practice. The authors emphasized that the scarcity of national studies reflects the urgency of developing research to identify the prevalence and experience of health professionals in the condition of second victims, in order to map the reality of the phenomenon in Brazilian health institutions and structure feasible support strategies for our context.

Although the core of this research has been to present the negative effects experienced by health professionals who engage in AE, we have shown that, in some situations, the experience of the second victim caused an increase in surveillance for patient safety routines, which represents a positive consequence of this phenomenon.

Finally, the results found in this research emphasized the complexity of the phenomenon of the second victim of AE and put on the agenda the urgent need to broaden the debate on this topic. Nursing has suffered severely from the effects of the lack of an adequate system to treat the second victims of AE, facing, in most cases without institutional support, damage to physical and emotional health such as anxiety, irritation, insomnia, loss of appetite, and difficulty returning to the routine.

In order to bring about changes in the reality experienced by nursing professionals, political and academic entities, managers and leaders of health institutions, nursing councils and health workers must join efforts in order to establish practices and guidelines of reception and protection for the professional who is involved in an EA.

CONCLUSIONS

Deeply understanding the phenomenon of the second victim and its contributing factors is essential for a paradigm shift and the adoption of effective strategies to transform work environments into healthier environments.

National research on the phenomenon of the second victim is still incipient and there are no validated instruments in Brazil on this problem. Most academic productions are international, which made it impossible to compare the results with national data.

The problem of the second victim of AE is complex and demands effective intervention measures as a matter of urgency. The suffering faced by health professionals, resulting from involvement in a severe AE, which is mostly the result of inappropriate work

processes, can no longer be disregarded by society in general, health institutions and government officials.

It is hoped that, from this study, further research will be carried out and that organizational leaders and managers can understand the need to evaluate in their organizations the presence of contributing factors to the phenomenon of the second victim and the importance of establishing a safety culture to reduce and prevent the illness of health professionals and the incidence of AE.

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Author's Contributions

Almeida PP – Conception, planning (study design), acquisition, analysis, data interpretation, and writing of the work. Moura GG – Planning (study design), analysis and data interpretation. All authors approved the final version of the work.

Conflict of Interests

The authors inform that there is no potential conflict of interest with peers and institutions, politicians, or financial in this study.