

The Hidden Wounds of Care: Organizational Responses to the Second Victim Phenomenon Among Nurses

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Abstract

Background

Patient safety incidents can have psychological and professional consequences for nurses experiencing the second victim phenomenon. Although organizational support is increasingly recognized as important, evidence concerning nurses' experiences and organizational support needs in Indonesian hospitals remains limited. This study explored nurses' second-victim experiences and perceived organizational responses following patient safety incidents.

Methods

A qualitative single-case study was conducted at PHC Hospital in Indonesia, a Type B teaching hospital with established quality and patient safety reporting systems. The hospital was purposively selected as an information-rich case for examining nurses' post-incident experiences and organizational responses within a formal patient-safety setting. Nine informants, comprising eight nursing participants and one physician, were purposively selected. Data were collected through in-depth interviews and analyzed using deductive and inductive approaches, with the Gioia methodology informing the development of first-order concepts, second-order themes, and aggregate dimensions.

Results

Six dimensions characterized nurses' second-victim experiences: psychological distress, physiological distress, socio-cultural factors, professional identity crisis, support systems, and individual coping resources. Three organizational support dimensions were identified: Employee Assistance Programs (EAPs), work flexibility, and team support. Participants emphasized the need for confidential psychological counseling, supportive work arrangements, peer support, and non-punitive managerial responses. Nurse managers were perceived as important in providing initial support and facilitating access to additional organizational resources.

Conclusions

Nurses' second-victim experiences extend beyond psychological distress to encompass threats to social and professional resources. Viewed through the lens of the Conservation of Resources Theory, the findings highlight the perceived importance of complementary organizational support in addressing post-incident needs. These findings have implications for Sustainable Development Goal (SDG) 3, particularly Target 3.4 on mental health and well-being, and SDG 8, particularly Target 8.8 on safe and secure working environments. Further research is needed to evaluate the effectiveness of these organizational interventions.

I. INTRODUCTION

In the hospital industry, patient care and safety are central concerns for healthcare professionals and hospital management. Hospital strategies ultimately aim to ensure effective patient care, with patient safety and recovery remaining key priorities in delivering high-quality services. Patient safety issues continue to attract global attention [1]. Human resources are among the most frequently cited factors influencing hospital readiness [2].

However, research on the second victim phenomenon among nurses in Indonesia remains scarce and insufficiently comprehensive. Systematic reviews indicate that research on second victims has predominantly been conducted in Western countries [3, 4]. A similar gap has been identified in South Asia, where formal institutional or peer-support programs for healthcare workers experiencing second victim distress remain limited [5]. Following adverse events, healthcare providers commonly rely on colleagues, peers, and family members for support, reflecting the limited availability of structured institutional emotional support systems [5].

As patient health issues become increasingly complex and healthcare delivery systems continue to evolve, the likelihood of errors and patient harm has also increased [6]. Poorly managed second victim experiences can lead to negative occupational outcomes, including resignation and absenteeism [7]. These consequences not only affect healthcare providers but may also have cascading effects on the quality of patient care. This concern is further amplified by the age diversity of nurses, as generational characteristics may influence how individuals experience and respond to adverse events. Consequently, further investigation of the second victim phenomenon among nurses in Indonesia is warranted.

When healthcare workers provide medical care, both physical and psychological harm may occur, potentially resulting in patient safety incidents or adverse events [8]. Nurses may subsequently experience second victimization as a result of trauma associated with unexpected adverse events, which can negatively affect their daily lives [8]. Patient safety incidents or adverse events may generate three categories of victims: patients and their families as first victims, healthcare providers as second victims, and healthcare organizations as third victims [7]. A preliminary study conducted at the research site also revealed second victim experiences among nurses following adverse patient events, highlighting the need for hospitals to recognize and assess the potential risks and impacts of such incidents.

The second victim phenomenon encompasses a range of interconnected physical, psychological, emotional, and behavioral responses [9]. Among healthcare professionals who have experienced serious adverse events, 15% have reported considering leaving their jobs [10]. Associations between second victim experiences, burnout, and suicidal ideation have also been documented, with higher prevalence reported among physicians who have committed errors than in the general population. Physical symptoms may include extreme fatigue, tachypnea, tachycardia, muscle tension, sleep disturbances, and headaches [11]. Psychological manifestations may include flashbacks or intrusive recollections, sadness, frustration, difficulty concentrating, fear, regret, doubts about professional competence, depression, anxiety, shame, anger, remorse, and nightmares [10, 12]. Such experiences can adversely

affect healthcare providers' health and functional abilities, thereby diminishing their capacity to cope with demanding situations [13]. Ultimately, these consequences may undermine professional confidence, increase defensive practices, and compromise patient safety through reduced quality of care [7].

The second victim phenomenon is highly complex, and there is growing consensus that affected healthcare professionals require support at both personal and organizational levels. Previous research consistently identifies peer support as one of the most critical forms of assistance, highlighting the need to formally evaluate organizational support programs [13]. Potential interventions for nurses affected by second victimization following patient safety incidents include informal peer support, structured debriefing, work adjustments such as leave or task rotation, and access to professional services, including psychological and occupational health support [9]. Nurse managers also play a pivotal role in identifying support needs, providing empathetic initial responses, and coordinating follow-up interventions [9]. Conversely, supervisory incivility, including arbitrary commands, may exacerbate workplace stressors, further emphasizing the importance of supportive managerial responses during second victim experiences [14].

In Indonesia, reporting patient safety incidents remains challenging. Previous research has identified several barriers to incident reporting, with seven key themes emerging: understanding of incident reporting, safety culture, consequences of reporting, socialization and training, facilities, feedback, and rewards and punishments [15]. When nurses are involved in patient safety incidents, they may consequently experience a range of psychological and physical responses associated with the second victim phenomenon [16, 17, 18]. These responses may adversely affect emotional well-being, professional confidence, and the ability to perform clinical roles effectively. Fear of blame, embarrassment, potential legal consequences, and possible workplace transfer may further discourage nurses from reporting patient safety incidents in Indonesia. These challenges underscore the importance of investigating second victim experiences among nurses, particularly by identifying organizational responses and support mechanisms that can facilitate psychological recovery and professional reintegration following patient safety incidents.

Previous research provides a strong rationale for further investigation into second-victim experiences among hospital nurses. Future research should examine the contributing factors of second victimization and identify effective interventions [19]. Given that much of the existing evidence has been generated in Western countries, research in other cultural and healthcare contexts is needed to broaden understanding, evaluate personal and organizational coping strategies, and identify contextually appropriate interventions [20]. Further research should also examine factors that enhance psychological resilience among second victims and develop targeted interventions to strengthen these protective resources [13]. Taken together, these findings highlight the need for further research to comprehensively examine the factors associated with second-victim experiences among nurses and to determine effective organizational responses, particularly within Indonesian hospital settings.

Beyond its implications for nursing practice and patient safety, addressing the second victim phenomenon is also relevant to the United Nations Sustainable Development Goals (SDGs). In particular, SDG 3, Target 3.4, emphasizes promoting mental health and well-being, while SDG 8, Target 8.8, calls for safe and secure working environments. These goals highlight the importance of considering healthcare professionals' psychological well-being and working conditions as part of organizational responsibility. In the context of patient safety incidents, nurses may experience psychological distress, threats to professional identity, and concerns about organizational consequences, underscoring the need for accessible support and non-punitive managerial responses. Examining organizational responses to the second victim phenomenon may therefore provide contextually grounded insights into how hospitals can better support nurses' mental well-being and foster safer working environments, contributing to the broader objectives of SDG 3 and SDG 8 [21].

This study aims to explore nurses' experiences of the second victim phenomenon following patient safety incidents and to identify organizational responses perceived as necessary and appropriate to support affected nurses. Drawing on Conservation of Resources (COR) Theory, the study examines how psychological, physiological, social, and professional resources may be threatened following patient safety incidents and how organizational support may address nurses' post-incident needs. By examining these experiences within an Indonesian hospital, the study seeks to provide contextually grounded insights into second-victim support and nursing management practices. The research questions addressed are:

RQ1: *What factors characterize nurses' second-victim experiences following patient safety incidents in an Indonesian hospital context?*

RQ2: *What organizational support interventions do nurses and nursing leaders perceive as needed and appropriate to facilitate recovery following patient safety incidents?*

II. LITERATURE REVIEW

Conservation of Resources (COR) Theory

The Conservation of Resources (COR) Theory posits that individuals are motivated to acquire, retain, protect, and build resources that they value, including psychological, social, physical, and material resources [22, 23]. In healthcare settings, this perspective provides a useful framework for understanding how healthcare professionals respond to occupational stress and adverse clinical events, particularly in high-pressure environments where substantial resource demands are continuously present. Resource loss, such as depletion of physical and psychological energy, may increase individuals' vulnerability to psychological distress and impair their capacity to cope effectively with subsequent demands [22].

A central proposition of COR Theory is that individuals seek not only to protect existing resources but also to acquire and generate additional resources that facilitate adaptation to stressful circumstances

[24]. Within healthcare organizations, interpersonal and organizational resources, including support from colleagues, supervisors, and the organization, may therefore serve as important mechanisms for mitigating the consequences of resource loss following patient safety incidents. Organizational support that addresses healthcare professionals' psychological and physical well-being may facilitate recovery, protect remaining resources, and promote sustained functioning following adverse clinical events [24, 23].

From a COR perspective, the second victim phenomenon can be conceptualized as a multidimensional process of resource depletion involving psychological, physical, and socio-structural resources. Psychological distress reflects the depletion of psychological resources, whereas physical distress represents the deterioration of physical resources. Similarly, a lack of colleague support indicates inadequate access to social resources, while a lack of supervisor support reflects limited access to structural, instrumental, and emotional resources within the organization. Greater actual or perceived resource loss is expected to increase vulnerability to distress and impaired functioning, particularly when individuals have insufficient access to compensatory resources [23]. Accordingly, examining the second victim phenomenon through the COR framework may provide insight into both the factors contributing to nurses' distress and the organizational resources required to facilitate recovery and adaptation.

Patient Safety Incidents

Patient safety incidents can have substantial consequences not only for patients and their families but also for healthcare professionals and healthcare organizations [3]. Healthcare professionals directly involved in such incidents may experience psychological and professional consequences, including concerns regarding their clinical competence, increased absenteeism, and intentions to leave their profession [3]. These consequences are commonly conceptualized within the literature as the second victim phenomenon [3].

The second victim phenomenon refers to the adverse psychological and emotional consequences experienced by healthcare professionals following their involvement in an unexpected adverse patient event, medical error, or patient-related injury [10, 25, 3]. Thus, patient safety incidents may affect healthcare professionals beyond their immediate clinical responsibilities, potentially compromising their psychological well-being, professional confidence, and subsequent work functioning.

