Medycyna Ogólna i Nauki o Zdrowiu 2024, Tom 30, Nr 2, 104–111
www.monz.pl

REVIEW ARTICLE

Medical personnel as the 'second victim' of an adverse medical event – narrative review

Personel medyczny jako druga ofiara niepożądanego zdarzenia medycznego – przegląd narracyjny

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Gibalska-Dembek A, Sys DN. Medical personnel as the 'second victim' of an adverse medical event – narrative review. Med Og Nauk Zdr. 2024; 30(2): 104–111. doi: 10.26444/monz/189260

Abstract

Introduction and Objective. This review aims to define the phenomenon of the 'second victim' in the context of adverse medical events and to assess its impact on medical personnel. The prevalence of second victim syndrome is difficult to estimate, but research suggests that it may affect between 9% – 38.7% of healthcare workers. In addition, the review focuses on analyzing support strategies for mental health and the professional effectiveness of healthcare workers.

Review Methods. The review comprised a systematic literature search in three main databases: PubMed, Web of Science, and Science Direct.

Brief description of the state of knowledge. Research indicates that medical personnel, as the second victim, experience psychological and physical symptoms after the event, such as constant guilt, loss of faith in professional skills, depression, suicidal thoughts, and professional burnout, as well as sleep or eating disorders. The phenomenon can also lead to post-traumatic stress disorder (PTSD). Equally important, the second victim syndrome negatively affects work efficiency, and the quality of patient care and may encourage staff to practice defensive medicine, increasing the costs and risk of making further mistakes. Providing support to protect healthcare workers from the long-term effects of the syndrome is crucial.

Summary. Understanding second victim syndrome and effective support programmes are key to improving patient safety and the well-being of healthcare workers. Efforts should be undertaken by healthcare organizations in such a way as to integrate these aspects within healthcare systems.

Key words

adverse medical events, healthcare support systems, mental health of medical workers, second victim

Streszczenie

Wprowadzenie i cel pracy. Częstość występowania syndromu drugiej ofiary jest trudna do oszacowania, ale badania sugerują, że może on dotyczyć od 9 do 38,7% pracowników ochrony zdrowia. Niniejszy przegląd ma na celu zdefiniowanie zjawiska „drugiej ofiary" w kontekście niepożądanych zdarzeń medycznych oraz ocenę jego wpływu na personel medyczny. Dodatkowo skupia się na analizie strategii wsparcia zdrowia psychicznego i efektywności zawodowej pracowników ochrony zdrowia.

Metody przeglądu. W ramach przeglądu narracyjnego przeprowadzono systematyczne przeszukiwanie literatury w trzech głównych bazach danych: PubMed, Web of Science oraz Science Direct.

Opis stanu wiedzy. Badania wskazują, że personel medyczny jako druga ofiara doświadcza objawów psychologicznych i fizycznych po zdarzeniu, takich jak: nieustające poczucie winy, utrata wiary we własne umiejętności zawodowe, depresja, myśli samobójcze, wypalenie zawodowe, a także zaburzenia snu czy odżywiania. Zjawisko to może również prowadzić do wystąpienia zespołu stresu pourazowego (PTSD). Co równie ważne, syndrom drugiej ofiary wpływa negatywnie na wydajność pracy, a więc jakość opieki nad pacjentami, i może skłaniać personel do praktykowania medycyny defensywnej, zwiększając koszty i ryzyko popełniania kolejnych błędów. Kluczowe jest zatem zapewnienie pracownikom ochrony zdrowia wsparcia, aby uchronić ich przed długoterminowymi skutkami syndromu.

Podsumowanie. Zrozumienie syndromu drugiej ofiary i skuteczne programy wsparcia dla pracowników ochrony zdrowia są kluczowe dla poprawy bezpieczeństwa pacjentów i dobrostanu personelu medycznego. Organizacja ochrony zdrowia powinna podejmować wysiłki w celu integrowania tych aspektów w ramach systemów opieki zdrowotnej.

Słowa kluczowe

druga ofiara, niepożądane zdarzenia medyczne, systemy wsparcia w służbie zdrowia, zdrowie psychiczne pracowników medycznych

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Received: 28.02.2024; accepted: 10.05.2024; first published: 06.06.2024

INTRODUCTION

The term 'second victim' was first described and used in 2000 by Albert Wu, Health Policy and Management Professor at Johns Hopkins Bloomberg School of Public Health in Baltimore, USA. He noted that apart from the first obvious victim of an adverse medical event – the patient, there is also a second victim – the healthcare worker [1]. Ten years later, researcher Susan D. Scott and her team developed a definition of the second victim:

The second victim is a healthcare worker involved in an unforeseen adverse event in a patient who becomes a victim in the sense that he or she is traumatized by the event. Often, the second victim feels personally responsible for the unexpected results of the patient's treatment and feels that they have failed their patients by assessing their clinical skills and knowledge for the second time [2].

In 2022, an international group of researchers, after analyzing 83 publications on second victim syndrome, developed a new definition:

The second victim is any healthcare worker directly or indirectly involved in an unforeseen adverse event, an unintended care error or a patient injury, and who becomes a victim in the sense that he or she is also adversely affected.