Concept of the Second Victim

The concept of the second victim was introduced by [26, 27, 16] to describe healthcare professionals who experience psychological and emotional consequences following unexpected clinical events. The concept emphasizes that adverse events may generate substantial emotional burdens among healthcare professionals, particularly when patients experience harm or when clinicians perceive that their actions have contributed to an undesirable outcome [28, 11]. Such experiences may involve guilt,

emotional distress, self-doubt, and concerns regarding professional competence, while fear of disclosure and perceived social isolation may further intensify their psychological burden [17].

Second victims may experience diverse psychological, cognitive, and physical symptoms following patient safety incidents. Reported manifestations include shame, anxiety, emotional distress, fatigue, sleep disturbances, and persistent concerns about the event, with symptoms potentially persisting from several days to several years [7, 29, 6]. Persistent distress may subsequently affect healthcare professionals' quality of life and professional functioning, including absenteeism, reduced confidence in clinical practice, and intentions to leave the profession [7].

The second victim phenomenon should therefore be understood not merely as an individual psychological response but as a complex experience shaped by the availability of personal and organizational resources. From this perspective, the consequences of patient safety incidents may become more pronounced when affected healthcare professionals lack adequate individual coping resources and access to supportive interpersonal and organizational environments.

Support and Interventions for Second Victims

The psychological consequences of adverse events among healthcare professionals highlight the importance of systematic support mechanisms within healthcare organizations. Evidence suggests that a substantial proportion of healthcare professionals may experience persistent emotional consequences following adverse events, underscoring the need for organizational approaches that address the well-being of affected staff [30, 19]. Support for second victims has consequently been recognized as an important component of patient safety and organizational responses to adverse clinical events[30].

The World Health Organization has emphasized the importance of providing patients, families, and healthcare staff affected by serious patient safety incidents with psychological and other forms of ongoing support [12]. Such support is particularly important because timely access to appropriate resources may help prevent prolonged distress and facilitate recovery following adverse events.

Evidence regarding effective strategies indicates that support should operate at both individual and organizational levels. At the individual level, peer support and reflective learning from adverse events have been identified as valuable strategies for helping healthcare professionals process and learn from adverse experiences [13]. At the organizational level, structured second victim support programs, including rapid-response teams consisting of trained peers, have been identified as among the most valued approaches for providing timely assistance following adverse events[20]. These findings are consistent with the COR perspective, which suggests that interventions that restore, protect, and strengthen individuals' psychological and social resources may reduce the consequences of resource loss and facilitate recovery following stressful events [23].

III. RESEARCH METHODOLOGY

Design and setting

This study employed a qualitative single-case study design at PHC Hospital Surabaya, Indonesia. The hospital was purposively selected as an information-rich organizational case because it is a Type B teaching hospital within Indonesia's state-owned hospital network and operates formal quality and patient-safety reporting systems. In 2024, the hospital was recognized at the provincial level for its reporting of national quality indicators and patient safety incidents, making it a particularly relevant setting for examining how formal patient-safety systems interact with healthcare workers' post-incident experiences. The purpose of selecting this case was not statistical representativeness, but to obtain an in-depth understanding of second-victim experiences and organizational responses within a clearly defined institutional context.

Credibility was enhanced through data-source triangulation by comparing perspectives across nursing roles and clinical units. Accounts from staff nurses, shift coordinators, nurses in charge, nursing supervisors, and nursing management were examined for convergence and divergence during coding and theme development. Research team discussions were also used to challenge the first author's interpretations and enhance reflexivity.

Sample

Nine informants were selected using criterion-based purposive sampling, comprising four staff nurses, one shift coordinator, two nurses in charge (PICs), one head nurse, and one physician. Participants were recruited from clinical units recommended by the Head of Nursing at PHC Hospital, based on predefined eligibility criteria relevant to the research objectives [31].

The nursing participants were eligible if they had at least 5 years of clinical experience and either had been directly involved in patient safety incidents or held nursing leadership positions with experience managing or supporting staff following such incidents. These criteria enabled the study to capture both nurses' firsthand experiences and nursing leaders' perspectives on organizational responses to the second victim phenomenon.

The physician was included as a key informant to provide an additional clinical and organizational perspective on patient safety incidents and the support provided to affected nurses. The inclusion of informants from different professional roles enabled data triangulation and enriched the understanding of nurses' organizational responses to the second victim phenomenon. Table 1 presents the participants' characteristics.

Data collection

The interview guide (Table 2) was developed by the research team based on a focused literature review conducted in Scopus. The review covered the second victim phenomenon, patient safety incidents, and

healthcare professionals’ experiences, responses, and support needs following adverse events [13, 32]. Drawing on this literature, the research team formulated open-ended questions to explore nurses’ experiences of patient safety incidents, their psychological and professional responses, coping strategies, and perceptions of organizational support. The questions were developed for the purposes of this study rather than adopted verbatim from an existing interview instrument. Follow-up probes were used to clarify participants’ accounts and explore emerging issues in greater depth.

The interview guide explored seven key domains: (1) the types of patient safety incidents experienced by nurses; (2) nurses’ experiences, processes, and responses when encountering adverse events; (3) the perceived psychological, physical, and professional impacts of adverse events; (4) sources of support accessed by nurses when coping with patient safety incidents; (5) emotional responses during and following patient safety incidents; (6) nurses’ perceptions and evaluations of team support following patient safety incidents, including their expectations regarding organizational interventions; and (7) the role of nurse managers and hospital leadership in responding to patient safety incidents and supporting affected nurses.

These topics were explored directly with participants, with flexibility in questioning to clarify and probe deeper into their experiences. Additionally, one pilot interview was conducted with a nurse from a different unit who was not part of the main sample. This pilot served to refine the interview protocol but was excluded from the final dataset.

Table 1. Participants' characteristics.

<i>Participant</i>	<i>Gender</i>	<i>Age</i>	<i>Educational Field</i>	<i>Job Position</i>	<i>Length of Employment</i>
<i>P1</i>	<i>Female</i>	42	Health	Shif Coordinator	>5 years
<i>P2</i>	<i>Female</i>	31	Health	Inpatient Nurse	>5 years
<i>P3</i>	<i>Female</i>	25	Health	ICU Nurse	>5 years
<i>P4</i>	<i>Female</i>	28	Health	ICU Nurse	>5 years
<i>P5</i>	<i>Female</i>	40	Health	Inpatient Nurse	>5 years
<i>P6</i>	<i>Female</i>	43	Health	PIC Inpatient Unit	>5 years
<i>P7</i>	<i>Female</i>	45	Health	PIC Inpatient Unit	>5 years
<i>P8</i>	<i>Male</i>	46	Health	Head of Nursing	>5 years
<i>P9</i>	<i>Male</i>	60	Medicine	Physician	>5 years

Note: PIC = person in charge; ICU = intensive care unit. Participant codes (P1–P9) are used to present interview excerpts. P1–P8 were nursing participants, whereas P9 was a physician included as a supplementary informant to provide a clinical and organizational perspective.

The researcher conducted individual interviews with participants online via Zoom between April and May 2025 to accommodate nurses' work schedules and avoid imposing additional burdens on those on duty. Participants joined the online interviews from their workplaces, although two staff nurses participated from home during evening hours. The researcher conducted the interviews from both the office and the personal residence. No individuals other than the participants and the researcher were present during the sessions. Prior to the interviews, participants were provided with information about the study's purpose and background, as well as assurances of voluntary participation and confidentiality. The researcher's professional background and interest in the phenomenon under study were also shared. Of the nine informants, all agreed to keep their cameras on, and the researcher likewise maintained video presence throughout the interviews. Each interview lasted approximately 40 to 60 minutes, resulting in a total of about nine hours of recorded data.

Data collection and preliminary analysis were conducted iteratively. Interviews continued until additional data no longer generated substantively new codes relevant to the research questions and the existing categories were sufficiently developed. Saturation was therefore assessed in relation to the study scope and emerging analysis rather than by applying a predetermined numerical threshold. This approach is consistent with empirical evidence showing that saturation depends on factors such as sample homogeneity, the specificity of the research questions, and the depth of analysis sought [33]. Data saturation is a procedure used to determine when the data collection process should be stopped, based on two main dimensions [34]. First, the researcher continued the interview process until the collected data mostly consisted of repetition without new ideas emerging and no new insights being obtained. Second, the criterion is based on the research questions.

Data Analysis

Interview data were analyzed manually using a combination of deductive and inductive approaches, with the Gioia methodology informing the development of the data structure [35]. The deductive component was informed by the interview guide and existing literature on the second victim phenomenon, while inductive analysis allowed additional concepts and themes to emerge from participants' accounts.

The analysis began with repeated reading of the interview transcripts to develop familiarity with the data. Meaningful statements were identified and assigned initial codes that closely reflected participants' own descriptions. These codes were subsequently organized into first-order concepts, preserving participants' perspectives and terminology as closely as possible. Through iterative comparison of similarities and differences, related first-order concepts were grouped into second-order themes representing more abstract, researcher-informed interpretations. The second-order themes were then consolidated into aggregate dimensions to develop an integrated understanding of nurses' second-victim experiences and organizational responses.

The resulting data structures were organized into two overarching domains: factors characterizing nurses' second-victim experiences and organizational responses to the second-victim phenomenon. Throughout the analytical process, the researchers revisited the original transcripts and interview

recordings to examine the correspondence between participants' accounts and the emerging interpretations. Research team discussions were held to critically evaluate coding decisions, refine themes, and enhance reflexivity. Representative participant quotations were selected to illustrate the findings and demonstrate the relationship between the empirical data and the resulting aggregate dimensions.

Table 2. *The interview guide.*

Interview Themes	Guiding Questions
Characteristics	Age Gender Educational background Work experience in hospitals Experience in nursing management Work unit
Types of adverse events (AEs) experienced by nurses	<i>"What are the most challenging adverse events you (or your colleagues) have encountered during your career?"</i>
Nurses' processes in experiencing and responding to AEs	<i>"Can you describe the process you went through after facing an adverse event?"</i> <i>"How did you (or your colleagues) cope with such an event?"</i>
Impact of AEs on nurses	<i>"How did this event affect you (or your colleagues)?"</i>
Interventions needed after AEs	<i>"How would you describe the type of intervention or support provided by your institution following an adverse event?"</i> <i>"What resources or supports did you utilize in managing the aftermath of the adverse event?"</i>
Support in coping with AEs	<i>"How did interactions between you and your team influence your experience in dealing with the event?"</i> – Support from supervisors? colleagues? hospital management?
Emotional responses during AEs	<i>"Can you describe the feelings or emotions you experienced while trying to cope with the adverse event?"</i>
Nurses' evaluation of team support after AEs	<i>"How would you assess the role of your colleagues and supervisors in supporting you after the adverse event?"</i>
Organizational management of AEs	<i>"How did your manager or the organization handle the incident?"</i>

Note: The interview guide was developed by the research team based on a focused review of relevant literature. Questions were phrased as open-ended prompts and supplemented with follow-up questions

as appropriate to participants' experiences and professional roles. AE = adverse event; PIC = person in charge.

Ethical Considerations

The study was conducted in accordance with the ethical principles of voluntary participation, informed consent, confidentiality, and respect for participants' privacy. Before data collection, participants were informed about the study's purpose, interview procedures, and the voluntary nature of their participation. Written informed consent was obtained prior to the interviews, and participants were informed of their right to withdraw at any time.

Given the potentially sensitive nature of discussing patient safety incidents and second-victim experiences, participants were informed that they could decline to answer questions that caused discomfort. Personal identifiers were removed from interview transcripts and reported findings to protect participants' confidentiality. Interview data were handled securely and used solely for research purposes.

Research Trustworthiness

To reduce researcher bias, the first author acknowledged prior assumptions regarding the phenomenon under investigation. With professional experience as a psychologist handling second victim cases, the author engaged in continuous reflection at each stage of the study, questioning assumptions to minimize bias. All stages of the research were carried out collaboratively, involving discussions within the research team. These discussions provided critical perspectives that enhanced the study's trustworthiness.

The study was conducted with rigor, transparency, and prudence to strengthen its credibility. Transferability and credibility were ensured by providing a clear description of the research process [36]. Dependability was reinforced by participants' professional backgrounds and nursing management experience. As is typical of qualitative research, the aim was not generalization [36]. Instead, data were collected from participants with direct experience relevant to the phenomenon under study. Including participants from diverse healthcare units within PHC Hospital enriched the findings with varied perspectives, despite the limited sample size. Participant characteristics were described, and findings were presented alongside original quotations to demonstrate the interpretive process and allow readers to assess transferability.

Saturation was observed during the final interviews, indicating that sufficient data had been collected. All interviews were conducted by the first author, ensuring consistency (dependability). The interview guide ensured that all participants were asked the same core questions, though follow-up probes varied. Original participant quotations included in the findings reflected authentic perspectives and reinforced the validity of the analysis. Finally, the study adhered to the COREQ guidelines in reporting the research process [37].

IV. FINDING AND DISCUSSION

This study involved nine participants, comprising eight nursing professionals and one physician who served as a supplementary informant. The nursing participants included one head of nursing, two persons in charge (PICs), one shift coordinator, and four staff nurses. They represented different areas of hospital services, including the emergency unit, intensive care unit, inpatient wards, and nursing management. The physician provided an additional clinical perspective on patient safety incidents and organizational responses to the second victim phenomenon. Accordingly, the findings distinguish nurses' accounts of their experiences from the physician's contextual perspective.

The analysis identified six aggregate dimensions characterizing nurses' second-victim experiences following patient safety incidents: (1) psychological distress, (2) physiological distress, (3) socio-cultural factors, (4) professional identity crisis, (5) support systems, and (6) individual coping resources. The corresponding Gioia data structure is presented in Figure 1.

Meanwhile, Figure 2 demonstrates that the organizational interventions most aligned with nurses' expectations, in terms of aggregate dimensions, include: (1) employee assistance programs, (2) work flexibility, and (3) team support.

Second Victim Factors

1. Psychological Distress

At the first-order level, data from participants included fear of being blamed by superiors, anxiety in dealing with patients' families, feelings of guilt, fear of litigation, trauma from the incident, embarrassment before colleagues, difficulty concentrating, regret, a sense of burden, and fear of negative perceptions. These were grouped into negative emotional reactions at the second-order level. This finding is consistent with previous studies, which reported that the dimension of psychological distress received the highest level of agreement, as the storm of negative emotions experienced by healthcare professionals after medical errors may persist for a long period of time [7]. These were then synthesized into the aggregate dimension of Psychological Distress.

Psychological distress emerges as the primary factor experienced by second victims after being involved in a patient safety incident. Feelings of guilt, anxiety, shame, fear of colleagues' judgment, and concerns regarding potential legal or disciplinary consequences frequently impose a heavy emotional burden. Such conditions may lead to acute stress, sleep disturbances, difficulty concentrating, and even symptoms of depression. Without adequate support, this psychological strain can impair performance, lower self-confidence, and have long-term adverse effects on mental health.

Illustrative excerpts from participants' transcripts include the following:

"Psychologically, it feels like there is trauma, a sense of fear, you know... afraid it might happen again. There's definitely fear. Fear of the incident and the mistakes that colleagues made." (P1)

"Both, actually. Afraid of the patient's reaction... and secondly, afraid of sanctions from supervisors, that's for sure." (P1). "The stress usually comes with a sense of shame because of the incident." (P1)

"When an adverse event happens... there's always this feeling of guilt." (P3)

"It was just me being afraid when I had to file a report, that's all." (P4)

"Yes, the biggest fear is really about something happening to the patient." (P2)

"There was one time I even cried, just recently in the Mutiara ward." (P2)

From the transcripts addressing psychological distress, it is evident that even in situations where the surrounding environment did not directly assign blame, nurses still experienced substantial mental burdens. These included fear of facing consequences, anxiety about being blamed by supervisors, apprehension in dealing with patients' families, feelings of guilt, fear of litigation, trauma from the possibility of recurrence, shame before colleagues, difficulty concentrating during work, regret over being unable to save patients, the heavy responsibility of acting as a person in charge (PIC), and concern about negative perceptions from physicians. Such responses reflect the negative emotional reactions that characterize nurses as second victims [28]. These negative emotional reactions can be categorized as psychological distress, arising after nurses experience the second victim phenomenon following patient safety incidents.

2. Physiological Distress

In this section, the first-order data included experiences such as palpitations during the adverse event, excessive fatigue after the incident, crying after being reprimanded by patients, and insomnia. These were grouped into the second-order category of Physiological Distress, which was then identified as the aggregate dimension.

As highlighted in previous studies, such physiological reactions may occur immediately after the event or even persist for years, leading to physical and mental health problems including headaches, sleep disturbances, eating disorders, depression, anxiety, and post-traumatic stress disorder (PTSD) [26]. As reflected in the transcripts, one participant stated:

"During the incident, I felt nervous, my heart was racing..." (P2)

"It felt unbearable, I couldn't handle it... I couldn't sleep because I kept thinking about it." (P3)

Most respondents expressed their distress more in psychological terms (emotions, anxiety, fear) rather than physiological symptoms such as headaches, fatigue, insomnia, or other somatic complaints. However, some participants did report clear physiological manifestations, such as insomnia, following the adverse event.

100. Socio-Cultural

In this section, the first-order data included behaviors such as withholding disclosure due to shame and avoiding sharing experiences with others. These were categorized into the second-order theme of Socio-Cultural Distress. Additional first-order data included confiding only in close friends or senior colleagues, feeling misunderstood by patients' families, and fearing negative evaluations of professional competence by others. These were grouped into the second-order category of Fear of Negative Judgment. Together, these categories formed the aggregate dimension of Socio-Cultural Factors.

Previous research has shown that healthcare workers often worry that seeking emotional support might expose them to negative judgments from colleagues, or that such support may be perceived as ineffective [38]. Persistent stigma related to shame, guilt, and a culture of blame or judgment further creates challenges for nurses experiencing second victimization [7].

A socio-cultural perspective on the second victim experience emphasizes how values, norms, organizational structures, social relationships, and cultural expectations within the workplace shape nurses' responses to adverse events (adverse patient events, near misses, or sentinel events). As reflected in the transcripts, one participant stated:

"...afraid of not being trusted, being blamed, or feeling ashamed. Sometimes these feelings are hidden, because of that sense of shame. There is shame from making a mistake... so they hide their reactions, but deep down they are actually scared." (P8)

The values of "saving face," avoiding shame, and a cultural expectation not to display vulnerability were particularly strong, suppressing nurses' ability to openly express their distress despite heavy emotional burdens. Another participant added:

"...the doctor's perception... afraid that the patient was not taken care of properly. That's what I worry about, the doctor's perception like that." (P4)

Here, pressures from socio-professional expectations are evident. The medical culture often entails interprofessional judgment, leaving nurses feeling compelled to maintain a professional image and protect their reputations in the eyes of both doctors and patients.

500. Professional Identity Crisis

In this section, the first-order data included questioning one's own professional competence, comparing situations with personal performance, and fear or worry about being responsible for a patient's death. These were categorized into the second-order theme of Reflection and Guilt. Additional first-order data involved contemplating whether the hospital's standard operating procedures (SOPs) were flawed or whether errors stemmed from incorrect protocols, which were grouped under the second-order theme of Procedure Identification. Together, these categories formed the aggregate dimension of Professional Identity Crisis.

A professional identity crisis refers to a condition in which individuals begin to doubt the value, competence, or meaning of their professional role. For nurses as second victims of adverse events, near misses, or sentinel events, this crisis often emerges when they feel they have failed to meet professional expectations, been doubted, or held responsible, thereby undermining their self-perception as competent professionals. Prior research highlights that shame and guilt are particularly challenging components contributing to this crisis [7].

The following verbatim excerpts illustrate manifestations of professional identity crisis among participants:

"Of course, as healthcare workers, it feels like we were not capable... we regret it, ma'am... but in the end, the patient could not be saved. That regret is always there." (P3)

This statement demonstrates internal conflict regarding professional identity. Despite maximum effort, the inability to save the patient left the nurse feeling unworthy in their professional role.

"Usually, from the management side, they directly suspend you, ma'am, downgrade your grade, or transfer you to another department..." (P1)

Consequences such as demotion or reassignment reflect judgments of professional competence. Such punitive measures risk eroding self-esteem and triggering a professional identity crisis, as nurses feel they have lost both their position and dignity as healthcare providers.

5. Support System

In this section, the first-order data include "needing rest after trauma" and "confidence in recovery if supported by the team." These were then grouped into the second-order category of self-recovery, which subsequently led to the determination of the aggregate dimension, namely Support System.

Support for nurses experiencing second victim phenomena or after encountering an Adverse Event (AE) is crucial, as it plays a vital role in psychological recovery, maintaining emotional stability, and preventing long-term impacts such as prolonged stress, loss of self-confidence, or even burnout. When nurses feel that they are being listened to, not immediately blamed, and receive empathy from supervisors and colleagues, they tend to recover more quickly, reflect constructively on the experience, and maintain their professional commitment as well as the quality of care. Such support not only benefits individuals but also strengthens the culture of patient safety and fosters a healthy and collaborative working environment within hospitals.