This definition excluded the word 'traumatized', stating that it is a diagnostic term. Reckless or malicious violations were also not included in the definition of the second victim [3]. The authors of the paper *Abandon the term 'second victim'* disagree with the concept of the second victim. They point out that this term is poorly perceived by patients who are the first victims of an adverse event. The victim arouses sympathy and is not attributed responsibility for the event. Patients, on the other hand, expect responsibility from healthcare workers. Researchers prove that search engines, after entering the term victim of a medical error, search for images of desperate healthcare workers instead of patients who are the first victims [4]. Esperanza Gómez-Durán, a psychiatrist and forensic physician, and a team of researchers, denied the need to change the name of the other victims, and disagreed with this view. According to the researchers, not naming medical staff as second victims, who are often reluctant to ask for help and psychological support and which sometimes even leads to suicide, is not a solution leading to improved safety in healthcare [5].

The prevalence of second victim syndrome is difficult to estimate. There are several studies indicating the scale of the phenomenon, one of which states that experience of the syndrome affects from 9% – 38.7% of healthcare workers in the first six months after the event, to 86.3% over five years [3]. Other studies indicate that half of medical staff experience the syndrome at least once during their profession [6–8]. At the same time, the most common specializations affected by this phenomenon are surgery, anaesthesiology, paediatrics, obstetrics and gynaecology [7].

This narrative review aims to explain the phenomenon of the 'second victim' in the context of adverse medical events, to identify the extent of its occurrence among medical personnel, and to assess its impact on healthcare workers. In addition, the review aims to analyze the available strategies and support programmes that can be implemented to assist employees affected by this phenomenon, emphasizing their mental health and professional effectiveness. Another aim is to emphasize the importance of integrating these support programmes into healthcare systems to increase patient safety and improve the well-being of medical personnel.

MATERIALS AND METHOD

The narrative review was performed using a systematic literature search to identify and synthesize relevant information regarding the phenomenon of the 'second victim' in the context of adverse medical events. The literature search process was carried out on 3 May 2023, in three main bibliographic databases: PubMed, Web of Science, and Science Direct. A set of keywords and their combinations were used to increase the range and depth of the search. The main key words included: 'second victim', 'healthcare workers', 'adverse medical event', 'psychological impact', 'medical staff trauma' and 'healthcare support systems'. In addition, search filters were applied to limit the results to articles published in English, and full-text works. Only full-text works published in full in English were included in the review, including original works, literature reviews, as well as legal documents and programmes implemented in medical facilities. Conference abstracts, comments, opinions, and letters to editors that did not provide full research data or were not directly related to the topic, were excluded from the analysis. Subsequently, the articles were selected based on their relevance to the topic of 'second victim'. The collected articles were analyzed by extracting key data which was then synthesized to extract key information about the extent of the 'second victim' syndrome, its impact on medical personnel, and available support methods.

The use of the narrative review methodology enabled an integral approach to the topic, taking into account different perspectives and research on the 'second victim' syndrome. This method allowed for a broad view of the problem while at the same time identifying gaps in current knowledge, and indicating directions for further research.

RESULTS

The review identified 13 studies analyzing the 'second victim' syndrome among medical staff after an adverse medical event, of which 4 were qualitative research, 8 were quantitative research, and 1 used a mixed paradigm. The research covered various medical specialties, including nurses, midwives, doctors, and surgeons, from various countries such as Australia, Italy, The Netherlands, USA, Spain, UK and Belgium. Research methods ranged from interviews and content analysis, through cross-sectional research and online surveys, to meta-analyses and analysis of tools, e.g. TSQ (Trauma Screening Questionnaire), HADS (Hospital Anxiety and Depression Scale), or SVEST (Second Victim Experience and Support Tool). The main results concerned the challenges in the recovery process after critical incidents, often leading to PTSD (Post-Traumatic Stress Disorder) and burnout, the significant frequency and variety of psychological symptoms, the signs indicating PTSD, adjusting emotional expression to the expectations of the organization, the impact on medical practice, access to support protocols, as well as coping methods and support strategies (Tab. 1).