"According to them [nurses], because their supervisor listened to them, and did not immediately put blame, but responded more patiently..." (P5)

Nurses feel emotionally supported when supervisors adopt a listening, patient, and non-judgmental attitude, which is essential for psychological recovery.

"With colleagues, I often ask for their opinions... I often share with my senior colleagues." (P4)

Nurses feel informally supported by their peers. A strong team culture enables them to share feelings and experiences without fear of judgment.

The analysis identified six aggregate dimensions of nurses' second-victim experiences: psychological distress, physiological distress, socio-cultural factors, professional identity crisis, support systems, and individual coping resources. Figure 1 presents the Gioia data structure, illustrating how participants' accounts were organized into first-order concepts, second-order themes, and aggregate dimensions.

f. Individual coping resources.

In this section, the first-order data consist of nurses' emotional regulation, individual traits, and paradigms. From these data, the second-order category of influence of personality and mental strength was identified and thematized as the aggregate dimension of individual coping resources.

Nurses' individual coping resources are one of the factors contributing to the occurrence of the second victim phenomenon. Variations in traits, paradigms, and emotional regulation indicate that internal conditions influence nurses' mental strength and determine how quickly they can recover from second victim experiences following an Adverse Event (AE).

According to Gerald C. Davison, paradigms shape individual coping resources. He describes several major paradigms: biological, psychoanalytic, learning, cognitive, and humanistic, each of which emphasizes different aspects of individual coping resources development. The biological paradigm highlights genetic and neurochemical influences, while the psychoanalytic paradigm emphasizes unconscious conflicts and life experiences. Learning and cognitive paradigms focus on environmental influences, reinforcement, and thought patterns, whereas the humanistic paradigm underscores the importance of self-actualization and personal freedom. Collectively, these paradigms demonstrate that individual coping resources develop through a complex interaction of biological, psychological, and environmental factors.

The role of individual coping resources as a contributing factor in the second victim phenomenon is illustrated in the following interview with P9, a physician:

"In my opinion, whether or not nurses who experience an AE then go on to experience what is referred to as the second victim depends on each nurse's paradigms and coping as well. It depends on their mental strength when facing the Advers events—whether they are easily affected or able to quickly regain self-control." (P9)

As the participant highlighted, nurses with certain individual coping resources are more likely to minimize the impact of AEs and recover more quickly from the risk of becoming second victims.

Organizational Interventions

The analysis identified three overarching dimensions of organizational responses to nurses experiencing the second victim phenomenon: employee assistance programs (EAPs), work flexibility, and team support. These dimensions encompass both organizational support experienced by participants and additional interventions perceived as necessary following patient safety incidents. The findings highlight the importance of distinguishing existing informal and managerial support from structured organizational interventions that participants expected or considered beneficial. The resulting data structure is presented in Figure 2.

a. Employee Assistance Program

The first aggregate dimension concerned the need for structured organizational assistance following patient safety incidents. First-order concepts included emotional support, access to confidential psychological counseling, psychological reinforcement, second-victim assessment, internal audit, system evaluation, retraining, case briefings, clinical competency enhancement, and post-incident learning forums. These concepts were grouped into three second-order themes: counseling and psychosocial approaches, crisis procedure interventions, and competency enhancement. Together, these themes informed the aggregate dimension of Employee Assistance Programs (EAPs).

Organizational culture within an institution may act as either a barrier or a facilitator, encouraging proactive action, adaptation, and continuous evaluation [39]. In this context, the presence of an Employee Assistance Program (EAP) is essential as a comprehensive form of organizational intervention. EAPs provide structured support services for employees, starting with assessment and followed by tailored interventions. Based on earlier literature, EAPs are designed to identify and assist employees in addressing issues that disrupt their personal functioning or work performance, with active support from management. The program includes an assessment of employees' specific needs prior to the design of interventions [40, 41, 42]. Therefore, the implementation of an EAP should begin with a thorough assessment to effectively uncover the problems employees face.

The analysis identified three aggregate dimensions of perceived organizational responses to the second victim phenomenon: Employee Assistance Programs (EAPs), work flexibility, and team support. Figure 2 presents the corresponding Gioia data structure, showing the progression from participants' accounts to first-order concepts, second-order themes, and aggregate dimensions.

Participants emphasized the need for accessible and confidential psychological support following patient safety incidents. Professional counseling was perceived as a valuable resource for expressing emotional distress, addressing feelings of guilt and anxiety, and discussing experiences without fear of judgment. In addition to psychological support, participants identified the importance of organizational assessment, clinical competency enhancement, and post-incident learning opportunities. These findings suggest that structured organizational assistance could complement informal peer and supervisor support by addressing nurses' psychological and professional needs following patient safety incidents.

"Yes, I really feel that we need counseling with a psychologist, as long as it is free, hehe... because we can talk confidentially without fear of being judged." (P2)

"Yes, I really need counseling with a psychologist, so I can release my feelings and frustrations." (P1)

These accounts highlight participants' perceived need for accessible and confidential professional counseling. Psychological support was viewed as an important organizational resource that could help nurses process emotional distress and regain confidence following patient safety incidents.

b. Work Flexibility

The second aggregate dimension concerned work flexibility as a perceived organizational support need following patient safety incidents. First-order concepts included temporary leave, relocation, and allocated recovery time. These concepts were grouped into the second-order theme of work environment flexibility and subsequently consolidated into the aggregate dimension of work flexibility.

The second aggregate dimension concerned work flexibility as both an experienced form of organizational support and a perceived need for support following patient safety incidents. First-order concepts included temporary leave, relocation or reassignment, and allocated recovery time. These concepts were grouped into the second-order theme of work environment flexibility and subsequently consolidated into the aggregate dimension of work flexibility.

Participants' accounts highlighted the importance of temporary work adjustments in accommodating nurses' recovery needs following patient safety incidents. Such arrangements included opportunities for leave, reduced workloads, recovery time, and temporary reassignment from clinical areas associated with an incident. These adjustments may provide nurses with time and space to manage post-incident distress. However, participants' concerns about possible suspension, demotion, or reassignment also highlighted the distinction between supportive work adjustments and punitive organizational responses. Temporary reassignment should therefore not be automatically interpreted as a supportive intervention; its perceived value may depend on whether it is intended to facilitate recovery or is experienced as a disciplinary consequence. This distinction underscores the importance of transparent communication and individualized assessment when considering post-incident work arrangements.

"At that time, I kept thinking about the incident and was afraid to immediately take care of patients again. The head nurse suggested that I take a few days off first." (P3)

"The head nurse was quite understanding of my condition. My workload was temporarily reduced, and I was given time to recover. It made me feel that I was not being forced to return to normal immediately." (P4)

"My supervisor saw that I was still very distressed, so for a while I was not assigned to the area directly related to the incident. I was temporarily reassigned so that I would not feel too overwhelmed." (P5)

c. Team Support

The third aggregate dimension concerned team support, encompassing supervisor support, peer support, and a non-blaming culture. First-order concepts related to supervisor support included follow-up actions by the head nurse and preliminary internal evaluations. Peer support was reflected in colleagues' willingness to listen to concerns, provide emotional reassurance, and offer guidance following patient safety incidents. A non-blaming culture was reflected in participants' expectations of non-punitive responses and a humanistic approach to managing adverse events. These second-order themes were consolidated into the aggregate dimension of team support.

Peer and supervisor support are important components of organizational responses to nurses experiencing the second victim phenomenon following patient safety incidents [9]. Consistent with this perspective, participants' accounts highlighted the importance of interpersonal support in managing the emotional and professional consequences of patient safety incidents. Colleagues and senior nurses were perceived as accessible sources of emotional reassurance and practical guidance, while nurse managers played an important role in responding to incidents and addressing nurses' concerns. Supportive interactions were particularly important when nurses experienced guilt, fear of negative evaluation, or uncertainty about their professional competence. Rather than immediately assigning blame, participants valued opportunities to discuss incidents, clarify circumstances, and receive reassurance from their teams. These findings suggest that team support may help preserve interpersonal trust and professional confidence following patient safety incidents.

Based on the analysis of verbatim interviews with nurses who experienced adverse events or became second victims, team support refers to the provision of emotional, technical, or moral assistance from colleagues, functioning as a psychological safeguard in times of crisis.

"I often ask my colleagues for advice. For example, when my patient's condition declines... I confide in my senior." (P4)

"So, I often share with my senior... because here, I am definitely the most junior." (P4)

These statements highlight an open and supportive team dynamic in which junior nurses feel safe discussing and seeking help without fear of judgment. This illustrates the importance of horizontal team support, with senior colleagues informally serving as critical sources of both psychological and technical support for less experienced members under work pressure.

"Usually, we don't immediately blame each other. We always cross-check first before getting upset... before confirming with a colleague." (P2)

"With colleagues, I am not afraid, because we are a team, right? And the team always helps." (P2)

These excerpts reflect procedural and communicative support, in which team members allow space for clarification rather than assigning direct blame. This fosters a collaborative climate and reinforces a healthy team culture in which members trust and support one another rather than judging one another after errors or adverse events.

DISCUSSION

The present study shows that nurses' second victim experiences following patient safety incidents involve interconnected psychological, physical, social, and professional consequences. From the perspective of Conservation of Resources (COR) Theory, these experiences can be understood as threats to or losses of valued resources, including emotional stability, physical well-being, professional confidence, social acceptance, and coping capacity [22]. The findings further indicate that recovery requires multiple forms of organizational support rather than a single intervention.

The first research question identified six dimensions of second victim experiences: psychological distress, physiological distress, socio-cultural factors, professional identity crisis, support systems, and individual coping resources. Psychological distress was reflected in guilt, anxiety, shame, fear of blame, concerns about litigation, difficulty concentrating, and fear of negative evaluation. These reactions represent threats to psychological resources such as emotional stability, self-confidence, and perceived competence. This interpretation suggests that second victim distress was associated with adverse occupational outcomes, including turnover intention and absenteeism [7].

Physiological reactions, including palpitations, fatigue, crying, and sleep disturbances, further demonstrate that the impact of patient safety incidents extends beyond emotional distress. Within COR Theory, these reactions may indicate depletion of physical and energetic resources, potentially reducing nurses' capacity to manage subsequent clinical demands.

The socio-cultural dimension was particularly important. Participants described shame, reluctance to disclose their experiences, fear of being perceived as incompetent, and concern about the judgments of colleagues, physicians, and supervisors. These responses indicate threats to social resources, including professional reputation, interpersonal trust, and a sense of belonging within the healthcare team. This finding is especially relevant in Indonesia, where it was found that fear of blame, embarrassment, legal consequences, and possible transfer can inhibit patient safety incident reporting [15]. The present study extends this evidence by suggesting that such socio-cultural concerns may also shape nurses' psychological recovery after an incident.

A professional identity crisis represents another important form of resource loss. Participants questioned their competence, expressed regret regarding patient outcomes, and worried about sanctions, demotion, or reassignment. For nurses whose professional identity is closely linked to providing safe and competent care, involvement in an adverse event may threaten professional self-efficacy, confidence, and role identity. Li et al. [32] similarly found that recovery from second victim experiences is influenced by emotional trauma, job-related stressors, personal factors, and the availability of support [32].

The findings also emphasize the importance of support systems. Being listened to, receiving nonjudgmental responses, and obtaining support from colleagues and supervisors may help protect nurses from further loss of resources. Organizational support plays an important role in the relationship

between second victim distress and occupational outcomes, supporting the view that recovery depends partly on the resources available after an incident [7].

The final dimension, individual coping resources, refers to personal capacities such as emotional regulation, ways of interpreting stressful events, and the ability to regain emotional control. These resources may shape how nurses respond to adverse events, but they should not be interpreted as evidence that second-victim distress results from individual weakness. Participants' accounts suggest that personal coping capacities operate alongside workplace conditions and access to organizational support. From a COR perspective, nurses' ability to protect and restore their resources may therefore depend on both individual coping capacities and the resources available in their organizational environment [32].

An important distinction emerged between providing non-judgmental support and maintaining accountability for patient safety. Participants valued colleagues who listened to their concerns and avoided premature blame; however, supportive team relationships should not be interpreted as a justification for withholding incident reports. From an organizational perspective, team support may be most constructive when emotional reassurance is accompanied by transparent incident reporting, appropriate follow-up, and opportunities for learning. This distinction highlights the importance of integrating psychological support for affected nurses with organizational responsibilities for patient safety.

Overall, RQ1 indicates that the second victim phenomenon can be conceptualized as a multidimensional resource-loss process involving psychological, physical, social, professional, and personal coping resources. The prominence of socio-cultural concerns and professional identity threats in this Indonesian hospital context further demonstrates that second victim distress should not be understood solely as an individual psychological reaction.

The second research question identified three interconnected organizational responses: Employee Assistance Programs (EAPs), work flexibility, and team support. Rather than indicating that one intervention is superior, the findings suggest a layered support architecture in which different organizational resources address distinct aspects of second-victim distress.

The first layer involves immediate support from colleagues and nurse managers. Participants emphasized empathetic listening, emotional reassurance, avoidance of premature blame, and initial follow-up by supervisors. Such responses can replenish social and psychological resources by reducing isolation and maintaining a sense of acceptance within the team. Nurse managers play an important role in identifying affected nurses, providing initial support, coordinating further assistance, and promoting a non-blaming culture [9]. Healthcare professionals commonly value peer support, practical guidance, and professional mental health support following patient safety incidents [27].

The second layer involves work flexibility, including temporary leave, workload adjustment, recovery time, or temporary reassignment. These measures may prevent further depletion of psychological and

physical resources and provide nurses with time to recover before returning to full clinical responsibilities. However, work adjustments should be discussed collaboratively and clearly framed as supportive rather than punitive. This distinction is especially important because fear of transfer or organizational consequences has been identified as a barrier to incident reporting among Indonesian nurses [15].

The third layer involves access to confidential professional support through psychological services, occupational health, or EAPs. Such support may be particularly relevant when distress persists beyond what can be managed through informal peer or supervisor support. Choi et al. [44] reported high acceptability and reduced psychological impact following an individual support program for nurses affected by patient safety incidents. However, the findings should be interpreted with caution, as larger controlled studies are needed to establish the effectiveness of such interventions. In a Southeast Asian workforce sample, access to EAP services was associated with better mental health and lower turnover intention, although the cross-sectional design does not establish causality [43, 41].

Taken together, team support, work flexibility, and professional or EAP support may be best understood as a complementary resource-replenishment system. Team support provides immediate interpersonal resources, work flexibility protects psychological and physical resources during recovery, and professional services provide more specialized assistance when needed. Individual coping resources may also be strengthened when these organizational supports are available.

From the perspective of Conservation of Resources (COR) Theory, the findings suggest that organizational responses to the second victim phenomenon may be understood as complementary resources that address different dimensions of post-incident distress [22]. Peer and supervisor support may help protect social resources by maintaining interpersonal trust and reducing perceived isolation, whereas work flexibility may help preserve physical and psychological resources by accommodating nurses' recovery needs. Access to confidential professional counseling and structured organizational support may provide additional resources for managing emotional distress and restoring professional confidence. These findings suggest that organizational responses should be considered in relation to the specific resources threatened by patient safety incidents rather than as isolated support interventions.

An important consideration is that organizational responses may also become sources of additional resource loss when they are perceived as punitive. Participants' concerns about blame, negative professional evaluation, and potential disciplinary consequences suggest that the organizational environment may influence how nurses interpret and respond to post-incident support. Temporary reassignment, for example, may be perceived differently depending on whether it is experienced as a supportive adjustment or a disciplinary measure. This distinction extends the interpretation of organizational support beyond the availability of interventions to include how organizational responses are communicated and experienced by affected nurses. In this context, supportive nursing leadership and non-punitive organizational practices may help protect nurses' professional identity and interpersonal resources following patient safety incidents.

However, the present qualitative findings should not be interpreted as evidence that these interventions are definitively effective. The effectiveness of second victim support interventions remains heterogeneous [27], short-term benefits of peer support, rather than long-term evidence for resilience, burnout reduction, or workforce retention [43, 45]. Therefore, EAPs, work flexibility, and team support should be viewed as organizational strategies that participants perceive as relevant and appropriate, rather than as interventions whose effectiveness has been established by this study.

Overall, the two research questions illustrate a coherent process of resource loss and replenishment. Patient safety incidents may threaten nurses' psychological, physical, social, professional, and coping resources, whereas organizational support may prevent further loss of these resources and facilitate recovery. The findings particularly highlight the importance of socio-cultural context, non-punitive organizational responses, and the role of nurse managers in linking patient safety management with the psychological and professional recovery of affected nurses.

Table 3 presents the sequential stages of organizational support for nurses experiencing the second victim phenomenon following patient safety incidents. These stages were adapted from previous research [9] and contextualized according to the organizational procedures and support needs identified in the study hospital. The stages encompass immediate peer support, assessment of support needs, incident review, patient and family communication, structured debriefing, professional assistance, work adjustments, and recovery and reintegration. They illustrate potential organizational responses rather than an intervention pathway whose effectiveness has been evaluated in the present study.

The researcher confirmed with the Board of Directors (BOD) of PHC Hospital the importance of documenting current practices and designing a structured mechanism for future plans. The procedures were adapted to the terminology and workflow existing at the research site. The explanation of each stage is as follows:

Table 3

Sequential stages of organizational support for nurses experiencing the second victim phenomenon following patient safety incidents.

Stage	Primary purpose	Organizational actor/response
Patient safety incident	Immediate clinical stabilization and recognition of affected staff	Clinical team/charge nurse
Immediate peer support	Emotional containment and initial listening	Trained peer / senior nurse
Support-needs assessment	Identify distress, functional impact, and preferred support	Nurse manager
Incident review	Identify system causes and learning opportunities without premature blame	Patient safety team
Patient/family communication	Transparent communication while supporting involved staff	Clinical leader
Structured debriefing	Reflection, learning, and emotional processing	Trained facilitator
Professional support/EAP	Confidential psychological or occupational-health intervention when indicated	Psychologist/EAP/OH
Work adjustment	Temporary workload, schedule, leave, or role modification	Nurse manager/HR
Recovery and reintegration	Follow-up and restoration of professional confidence	Manager + team
Note: EAP = Employee Assistance Program; OH = Occupational Health. The sequential stages were adapted from Järvisalo et al. [9] and contextualized to the study setting. They represent organizational support procedures and potential responses following patient safety incidents. Their effectiveness was not evaluated in the present study.		

Despite hospitals having mechanisms for addressing assistance programs, the second victim phenomenon remains likely among nurses in Indonesia. Implementation challenges include a persistent blame culture, limited effective reporting systems, and the absence of standardized operational models. Standardization of second victim management procedures, nurse manager training as first responders, and integration of a holistic approach considering psychological, structural, and organizational culture dimensions are therefore essential [46, 47, 48].

Interrelation Between Aggregate Dimensions

Table 4 presents a conceptual mapping of the relationships between the six dimensions of nurses' second-victim experiences and the three organizational support dimensions identified in this study. Drawing on the Conservation of Resources Theory, the matrix illustrates how different forms of

organizational support may address the psychological, physical, social, and professional resources threatened following patient safety incidents. These relationships are interpretative rather than causal and provide a basis for considering complementary organizational responses to nurses' post-incident needs.

Table 4
Conceptual mapping of second-victim experience dimensions and perceived organizational support needs

Interventions Factors	EAP	Work Flexibility	Team Support
Psychological Distress	✓	✓	✓
Physiological Distress	✓	✓	✓
Socio-Cultural Culture			✓
Professional Identity Crisis	✓		✓
Support System	✓		✓
Individual coping resources	✓	✓	✓
Note: EAP = Employee Assistance Program. The matrix presents a conceptual mapping between the dimensions of nurses' second-victim experiences and organizational support needs identified in this qualitative case study. Check marks indicate proposed relationships informed by participants' accounts and the interpretation of the findings through Conservation of Resources Theory. They do not represent statistical associations, intervention effectiveness, or empirically validated causal relationships. Blank cells should not be interpreted as evidence that an organizational support strategy is irrelevant to a particular dimension.			

First, Employee Assistance Programs (EAPs) were identified as a potential source of structured organizational assistance for nurses experiencing second-victim distress. Participants emphasized the need for confidential psychological counseling, emotional support, and opportunities to address concerns about their professional competence. From a Conservation of Resources perspective, these forms of assistance may provide additional psychological and professional resources when nurses experience guilt, anxiety, and reduced confidence following patient safety incidents. EAPs may therefore complement existing interpersonal support by providing access to specialized assistance according to nurses' individual needs.

Second, work flexibility was identified as a potential organizational response to nurses' psychological and physiological distress following patient safety incidents. Temporary leave, recovery time, and adjustments to clinical responsibilities may provide opportunities to manage emotional strain and physical exhaustion. Within Conservation of Resources Theory, such arrangements may help protect nurses from further resource depletion during the post-incident period. However, work adjustments should be distinguished from punitive measures, as reassignment or changes in clinical responsibilities

may also be perceived as threats to professional identity when implemented without appropriate communication and consideration of individual needs.