Table 1. Studies on the second victim syndrome after an adverse medical event

Author/s	Year	Country/ Region	Study group (who?)	Sample size	Paradigm (qualitative/ quantitative)	Method/ Tools	Main outcome
Buhlmann M, et al.	2022	Australia	nurses and midwives	10	qualitative	interviews	The study highlights the challenging recovery healthcare professionals face after critical incidents, often leading to PTSD and burnout due to insufficient organizational support.
Busch IM, et al.	2020	Italy	healthcare providers involved in adverse events	11,649	quantitative	Meta-analysis	Second victims experience a significant prevalence and variety of psychological symptoms, with over two-thirds of providers indicating issues such as persistent troubling memories, anxiety, anger, remorse, and distress.
Kerkman T, et al.	2019	Netherlands	midwives	691	quantitative	Cross-sectional / survey including TSQ, HADS	Nearly one in five midwives (17%) who encountered a traumatic event displayed symptoms potentially indicative of PTSD.
Rodriquez J, and Scott SD.	2018			105	quantitative	Cross-sectional / Web-based survey	Healthcare professionals adjusted their emotional expressions to match what their organizations expected, leading to the internal suppression of feelings like guilt and shame, which potentially contributed to burnout, role changes, or early retirement.
Jones JH and Treiber LA	2018	USA	former students of nursing	168	mixed	Cross-sectional / survey including both quantitative and qualitative items	The study reveals that nursing graduates often become second victims, underscoring the need for further research in nursing education to develop specific strategies and best practices for their support.
Baas MAM, et al.	2018	Netherlands	obstetricians-gynecologists	683	quantitative	Cross-sectional / survey including TSQ,	1.5% of obstetricians-gynecologists experience post-traumatic stress disorder, with 12% having access to a hospital support protocol post-adverse events. Common coping methods include support from colleagues, family, friends, case discussions, and distractions, with 82% preferring peer support from colleagues after such events.
Burlison JD, et al	2017	USA	healthcare providers involved in direct patient care	303	quantitative	Cross-sectional / SVEST	Healthcare organizations can utilize the SVEST to assess the experiences of their staff as second victims and to evaluate the quality of the support resources available to them.
Schrøder K, et al.	2016	Denmark	obstetricians and midwives	survey=1237; interview=14	mixed	national survey and interview	Following a traumatic childbirth, obstetricians and midwives grapple with feelings of blame and guilt, as well as existential dilemmas.
Plews-Ogan M et al.	2016	USA	physicians who had made a serious medical error	61	qualitative	interviews	Eight key factors that aided in the positive coping of exemplary physicians were identified: discussing their experiences, admitting mistakes and apologizing, practicing forgiveness, understanding the moral implications, accepting imperfection, learning and gaining expertise, focusing on preventing similar incidents and enhancing teamwork, and contributing by assisting and educating others.
Mira JJ, et al.	2015	Spain	physicians and nurses	1087	quantitative	Cross-sectional / online survey	Health professionals often experience guilt, anxiety, and a loss of confidence due to adverse events. The majority will encounter these situations as second victims at some point in their careers, yet they seldom receive training or education on how to manage these challenging experiences.
Harrison R, et al.	2015	UK/USA	physicians and nurses	265	quantitative	Cross-sectional / online survey	An adverse event resulted in both professional and personal difficulties with prevalent negative emotions, although some reported positive feelings like determination. Those surveyed tended to choose problem-focused coping methods, linked to specific emotional states. While peer-inclusive organizational support was valued, concerns about confidentiality deterred some staff from utilizing these services.
Gerven EV, et al.	2014	Belgium	hospitals	59	qualitative	content analysis based and the Scott Model	Out of thirty organizations, all had a structured plan to assist second victims. However, 12% were unable to pinpoint a specific contact person. The chief nursing officer often emerged as a primary contact in problematic situations. Regarding protocol quality, only a few adhered to some of the international resources.
Shanafelt TD.	2011	USA	surgeons	7825	quantitative	Cross-sectional / survey	1 in 16 American surgical doctors experienced suicidal thoughts after being involved in an adverse event. At the same time, only 26% of these doctors sought psychological or psychiatric help.

NOTE: TSQ - Trauma Screening Questionnaire: It is a tool for quickly assessing symptoms related to post-traumatic stress disorder (PTSD). TSQ consists of a series of questions about an individual's experiences and reactions after a traumatic event, such as adverse medical events; HADS - Hospital Anxiety and Depression Scale: This measurement tool is used to assess the level of anxiety and depression, especially in medical settings. The HADS scale contains two subscales: one measuring anxiety and the other depression, each of them containing 7 questions; SVEST - Second Victim Experience and Support Tool: It is a specially developed tool that is used to assess the experience of medical staff as second victims and the quality of the support resources available to them. SVEST helps to identify areas where medical organizations can improve support for their employees who are experiencing difficulties after adverse medical events.

Psychological and physical symptoms of second victims. Research indicates that second victims experience difficulties on a mental and physical level in connection with participation in an adverse medical event. Medical personnel may struggle with guilt and professional incompetence, doubt in their skills, loss of job satisfaction, and fear of possible future mistakes and the consequences of these mistakes. Medics may also experience depression, burnout, disturbing thoughts, grief and anger, and may also struggle with suicidal thoughts. They may additionally have physical symptoms, such as insomnia, nausea, and fatigue [6,8–9].

In a cross-sectional study on a sample of 1,087 healthcare professionals employed in both hospitals and primary healthcare in Spain, the most common emotional reactions after an adverse medical event were determined: guilt (58.8%), anxiety (49.6%), reliving the event (42.2%), fatigue (39.4%), insomnia (38%), and insecurity (32.8%) dominated. Almost a third of the surveyed staff were unable to continue working after the event [10]. Italian researchers reviewed 18 studies conducted in the USA, UK, Australia, Canada, Greece, Iran, Denmark, Sweden, Germany, Switzerland and Turkey, on the psychological and psychosomatic symptoms in second victims. This resulted in the number of 11,649 medical staff who experienced an adverse event. Disturbing memories manifested themselves in 81% of respondents, fear and concern were reported by 76%, anxiety by 75%, regret and remorse by 72%, chronic stress by 70%, fear of future mistakes by 56%, embarrassment by 52%, and guilt by 51%. Sleep difficulties were manifested in 35% of the respondents [11].