Third, team support emerged as an important interpersonal resource for nurses experiencing the second victim phenomenon. Participants described the value of colleagues who listened to their concerns, offered practical guidance, and avoided premature blame. Supportive responses from nurse managers were also perceived as important in addressing post-incident concerns and facilitating access to additional organizational assistance. From a resource-based perspective, these interactions may help preserve social resources, including interpersonal trust, professional acceptance, and a sense of belonging within the nursing team. Team support should therefore be considered alongside structured professional assistance and supportive work arrangements rather than as a stand-alone response to second-victim distress.

Taken together, Table 4 illustrates the complementary roles of Employee Assistance Programs (EAPs), work flexibility, and team support in addressing the different dimensions of nurses' second-victim experiences. From the perspective of Conservation of Resources (COR) Theory, these organizational responses may provide psychological, physical, social, and professional resources that are threatened following patient safety incidents. Rather than representing interventions with demonstrated effectiveness, the proposed relationships reflect organizational support needs identified through participants' accounts and their interpretation within the study's theoretical framework. An integrated approach to organizational support may therefore offer a useful basis for developing contextually appropriate second-victim support strategies, although its effectiveness requires further empirical evaluation.

V. CONCLUSION AND FURTHER RESEARCH

This study makes three principal contributions. First, nurses' second-victim experiences in this Indonesian hospital case involved not only psychological and physiological distress but also socio-cultural threats and disruption of professional identity, indicating that patient safety incidents may deplete social and professional resources alongside emotional resources. Second, participants described recovery as requiring a complementary combination of immediate team and managerial support, temporary work adjustment, and confidential professional assistance rather than a single stand-alone intervention. Third, nurse managers emerged as a critical organizational bridge between patient-safety incident management and healthcare workers' psychological and professional recovery. Viewed through the lens of Conservation of Resources Theory, these findings suggest a resource-loss and resource-restoration process in which non-punitive interpersonal responses, protected recovery opportunities, and professional support may help replenish threatened psychological, social, and professional resources. Because this qualitative study did not evaluate intervention outcomes, these strategies should be interpreted as contextually preferred organizational supports rather than proven effective interventions.

MANAGERIAL IMPLICATIONS

The findings of this study suggest that hospitals should move beyond ad hoc responses for healthcare professionals affected by patient safety incidents and develop a more structured, tiered organizational support system. Recent evidence emphasizes that nurse managers play a pivotal role in recognizing second-victim distress, providing immediate support, coordinating subsequent interventions, and fostering an open and non-blaming patient safety culture [9]. Accordingly, at the first level of support, nurse managers, charge nurses, or other designated unit leaders should provide an immediate, empathetic, and non-punitive response following a patient safety incident. This initial response should focus on emotional stabilization, active listening, assessing immediate support needs, and reassuring the affected nurse that they will not face premature judgment or blame. Unit-based peer-support approaches may also be incorporated at this stage. Thus, nurse managers should be trained to serve as first-line responders who are capable of recognizing signs of distress and determining whether additional support is required.

At the second level, hospitals should establish clear, accessible, and confidential referral pathways to professional psychological support, occupational health services, or Employee Assistance Programs (EAPs). This is particularly important for nurses who experience persistent psychological distress, sleep disturbance, anxiety, guilt, intrusive thoughts, impaired concentration, or reduced professional confidence following an incident. A feasibility study of an external psychological support program for nurses experiencing second-victim distress reported high participant satisfaction and a significant reduction in psychological impact scores following three individual counseling sessions [44]. Although these findings should be interpreted with caution, given the small sample size and single-group design, they provide preliminary support for including confidential professional counseling in second-victim support systems. Furthermore, a large study involving 15,302 employees across Southeast Asia found that access to EAP services was significantly associated with better mental health, higher productivity and workplace thriving, and lower turnover intention [43]. Because this evidence was derived from a cross-sectional design, however, these associations should not be interpreted as evidence of causality. Together, these findings support establishing confidential psychological assessment and counseling pathways as an integral component of organizational support following patient safety incidents.

At the third level, hospitals should consider individualized work adjustments that are responsive to the psychological condition, functional capacity, and recovery needs of affected nurses. Depending on the severity of distress, appropriate arrangements may include temporary workload reduction, scheduling flexibility, short-term leave, temporary reassignment or modification of work units, and gradual reintegration into clinical responsibilities. Such flexibility should not be perceived as an operational inconvenience or a disciplinary response; rather, it should be regarded as a temporary organizational resource designed to facilitate recovery and preserve professional functioning. Organizational support has been shown to play an important role in the relationship between second-victim distress and occupational outcomes, including intention to leave, absenteeism, and resilience [7]. From a managerial

perspective, work adjustments should therefore be integrated into an ongoing process of monitoring and follow-up rather than implemented as an isolated intervention.

Second-victim support should also be integrated into the broader framework of hospital patient safety governance while remaining clearly differentiated from disciplinary or punitive procedures. This distinction is particularly important in the Indonesian healthcare context. Barriers to patient safety incident reporting among Indonesian nurses include organizational culture, perceived consequences of reporting, inadequate feedback, and reward-and-punishment mechanisms [15]. Evidence from Indonesian healthcare settings further indicates that fear of blame, punishment, legal consequences, and negative professional repercussions may discourage healthcare professionals from openly reporting patient safety incidents. Hospital leaders should therefore ensure that incident investigations are primarily oriented toward organizational learning and system improvement rather than premature attribution of individual blame. Accordingly, nurse managers should receive specific training in empathetic first response, confidentiality, psychological safety, just-culture principles, referral criteria, and appropriate follow-up procedures.

Finally, the implementation of a second-victim support system should be accompanied by systematic evaluation. Hospitals may monitor indicators such as the interval between a patient safety incident and the initial supportive contact; utilization of peer and professional support services; uptake of psychological referrals; perceived organizational and supervisor support; utilization of temporary work adjustments; return-to-work or reintegration outcomes; and persistence of second-victim distress. Such an evaluative approach is important because current evidence does not yet support the assumption that all second-victim interventions are equally effective. Healthcare professionals commonly value peer support, practical guidance, and psychological support following patient safety incidents; however, evidence regarding the effectiveness of available organizational interventions remains heterogeneous [27]. Evidence regarding the effectiveness of organizational interventions for healthcare professionals affected by patient safety incidents remains heterogeneous [27]. Consequently, the interventions identified in the present study, including Employee Assistance Programs, work flexibility, and team support, should be conceptualized as complementary organizational support strategies whose effectiveness requires further empirical evaluation.

From a sustainable development perspective, these managerial implications are particularly relevant to SDG 3, Target 3.4, and SDG 8, Target 8.8. By strengthening access to confidential psychological support and implementing appropriate post-incident assistance, hospital management can align its organizational practices with the broader objective of promoting mental health and well-being. Similarly, non-punitive managerial responses, supportive work adjustments, and accessible organizational support mechanisms are consistent with the objective of promoting safe and secure working environments. Nurse managers and human resource departments may therefore consider integrating second-victim support into existing occupational health, employee well-being, and patient safety governance frameworks. Such integration would position nurses' psychological and professional well-being as an organizational responsibility rather than solely an individual coping concern. Although the present study

does not measure progress toward the SDGs, its findings offer practical considerations for aligning second-victim support with the broader objectives of sustainable healthcare workforce management [21].

THEORETICAL IMPLICATIONS

Theoretically, this study contributes to the second-victim literature by conceptualizing second-victim experiences through the lens of Conservation of Resources (COR) Theory. The findings indicate that patient safety incidents may involve multidimensional resource loss, encompassing psychological, physical, social, and structural resources, which may contribute to distress, professional identity disruption, and impaired functioning [22]. This extends the application of COR Theory to the second-victim context by illustrating how multiple forms of resource loss can occur simultaneously following patient safety incidents.

The findings further suggest that recovery extends beyond individual coping and depends on access to organizational resources. Employee Assistance Programs, work flexibility, and team support can be understood as resource replenishment mechanisms that facilitate the restoration of nurses' psychological, professional, and social resources. This provides a multi-level perspective in which individual coping resources and organizational support jointly contribute to second-victim recovery.

Finally, by providing empirical evidence from Indonesia, a context relatively underrepresented in second-victim research, this study extends the contextual application of COR Theory to healthcare professionals' responses to patient safety incidents. Future comparative research across healthcare systems and cultural contexts is needed to further examine the robustness and applicability of these resource-based pathways.

STRENGTHS AND LIMITATIONS

A key strength of this study is its contribution to understanding the second-victim phenomenon in Indonesia, a context that remains relatively underrepresented in the existing literature. Participants were recruited from PHC Hospital Surabaya, a type B teaching hospital operating within the state-owned enterprise (SOE) hospital system in East Java. The inclusion of nursing staff, nursing leaders, and a physician provided multiple perspectives on patient safety incidents and organizational responses to the second victim phenomenon. The use of online interviews also facilitated participation by accommodating nurses' work schedules and reducing the time and logistical demands associated with data collection.

Several limitations should nevertheless be considered when interpreting the findings. First, the relatively small sample and single-site design may limit the transferability of the findings to other hospitals and healthcare systems. Second, only two male participants were included, which may have limited the diversity of gender-related perspectives, particularly given evidence suggesting that emotional

responses to patient safety incidents may differ across genders [9]. Third, some participants were recruited through the nursing management structure, which may have introduced selection and social desirability biases, particularly in participants' accounts of organizational support and management practices.

Fourth, although the inclusion of nursing staff, nursing leaders, and one physician provided multiple perspectives on organizational responses to patient safety incidents, these participants occupied different professional roles and did not necessarily have equivalent firsthand experiences of the second victim phenomenon. Accordingly, accounts from nursing leaders and the physician should be interpreted as contextual and organizational perspectives rather than direct representations of affected nurses' experiences.

Fifth, the interviews were conducted primarily in Indonesian, with some use of the local Javanese language, and the quotations presented in this publication were translated into English to facilitate reader comprehension. Although efforts were made to preserve the original meaning and contextual nuances, subtle shifts in meaning during translation cannot be entirely excluded.

Sixth, the initial coding and interpretation were primarily conducted by the first author, which may have introduced researcher subjectivity. Although the Gioia methodology provided a systematic approach to developing first-order concepts, second-order themes, and aggregate dimensions [35], the resulting interpretations remained dependent on the researcher's analytical judgments. Research team discussions were used to critically examine emerging interpretations and refine the themes. Nevertheless, the involvement of additional researchers in the coding process could provide further opportunities to explore alternative interpretations in future studies.

Finally, the first author's professional experience as a licensed psychologist at the study hospital provided contextual familiarity with the second-victim phenomenon but also necessitated reflexive attention to potential preconceptions during data interpretation. This positionality was acknowledged throughout the interpretative process. Despite these limitations, the study provides contextually grounded insights into second-victim experiences and organizational support mechanisms within an Indonesian hospital setting and offers a foundation for future multi-site and cross-cultural research.