Interviews with 10 Australian nurses and midwives who experienced a critical incident while caring for a patient showed their initial response to the event. At the time of realizing the importance of the event, the study participants described the experience of shock, followed by a feeling of stress and disbelief. After the drop in adrenaline, the respondents felt a sense of guilt and self-incrimination. These emotions were often accompanied by embarrassment, anger at oneself, and sadness. The long-term consequences of the event were insomnia, nightmares, and thoughts about changing profession [12]. In a mixed method study conducted among Danish midwives and obstetricians after their participation in traumatic childbirth, it was shown that 87% of respondents were tormented for a long time by the memories of the event. Most of the respondents indicated that for many hours they were tormented by thoughts related to whether the event could have been prevented. Also for a long time, everyone felt a sense of care for the child and parents without information about the health of their patients. One midwife indicated that for 12 years she had been thinking about a particular mother and child whenever she passed through the town where they lived. Another midwife described a situation in which a mother wrote her long letters full of sadness. Yet another experienced criticism in a local newspaper, in which she was called a 'murderer from the city of X'.

The current study also shows that the staff were afraid of the morning medical briefings after an event, and thus the atmosphere of judgment and a possible change in the perception of them by colleagues. One of the midwives was afraid of the so-called 'invisible fingers' (the index finger pointing at the 'guilty' party) [13]. In a study on a group of 168 nursing graduates from an American university, the most common words used to describe their condition after participating in an adverse event were: awful, horrible, incompetent, worried, scared, and humiliated [14]. A study among a group of American surgeons showed that 1 in 16 had suicidal thoughts after participation in an adverse event. At the same time, only 26% of the surveyed doctors sought psychological or psychiatric help [15].

SVEST – The second victim experience and support tool is one of the globally recognized tools for examining second victims' experiences and the quality of forms of support. The questionnaire examined the psychological and physical suffering of the second victim, the level of support provided by the supervisor, co-workers, and institutional, the support that the staff receives outside the workplace, intention to change profession, and the absence of employees after the event. The creators of SVEST conducted the study on a sample of 303 employees of a pediatric hospital in the United States. The results indicated that 10.3% of the respondents experienced physical suffering and 7.4% mental suffering after an event. The intention to change jobs or profession was declared by 9.6% of the respondents. Absence as a result of the experience of an adverse event concerned 7.1% of the respondents [6]. To date, the SVEST study has been conducted in Italy, Spain, Denmark, Turkey, Malaysia and China, among others [16–19].

As a result of an adverse event, positive changes in the behavior of medical staff may also occur. In a cross-sectional study conducted in a clinical hospital in the UK and the USA, a sample of 265 doctors and nurses identified greater determination, attention and vigilance in patient care. Greater attachment to safety rules was noted in 83.8% of the respondents [20]. In the mentioned study of Danish midwives and obstetricians, it was shown that the experience of attending to traumatic childbirth influenced them both in the professional and existential context. The respondents talked about greater humility, drawing conclusions for the future, or reconsidering their professional path [13].

PTSD – post-traumatic stress disorder. Many studies indicate that after an adverse medical event, the medical staff may experience PTSD – post-traumatic stress disorder. This is *a set of symptoms associated with a psychological response to a strong, unexpected, catastrophic stressor* [21]. A cross-sectional study conducted among 691 Dutch midwives showed that 89 (13%) of them screened positive for PTSD. Researchers indicate that, based on this study, it can be estimated that 2% of midwives are at risk of PTSD. The study also indicated the results of a survey for PTSD among midwives in Australi – 17%, in the UK – 33%, and in Sweden – 5% [22]. For comparison, a cross-sectional study among Dutch gynaecologists showed that of the 12.6% of doctors who experienced an adverse event, 11.8% screened positive for PTSD [23].

Impact of second victim syndrome on the phenomenon of burnout. A researcher from the University of Oklahoma, USA, in a survey on a sample of 127 healthcare workers showed a higher level of occupational burnout in doctors who reported participation in an adverse event. In the publication, the author also cited a study conducted in a group of American surgeons, in which a high level of occupational burnout was also correlated with the number of reported medical errors [24].

Impact of second victim syndrome on career change. American researchers conducted a survey among medical staff who changed their professional careers as a result of an adverse event. The transition to a non-clinical position was indicated by 18% of the respondents, and 17% moved to other departments or units. The respondents were asked about their situation after an adverse medical event, and 64.9% stated they had not received the expected support from the professional environment, and 37.7% reported that they were ordered to remain silent about the incident in a medical facility. They reported guilt, stigmatization, shame, and loss of faith in their skills. The suppression of emotions was associated with the possibility of burnout, changing jobs, or early retirement [25].

Impact of second victim syndrome on the quality of work. The second victim syndrome may affect work efficiency and the ability to provide safe and effective care for subsequent patients. The latter is described in the literature as the 'fourth victims', i.e. patients who experienced an adverse event while under the care of staff who had previously experienced 'second victim' syndrome [7,26].

Medical personnel can also practice defensive medicine, i.e. use medical procedures aimed at preventing lawsuits instead of treating the patient, making a diagnosis or preventing diseases. Such a practice results in avoiding procedures or ordering unnecessary tests, deepening diagnostics, and thus increasing the costs of some tests. Italian researchers proved that the scale of ordering tests as part of defensive medicine is, among others, 33% more laboratory tests or 16% more consultations [7,27]. The increase in costs negatively affects the finances of the facility where the staff suffered the syndrome and who are labelled in the literature as the 'third victim'.

As a result of an adverse event, a media crisis may additionally occur, which has a negative impact on the image of the facility, and thus may lead to a loss of trust by patients [29]. Medical facilities may additionally be affected by absenteeism, the rotation of employees, lowering of the quality of care, and thus the level of patient satisfaction [30].

Notably, proceedings against medical personnel before professional supervisory/disciplinary boards and court proceedings contribute to the deepening of the syndrome. An additional stress for medical staff may be the publicity of the adverse event in the media, as well as the negative perception of the event in the workplace.

Support for second victims. In the Global Action Plan for Improving Patient Safety for 2021–2030, the World Health Organization (WHO) included the need to provide patients, families and medical staff with continuous psychological and other support in the event of a serious patient safety incident [31]. Another document by the WHO focuses specifically on the mental Charter: *Health Worker Safety: A Priority for Patient Safety.* This document serves as a response to issues related to workplace safety and hygiene in healthcare, violence against medical personnel, and the psychological well-being of healthcare workers, particularly considering the impact of the COVID-19 pandemic. It includes a call-to-action for WHO member states to undertake measures to improve the safety of medical staff [32].A document published by the Organisation for Economic Cooperation and Development (OECD), more extensively discusses the problems with workplace safety in healthcare [33].

Considering the consequences of being the second victim of an adverse event, it seems necessary to know the tools and support programme available for medical staff. One such tool may be an open disclosure of adverse medical events programme implemented in the facility. A qualitative study on a sample of 61 doctors in the USA showed that revealing the event to the patient, and an apology by the doctor, can be a way to forgive yourself for the mistake made. The researchers also indicated that openly talking about the event, adopting the attitude that there are no perfect people in medicine, treating the event as an opportunity to learn and draw conclusions to improve occupational safety and sharing knowledge, were helpful to doctors in recovering from an adverse event [9]. Another researcher, N. May, drew attention to the aspect of talking about difficult experiences related to an adverse event. During interviews with 61 doctors, the author pointed out that constructive and helpful conversations have an impact on the doctors' coping process after events. At the same time, the author also indicated the harmful effect of the silence of doctors and inadequately conducted conversations with them by the environment. Such conversations include those containing an element of blame, accusation, or even incitement to lie [34].

In the mentioned study conducted on Spanish healthcare workers, it was shown that they rarely receive support in the form of, for example, training in dealing with the negative phenomena of the second victim syndrome. Psychological counselling was received by 13.4% of specialists, and 46.5% received support in their ward [10]. The already cited study of Dutch gynaecologists examined the coping strategies of doctors after an adverse event, of whom 87.4% received the support of colleagues, and 72.2% of them received it from family or friends. Adverse ways of coping with the consequences of the event included increasing the consumption of alcohol, drugs and/or nicotine in 5.1% of doctors and 1.5% used medicines that they had not used before. In addition, 0.6% of them left the profession of gynaecologist, and 24.4% stopped working night shifts or stopped performing operations on their own [23]. A qualitative study among ten Australian nurses and midwives after a critical incident with a patient showed that only two of them received support in the workplace. They were offered debriefing (group psychological support), counselling, and the opportunity to talk to their supervisor as a form of support. The respondents indicated that after some time they adopted a strategy of coming to terms with the consequences of the event. Some of them engaged in physical activity, meditation, mindfulness, or spending time with loved ones [12].

Forms of support expected by employees after an adverse event. In hospitals in Maryland, USA, a study was conducted through interviews with Patient Safety Officers. The respondents indicated that in their institutions the most frequently chosen form of support by the second victims was carried out by their closest co-workers. In the literature, this is often called 'peer support'. They identified a prompt appointment and guaranteed confidentiality of the medical staff as most important. Also crucial in the process was the introduction of just culture, a framework in healthcare where organizations and employees share accountability for patient safety, with a focus on learning from errors and system vulnerabilities rather than assigning blame in the facility [35]. For Danish midwives and obstetricians, it was

most desirable to talk about the event with colleagues from the ward, partners, and management. At the same time, the Danish midwives, management and families obta8ined the highest results in the survey [36]. In their study, the creators of the SVEST tool proved that the form of support most often chosen by the respondents (80.5%) after the event was also a conversation with a colleague, and for 73.8% it was important to talk to their supervisor. The willingness to use the form of assistance outside the facility was declared by 62.4% of the respondents. The desire to speak confidentially 24 hours a day with someone who can provide support was chosen by 47.5% of employees [6].

Support programme MEs for second victims. A group of researchers reviewed 6 databases to identify 12 victim support programmes described in the literature: 10 were implemented in the USA, 3 of which additionally included aspects of assistance to staff in situations of violence at work, burnout, mourning and domestic violence. The greatest challenge identified in the implementation of the programmes was the persistent culture of blaming staff for the event, poor dissemination of the programme, and limited financial resources [8]. Selected support programmes for the second victims will be described below.

Scott model and forYOU programme ME. The forYOU programme is the most frequently cited second victim support programme in scientific research. Subsequent programmes were modeled on the solutions adopted in the forYOU programme. Subsequently, the YouMatter programme was created in cooperation with the creators of the forYOU programme. During the implementation of the programme, most of the solutions functioning in this programme were implemented (Tab. 2).

Susan D. Scott et al. developed a three-level model of support for second victims. It was created based on the results of a survey conducted among medical staff of facilities managed by the University of Missouri Health Care in the USA. At the first level, the second victim receives help at the facility from trained colleagues. Researchers estimated that at this level, 60% of employees will receive effective assistance. The second level is the help of a specially trained rapid response team that will meet the needs of 30% of the second victims. The third level is the provision of professional support to the worker if help is needed beyond the competence of the first and second-level support personnel. The result of the survey research and the implementation of the model, which took the name of the Scott model, was the creation of the forYOU team which provides support to the other victims 24 hours a day, 7 days a week [2].