Declarations

Ethics approval and consent to participate

Ethical approval for this study was granted by the Health Research Ethics Committee of PHC Hospital Surabaya (Approval No. 009/KEPK/RSPS-2025). Written informed consent was obtained from all participants prior to their participation in the study. Participation was voluntary, and participants were informed about the purpose of the study, the interview procedures, measures taken to ensure confidentiality, and their right to withdraw from the study at any time without consequence. Personal

identifiers were removed from the interview transcripts and reported findings to protect participants' confidentiality and privacy.

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Author Contribution

M.A. contributed to the conception and design of the study, participant recruitment, data collection, initial data analysis, and drafting of the manuscript. S.H. contributed to the conception and design of the study, methodological supervision, interpretation of the findings, and critical revision of the manuscript. F.N.D.N. contributed to the conception and design of the study, data analysis, interpretation of the findings, manuscript preparation, and critical revision of the manuscript. All authors reviewed and approved the final manuscript and agreed to be accountable for their contributions.

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Data Availability

The datasets generated and analyzed during the current study are not publicly available due to the sensitive nature of the interview data and the need to protect participants' confidentiality. De-identified data may be made available by the corresponding author upon reasonable request, subject to applicable ethical and institutional requirements.

References

1. Brook OR, Kruskal JB, Eisenberg RL, Larson DB. Root cause analysis: learning from adverse safety events. *Radiographics*. 2015;35(6):1655–67. 10.1148/rg.2015150067.
2. Susanti Y, Handoyo S, Ernawaty, Hendriani W. Factors influencing hospital preparedness and resilience for emerging infectious diseases: a systematic review. *J Public Health Afr*. 2023;14(S2).

- 10.4081/jphia.2023.2555.
3. Peddle M, Cross R, Parkinson-Zarb L. Simulation as an Element of Second Victim Recovery Programs Following Patient Safety Incidents: A Scoping Review. *Clin Simul Nurs*. 2024;89. 10.1016/j.ecns.2024.101512.
 4. Sahay A, McKenna L. Nurses and nursing students as second victims: A scoping review. *Nurs Outlook*. 2023;71(4):101992. 10.1016/j.outlook.2023.101992.
 5. Jain G, Sharma D, Agarwal P, Agrawal V, Yadav SK, Tenzin T, Alamgir MH, Manandhar K, Myint M, Chaudhary AM, Jami AA, Rojananin S, Rahim MM. Second Victim Syndrome Among the Surgeons from South Asia. *Indian J Surg*. 2022;84(1):40–6. 10.1007/s12262-021-02793-3.
 6. Tamburri LM. Creating healthy work environments for second victims of adverse events. *AACN Adv Crit Care*. 2017;28(4):366–74. 10.4037/aacnacc2017996.
 7. Mahat S, Lehmusto H, Rafferty AM, Vehviläinen-Julkunen K, Mikkonen S, Härkänen M. Impact of second victim distress on healthcare professionals' intent to leave, absenteeism and resilience: A mediation model of organizational support. *J Adv Nurs May*. 2024;1–13. 10.1111/jan.16291.
 8. Kang J, Kwon SS, Lee Y. Clinical nurses' work-life balance prediction due to patient safety incidents using classification and regression tree analysis: a secondary data analysis. *BMC Nurs*. 2024;23(1):1–10. 10.1186/s12912-024-01719-0.
 9. Järvisalo P, Haatainen K, Von Bonsdorff M, Turunen H, Härkänen M. Interventions to support nurses as second victims of patient safety incidents: A qualitative study of nurse managers' perceptions. *J Adv Nurs*. 2024;80(6):2552–65. 10.1111/jan.16013.
 10. Burlison JD, Scott SD, Browne EK, Thompson SG, Hoffman JM. 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(2):93–102. 10.1097/PTS.000000000000129.
 11. Tumelty ME. The second victim: a contested term? *J Patient Saf*. 2021;17(8):e1488–93. 10.1097/PTS.0000000000000558.
 12. Busch IM, Moretti F, Campagna I, Benoni R, Tardivo S, Wu AW, Rimondini M. Promoting the Psychological Well-Being of Healthcare Providers Facing the Burden of Adverse Events. A Systematic Review of Second Victim Support Resources; 2021.
 13. Kappes M, Romero-Garcia M, Sanchez M, Delgado-Hito P. Coping trajectories of intensive care nurses as second victims: A grounded theory. *Australian Crit Care*. 2024;37(4):606–13. 10.1016/j.aucc.2024.01.001.
 14. Handoyo S, Samian, Syarifah D, Suhariadi F. The measurement of workplace incivility in Indonesia: evidence and construct validity. *Psychol Res Behav Manag*. 2018;11:217–26. 10.2147/PRBM.S163509.
 15. Pramesona BA, Sukohar A, Taneepanichskul S, Rasyid MFA. A qualitative study of the reasons for low patient safety incident reporting among Indonesian nurses. *Rev Bras Enferm*. 2023;76(4):e20220583. 10.1590/0034-7167-2022-0583.

16. Jones JH, Treiber LA. When Nurses Become the Second Victim. *Nurs Forum*. 2012;47(4):286–91. 10.1111/j.1744-6198.2012.00284.x.
17. Kamaruzaman AZM, Ibrahim MI, Mokhtar AM, Zain MM, Satiman SN, Yaacob NM. Translation and Validation of the Malay Revised Second Victim Experience and Support Tool (M-SVEST-R) among Healthcare Workers in Kelantan, Malaysia. *Int J Environ Res Public Health*. 2022;19(4):1–17. 10.3390/ijerph19042045.
18. White RM, Delacroix R. Second victim phenomenon: is just culture a reality? An integrative review. *Appl Nurs Res*. 2020;56:151319. 10.1016/j.apnr.2020.151319.
19. Werthman JA, Brown A, Cole I, Sells JR, Dharmasukrit C, Rovinski-Wagner C, Tasseff TL. Second Victim Phenomenon and Nursing Support: An Integrative Review. *J Radiol Nurs*. 2021;40(2):139–45. 10.1016/j.jradnu.2020.12.014.
20. Kappes M, Delgado-Hito P, Contreras VR, Romero-García M. Prevalence of the second victim phenomenon among intensive care unit nurses and the support provided by their organizations. *Nurs Crit Care*. 2023;28(6):1022–30. 10.1111/nicc.12967.
21. United Nations. Transforming our world: the 2030 Agenda for Sustainable Development [Internet]. 2015. Available from: <https://sdgs.un.org/2030agenda>
22. Hobfoll SE. Conservation of Resources Theory: Its Implication for Stress, Health, and Resilience. In *The Oxford Handbook of Stress, Health, and Coping* (Issue January 2019). 2012. 10.1093/oxfordhb/9780195375343.013.0007
23. Radford K. Conservation of resources theory. *A Guide to Key Theories for Human Resource Management Research*. February; 2024. pp. 59–66. 10.4337/9781035308767.ch05.
24. Hobfoll SE. The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Appl Psychol*. 2001;50(3):337–421. 10.1111/1464-0597.00062.
25. Finney RE, Torbenson VE, Riggan KA, Weaver AL, Long ME, Allyse MA, Rivera-Chiauzzi EY. Second victim experiences of nurses in obstetrics and gynaecology: A Second Victim Experience and Support Tool Survey. *J Nurs Adm Manag*. 2021;29(4):642–52. 10.1111/jonm.13198.
26. Cohen R, Sela Y, Halevi Hochwald I, Nissanolz-Gannot R. Nurses' Silence: Understanding the Impacts of Second Victim Phenomenon among Israeli Nurses. *Healthc (Switzerland)*. 2023;11(13):1–13. 10.3390/healthcare11131961.
27. Simms-Ellis R, Harrison R, Sattar R, Sweeting E, Hartley H, Morys-Edge M, et al. Avoiding second victims in healthcare: what support do staff want for coping with patient safety incidents, what do they get and is it effective? A systematic review. *BMJ Open*. 2025;15(2):e087512. 10.1136/bmjopen-2024-087512.
28. Mohd Kamaruzaman AZ, Ibrahim MI, Mokhtar AM, Mohd Zain M, Satiman SN, Yaacob NM. The Effect of Second-Victim-Related Distress and Support on Work-Related Outcomes in Tertiary Care Hospitals in Kelantan, Malaysia. *Int J Environ Res Public Health*. 2022;19(11). 10.3390/ijerph19116454.

29. Potura E, Klemm V, Roesner H, Sitter B, Huscsava H, Trifunovic-Koenig M, Voiti P, Strametz R. Second Victims among Austrian Pediatricians (SeViD-A1 Study). *Healthc (Switzerland)*. 2023;11(18). 10.3390/healthcare11182501.
30. Seys D, Panella M, Russotto S, Strametz R, Joaquín Mira J, Van Wilder A, Godderis L, Vanhaecht K. In search of an international multidimensional action plan for second victim support: a narrative review. *BMC Health Serv Res*. 2023;23(1):1–11. 10.1186/s12913-023-09637-8.
31. Campbell S, Greenwood M, Prior S, Shearer T, Walkem K, Young S, Bywaters D, Walker K. Purposive sampling: complex or simple? Research case examples. *J Res Nurs*. 2020;25(8):652–61. 10.1177/1744987120927206.
32. Li X, Che CC, Li Y, Wang L, Chong MC. The mediating role of coping styles in the relationship between second victim experience and professional quality of life among nurses: a cross-sectional study. *BMC Nurs*. 2023;22(1):1–10. 10.1186/s12912-023-01473-9.
33. Hennink M, Kaiser BN. Sample sizes for saturation in qualitative research: a systematic review of empirical tests. *Soc Sci Med*. 2022;292:114523. 10.1016/j.socscimed.2021.114523.
34. Nadia FND, Sukoco BM, Susanto E, Sridadi AR, Nasution RA. Discomfort and organizational change as a part of becoming a world-class university change. 2020. 10.1108/IJEM-09-2019-0348
35. Gioia D. *A Systematic Methodology for Doing Qualitative Research*. 2021. 10.1177/0021886320982715
36. Malterud K. Developing and promoting qualitative methods in general practice research: Lessons learnt and strategies convened. February; 2022. pp. 1024–33. 10.1177/14034948221093558.
37. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349–57.
38. Edrees HH, Morlock L, Wu AW. Do Hospitals Support Second Victims? Collective Insights From Patient Safety Leaders in Maryland. *Joint Comm J Qual Patient Saf*. 2017;43(9):471–83. 10.1016/j.jcjq.2017.01.008.
39. Dukhanin V, Edrees HH, Connors CA, Kang E, Norvell M, Wu AW, Case. A Second Victim Support Program in Pediatrics: Successes and Challenges to Implementation. *J Pediatr Nurs*. 2018;41:54–9. 10.1016/j.pedn.2018.01.011.
40. Bowen BA. *Needs Assessment For An Employee Assistance Program By Magister Artium In Social ' S Scientiae*. October. 1997.
41. Joseph B, Walker A, Fuller-Tyszkiewicz M. Evaluating the effectiveness of employee assistance programmes: a systematic review. *Eur J Work Organ Psychol*. 2018;27(1):1–15. 10.1080/1359432X.2017.1374245.
42. Long T, Lee F. Human Resource Management Review Advancing the field of employee assistance programs research and practice: A systematic review of quantitative studies and future research agenda. *Hum Resource Manage Rev*. 2023;33(2):100941. 10.1016/j.hrmr.2022.100941.
43. Abdul Aziz AF, Ong T. Access to employee assistance programs and employee wellbeing: a cross-sectional study of employees in Southeast Asia. *BMC Public Health*. 2025;25:398. 10.1186/s12889-

025-21358-7.