The RISE programme ME. The RISE (Resilience in Stressful Events) programme was developed at the Johns Hopkins Hospital (JHH) in Baltimore, USA. The implementation of the programme was preceded by a survey conducted among staff on the impact of adverse events on their emotions, and the extent of expected help. Following the survey, a programme was initiated to assist second victims, involving an implementation team that established training procedures, including lectures, exemplary stories, role-playing, and mutual mentoring for peer supporters. As part of the programme, a special number has been launched, under which the so-called peer rescuers (names given under the programme) are on duty[37].

The YouMatter programme ME. The YouMatter programme was developed at the Nationwide Childrens' Hospital (NCH) in Columbus, Ohio, USA, which in 2017 had more than 10,000 employees. The programme was modeled on the forYOU help model described above, the creators of which provided NCH with training materials, procedures and marketing tools. The pilot programme was carried out in the hospital pharmacy, and then in 2015 implemented in the Emergency Department, Outpatient Clinic and the entire hospital. The NCH modified the forYOU programme by shortening the training time of staff who were to assist other second victims, and adding training in keeping electronic records of meetings and legal issues. Since the implementation of the programme between 2013–2016, 232 documented meetings were held, of which 62% took place in the Emergency Department, and 75 of them the participants were nurses? [38].

Table 2. Selected support programs for medical staff as the "second victim

Author/s	Year	Country	Was the introduction of the program preceded by a survey on the scale of the problem of the second victim syndrome and the needs of the staff?	Has the training process for staff on the principles of the program been carried out?	Does it assist staff 24 hours a day?	Is there documentation/ analysis of the implemented program?	How many interventions were carried out after the implementation of the program?
Liao M et al.	2017	USA	Yes (details not available)	Lecture and workshop training was conducted on, among others, role-playing, record keeping, and for non-clinical staff on mechanisms of coping with difficult situations	yes	Yes and it is used for statistical purposes	From 2013 to 2016, 232 peer meetings and 21 group meetings were held
Connors E et al.	2016	USA	A survey was conducted among medical employees of Johns Hopkins Hospital	Trainings were conducted, consisting of lectures, case study sessions, role-playing exercises, and group discussions	yes	Yes and it is used for statistical purposes	119 meetings were held from November 2011 to March 2016.
Hirschinger S et al.	2010	USA	Qualitative interviews were conducted with 31 employees according to a targeted sample and an online survey among 5300 lecturers and employees of the University of Missouri Health Care	Teaching classes, workshops, and simulations were carried out	yes	Meetings are documented and statistics are kept on their basis.	49 in the first months of operation of the program

DISCUSSION

Barriers to introducing programmes for second victims. A study conducted among patient safety representatives identified the 5 most common barriers to the development of second victim support programmes. For 27.10% of the respondents, the barrier was the lack of provision of funds to finance the programme; 14.02% of the staff had concerns about stigmatization; 13.08% had concerns about confidentiality; 10.28% stated possible lack of interest on the part of staff, and 10.28% – uncertainty about the use of best practices in the programmes [30]. In a study conducted among Danish midwives and obstetricians who had participated in traumatic childbirth, the fear of being blamed for the event was the greatest barrier to seeking later support [13]. The lack of knowledge among personnel about their functioning in the organization may also be a barrier to the operation of such programmes [35]. As indicated above, where such programmes have been introduced, posters, guides or announcements about the rules for using such assistance are prepared for employees [2,35–38].

The just culture as an element supporting medical staff after an event. The British organization for the prevention of medical accidents – Action against Medical Accidents (AvMA) has identified the main causes of safety problems in healthcare facilities. These include poor leadership, not listening to staff concerns or actions to suppress them, a culture of blame, and concealing safety issues. AvMA indicated that making a mistake is not in itself a deliberate act, or committed in bad faith, and employees should receive help and support from their organization. It was further indicated that employees should not be blamed if the adverse event was a consequence of organizational errors [39–40].

Just culture – the culture of fair treatment, may foster the introduction of programmes to support medical staff after an adverse event. S. Dekker describes it as 'a culture of trust, learning and responsibility'. This culture is based on providing healthcare workers with the ability to safely report any incidents related to occupational safety, and a fair approach to event liability. At the same time, this does not exempt from liability errors resulting from ignoring threats, breaking the law, or performing professional activities under the influence of measures limiting awareness [41–42].

A study of the willingness to disclose incidents among Dutch internists found that doctors were motivated to do so by the prevailing culture in the department of 'learning from mistakes' – 85%, respect for the staff reporting the incident – 84%, a culture of treating the reporter fairly – 77%, and providing a safe working environment for the reporter – 77% [43]. These elements are part of cultures based on fair treatment [41–42]. Open communication (e.g. meetings regarding incidents/quality, coaching, conversations with employees), noticing the importance of employees' emotions after the event and agreeing to express them, as well as the involvement of management in the development of a fair culture, are also supporting factors [44].

Strengths and strengths and limitations of the review. The strengths of this review are its interdisciplinarity and comprehensiveness. The analysis covers a wide range of literature on the 'second victim' syndrome, combining different perspectives and clinical contexts, and allowed for an in-depth understanding of the topic. Due to its nature, the review also allows for an integrated view of available research and theories, thereby creating a holistic view of the issue. In addition, the international nature of the sources from various medical and cultural backgrounds, enriches the discussion and emphasizes the universality of the phenomenon of the 'second victim' in healthcare and medicine.

The possible limitations of the review include, first of all, dependence on available publications which may not have taken into account the latest research results, or unpublished data. Another limitation is the possibility of omitting significant studies not published in English, which could affect the completeness of the analysis. In addition, as a literature review, the work is based on the results of research by other authors, which may limit the possibility of verification and interpretation of original data.

CONCLUSIONS

Medical professionals are exposed to the experience of an adverse medical event. This has many consequences in the mental and physical aspects or the quality of the work provided. As a result, the staff become the second victims of the event. The healthcare system should take note of the existence of this syndrome and implement solutions to support the second victims. This should be done by establishing a just culture in healthcare, educating about the impact of the second victim syndrome on medical staff and implementing programmes to help employees within the organization.

Based on the analysis conducted, the following recommendations can be proposed for the Polish healthcare system:

- implementation of the recommendations and guidelines contained in the reports developed by the World Health Organization (WHO) and the Organisation for Economic Co-operation and Development (OECD). These recommendations aim to elevate safety and hygiene standards in healthcare settings, and enhance awareness regarding workplace violence and its impact on mental health;
- conducting a survey among medical staff in Poland to determine the prevalence of the second victim syndrome. This syndrome refers to healthcare workers experiencing trauma as indirect victims of medical incidents. Understanding the extent of this phenomenon will allow for more effective targeting of its consequences;
- launching a public awareness campaign to educate healthcare workers about the possibility of experiencing second victim syndrome and its impact on mental health and safety at work. This campaign should include educational materials and provide support for those potentially affected by this issue;
- developing a support model for second victims to be implemented in Polish hospitals. This model should include intervention procedures, psychological support, and staff training, aimed at reducing the negative effects of this phenomenon on the psychological health and professional effectiveness of healthcare workers.

Funding: No external funding.