44. Choi EY, Pyo J, Ock M, Lee H. Development and evaluation of an external second victim support program for nurses: a single-group feasibility study. *BMC Nurs*. 2024;23:694. 10.1186/s12912-024-02285-1.
45. Sheng T, Ong K, Goh CN, Kane E, En Y, Sivanathan KA, Shao A, Tang P, Tan HK, Ng QX. June. Second Victim Syndrome Among Healthcare Professionals: A Systematic Review of Interventions and Outcomes. 2025.
46. Lee W, Pyo J, Jang SG, Choi JE, Ock M. Experiences and responses of second victims of patient safety incidents in Korea: a qualitative study. *BMC Health Serv Res*. 2019;19:100. 10.1186/s12913-019-3936-1.
47. Liukka M, Steven A, Moreno MFV, Sara-Aho AM, Khakurel J, Pearson P, Turunen H, Tella S. Action after adverse events in healthcare: an integrative literature review. *Int J Environ Res Public Health*. 2020;17(13):4717. 10.3390/ijerph17134717.
48. McDaniel LR, Morris C. The second victim phenomenon: how are midwives affected? *J Midwifery Womens Health*. 2020;65(4):503–11. 10.1111/jmwh.13092.

Figures

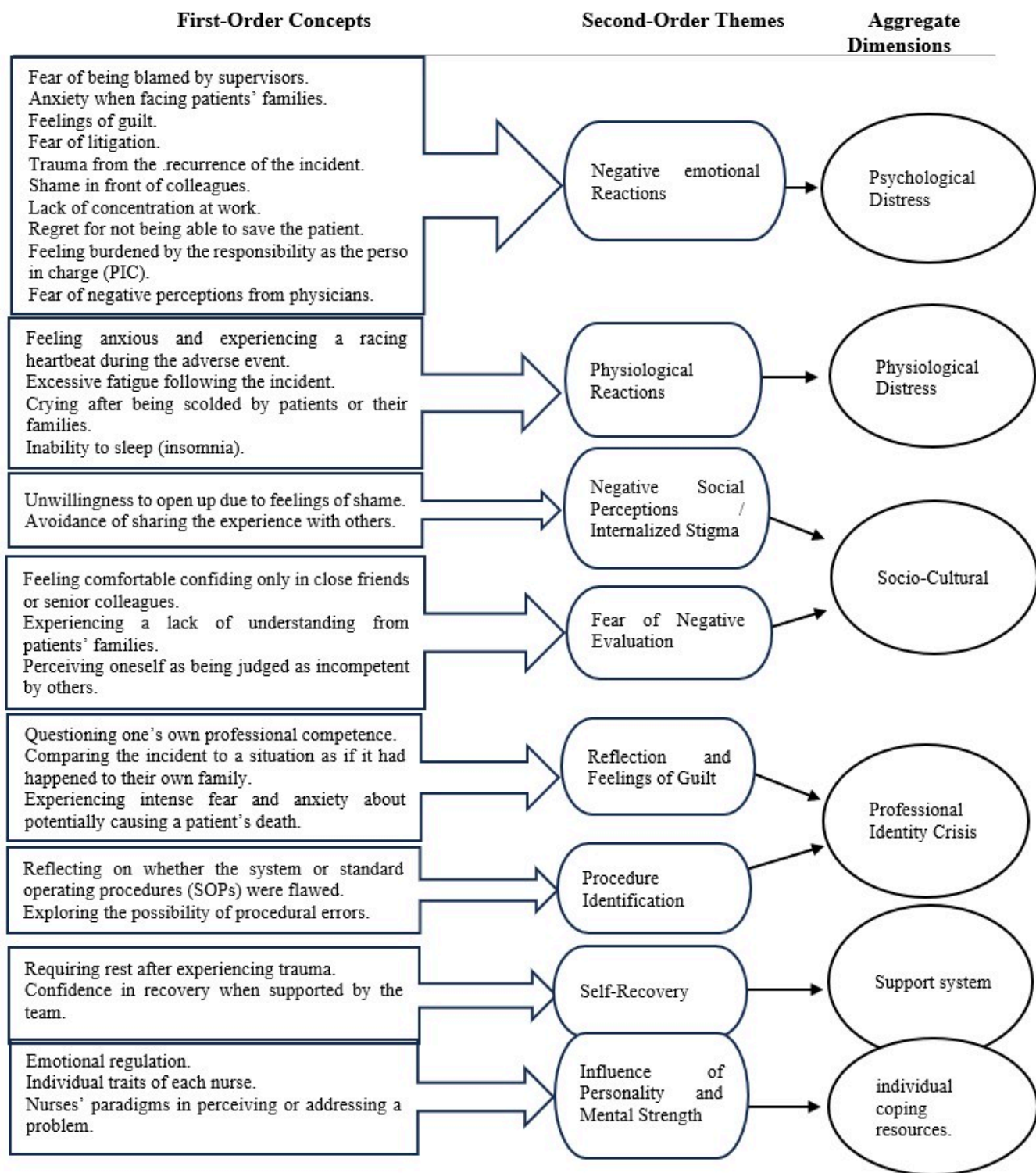


Figure 1

Data structure of nurses' second-victim experiences following patient safety incidents

Note: The figure illustrates the analytical progression from first-order concepts derived from participants' accounts to researcher-informed second-order themes and aggregate dimensions. The six aggregate dimensions represent psychological distress, physiological distress, socio-cultural factors, professional

identity crisis, support systems, and individual coping resources. The data structure was developed using the Gioia methodology [35].

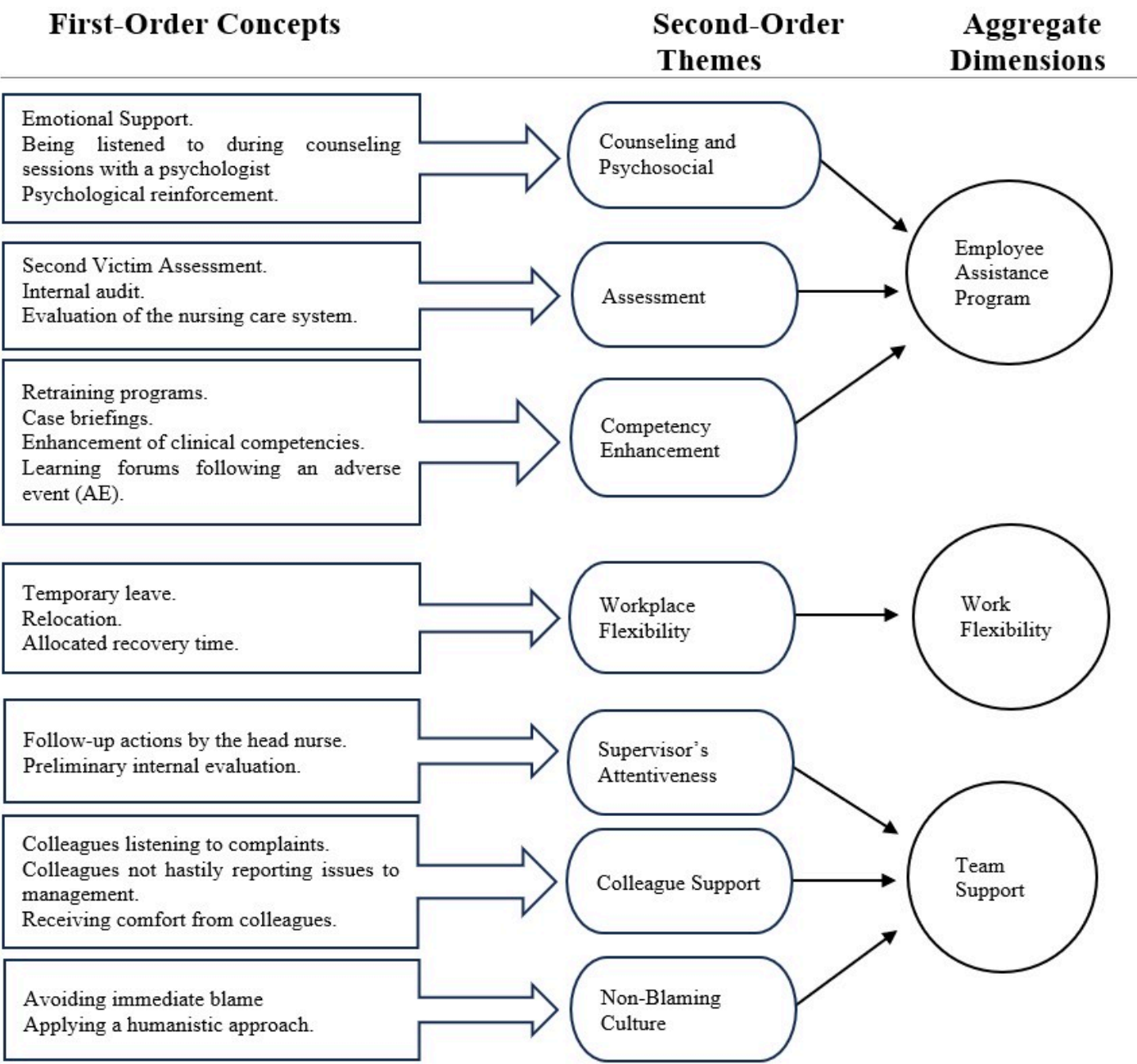


Figure 2

Data structure of organizational responses to the second victim phenomenon among nurses

Note: The figure illustrates the analytical progression from first-order concepts to second-order themes and aggregate dimensions. Three aggregate dimensions were identified: Employee Assistance Programs (EAPs), work flexibility, and team support. These dimensions encompass organizational support experienced by participants and additional support perceived as necessary following patient safety incidents. The figure represents the qualitative data structure and does not establish the

effectiveness of the identified interventions. The data structure was developed using the Gioia methodology [35].