REFERENCES

1. Wu AW. Medical error: the second victim. BMJ. 2000;320:726–727.
2. Scott SD, Hirschinger LE, Cox KR, et al. Caring for our own: deploying a systemwide second victim rapid response team. Jt Comm J Qual Patient Saf. 2010;36:233–240.
3. Vanhaecht K, Seys D, Russotto S, et al. An Evidence and Consensus-Based Definition of Second Victim: A Strategic Topic in Healthcare Quality, Patient Safety, Person-Centeredness and Human Resource Management. Int J Environ Res Public Health. 2022;19.
4. Clarkson MD, Haskell H, Hemmelgarn C, Skolnik PJ. Abandon the term "second victim." BMJ. 2019;l1233.
5. Gómez-Durán EL, Tolchinsky G, Martin-Fumadó C, Arimany-Manso J. Neglecting the "second victim" will not help harmed patients or improve patient safety. BMJ. 2019;l2167.
6. Burlison JD, Scott SD, Browne EK, et al. The Second Victim Experience and Support Tool: Validation of an Organizational Resource for Assessing Second Victim Effects and the Quality of Support Resources. J Patient Saf. 2017;13:93–102.
7. Ozeke O, Ozeke V, Coskun O, Budakoglu II. Second victims in health care: current perspectives. AMEP. 2019;10:593–603.
8. Busch IM, Moretti F, Campagna I, et al. Promoting the Psychological Well-Being of Healthcare Providers Facing the Burden of Adverse Events: A Systematic Review of Second Victim Support Resources. Int J Environ Res Public Health. 2021;18.
9. Plews-Ogan M, May N, Owens J, et al. Wisdom in Medicine: What Helps Physicians After a Medical Error? Acad Med. 2016;91:233–241.
10. Mira JJ, Carrillo I, Lorenzo S, et al. The aftermath of adverse events in Spanish primary care and hospital health professionals. BMC Health Serv Res. 2015;15:151.
11. Busch IM, Moretti F, Purgato M, et al. Psychological and Psychosomatic Symptoms of Second Victims of Adverse Events: a Systematic Review and Meta-Analysis. J Patient Saf. 2020;16:e61-e74.
12. Buhlmann M, Ewens B, Rashidi A. Moving on after critical incidents in health care: A qualitative study of the perspectives and experiences of second victims. J Adv Nurs. 2022;78:2960–2972.
13. Schrøder K, Jørgensen JS, Lamont RF, Hvidt NC. Blame and guilt – a mixed methods study of obstetricians' and midwives' experiences and existential considerations after involvement in traumatic childbirth. Acta Obstet Gynecol Scand. 2016;95:735–745.
14. Jones JH, Treiber LA. More Than 1 Million Potential Second Victims: How Many Could Nursing Education Prevent? Nurse Educ. 2018;43:154–157.
15. Shanafelt TD. Special Report: Suicidal Ideation Among American Surgeons. Arch Surg. 2011;146:54.
16. Scarpis E, Castriotta L, Ruscio E, et al. The Second Victim Experience and Support Tool: A Cross-Cultural Adaptation and Psychometric Evaluation in Italy (IT-SVEST). J Patient Saf. 2022;18:88–93.
17. Knudsen T, Abrahamsen C, Jørgensen JS, Schrøder K. Validation of the Danish version of the Second Victim Experience and Support Tool. Scand J Public Health. 2022;50:497–506.
18. Koca A, Elhan AH, Genç S, et al. Validation of the Turkish version of the second victim experience and Support Tool (T-SVEST). Heliyon. 2022;8:e10553.
19. Yan L, Tan J, Chen H, et al. Experience and support of Chinese healthcare professionals as second victims of patient safety incidents: A cross-sectional study. Perspect Psychiatr Care. 2022;58:733–743.
20. Harrison R, Lawton R, Perlo J, et al. Emotion and Coping in the Aftermath of Medical Error. Journal of Patient Safety. 2015;11:28–35.
21. Popiel A, Zawadzki B, Bielecki M, et al. Czy doświadczenie pandemii może prowadzić do pourazowego zaburzenia stresowego (PTSD)? Wyniki badania COVID-STRES. In: Paluchowski WJ, Bakiera L, editors. Psychospołeczny obraz pierwszej fali pandemii COVID-19 w Polsce, Poznań, 2021. p. 45–58.
22. Kerkman T, Dijksman LM, Baas MAM, et al. Traumatic Experiences and the Midwifery Profession: A Cross-Sectional Study Among Dutch Midwives. Journal of Midwifery & Women's Health. 2019;64:435–442.
23. Baas MAM, Scheepstra KWF, Stramrood CAI, et al. Work-related adverse events leaving their mark: a cross-sectional study among Dutch gynecologists. BMC Psychiatry. 2018;18:73.
24. Brannon C. An investigation of the relationship between the second victim phenomenon and occupational burnout in healthcare. 2020. https://hdl.handle.net/11244/324271 (access: 20.02.2024)
25. Rodriquez J, Scott SD. When Clinicians Drop Out and Start Over after Adverse Events. The Joint Commission Journal on Quality and Patient Safety. 2018;44:137–145.
26. Gerven EV, Seys D, Panella M, et al. Involvement of health-care professionals in an adverse event: the role of management in supporting their workforce. Pol Arch Med Wewn. 2014;124:313–320.
27. Pellino IM, Pellino G. Consequences of defensive medicine, second victims, and clinical-judicial syndrome on surgeons' medical practice and on health service. Updates Surg. 2015;67:331–337.
28. Pasowicz M. Zdrowie i medycyna – wyzwania przyszłości. Krakow, 2013.
29. Denham CR. TRUST: The 5 Rights of the Second Victim. Journal of Patient Safety. 2007;3:107–119.
30. Edrees HH, Wu AW. Does One Size Fit All? Assessing the Need for Organizational Second Victim Support Programs. J Patient Saf. 2021;17:e247-e254.
31. World Health Organizations. Global Patient Safety Action Plan 2021–2030: Towards Zero Patient Harm in Health Care. 2020. https://www.who.int/docs/default-source/patient-safety/1st-draft-global-patient-safety-action-plan-august-2020.pdf?sfvrsn=9b1552d2_4 (access: 20.02.2024)
32. The WHO Health Worker Safety Charter. 2000. https://www.who.int/docs/default-source/world-patient-safety-day/health-worker-safety-charter-wpsd-17-september-2020–3–1.pdf?sfvrsn=2cb6752d_2 (access: 28.04.2024)
33. de Bienassis K, Slawomirski L, Klazinga N. „The economics of patient safety. Part IV: Safety in the workplace: Occupational safety as the bedrock of resilient health systems". OECD Health Working Papers. 2021 No. 130, OECD Publishing, Paris. https://doi.org/10.1787/b25b8c39-en
34. May N, Plews-Ogan M. The role of talking (and keeping silent) in physician coping with medical error: A qualitative study. Patient Education and Counseling. 2012;88:449–454.
35. Edrees HH, Morlock L, Wu AW. Do Hospitals Support Second Victims? Collective Insights From Patient Safety Leaders in Maryland. The Joint Commission Journal on Quality and Patient Safety. 2017;43:471–483.
36. Schrøder K, Edrees HH, Christensen R dePont, et al. Second victims in the labor ward: Are Danish midwives and obstetricians getting the support they need? Int J Qual Health Care. 2019;31:583–589.
37. Edrees H, Connors C, Paine L, et al. Implementing the RISE second victim support programme at the Johns Hopkins Hospital: a case study. BMJ Open. 2016;6:e011708.
38. Merandi J, Liao N, Lewe D, et al. Deployment of a Second Victim Peer Support Program: A Replication Study. Pediatric Quality & Safety. 2017;2:e031.
39. Walsh P. What is a "just culture"? Journal of Patient Safety and Risk Management. 2019;24:5–6.
40. Action against Medical Accidents. A vision of what a "just culture" should look like for patients and healthcare staf. 2021. https://www.avma.org.uk/wp-content/uploads/Just-culture.pdf (access: 20.02.2024).
41. Dekker S. Just culture: restoring trust and accountability in your organization. 3rd ed. Boca Raton; 2017.
42. Hughes S. The Development of a Just Culture in the HSE. 2022. https://www.hse.ie/eng/about/who/nqpsd/qps-incident-management/just-culture-overview.pdf (access: 20.02.2024)
43. Linthorst GE, Kallimanis-King BL, Douwes Dekker I, et al. What contributes to internists' willingness to disclose medical errors?. Neth J Med. 2012;70:242.
44. Van Baarle E, Hartman L, Rooijakkers S, et al. Fostering a just culture in healthcare organizations: experiences in practice. BMC Health Serv Res. 2022;22:1035.