


## RESEARCH ARTICLE

# Prevalence of the second victim phenomenon among intensive care unit nurses and the support provided by their organizations

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## Abstract

**Background:** Health professionals can be 'second victims' of adverse patient events. Second victimhood involves a series of physical and psychological signs and symptoms of varying severity and is most prevalent among nurses and women and in intensive care units (ICUs). Previous research has described personal and organizational coping strategies.

**Aim:** The objective of this research is to determine the prevalence of second victimhood, focusing on psychological distress, among Chilean adult intensive care nurses and its relationship with the support provided by their organizations.

**Study Design:** A descriptive, correlational and cross-sectional study was conducted in seven intensive care units of Chilean hospitals.

**Results:** Of a sample of 326 nurses, 90.18% reported having been involved in an adverse event and 67% reported psychological distress resulting from the adverse event. Embarrassment was the most prevalent psychological symptom (69%). Only 2.8% reported that their organization had an action plan for professionals in the event of a serious adverse event. Participants who had spent longer working in an ICU reported more support from their organization around adverse events.

**Conclusion:** Two-thirds of Chilean adult intensive care unit nurses report psychological stress following an adverse event. These results should be assessed internationally because second victims have major implications for the well-being of health professionals and, therefore, for retention and the quality of care.

**Relevance to Clinical Practice:** Critical care leaders must actively promote a safe environment for learning from adverse events, and hospitals must establish a culture of quality that includes support programmes for second victims.

## KEYWORDS

adverse events, nursing, patient safety, second victims

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## 1 | INTRODUCTION

Second victimhood (SV) was first described more than 20 years ago<sup>1</sup> as a series of physical and psychological signs and symptoms<sup>2</sup> suffered by some health professionals (doctors, nurses, midwives, anesthesiologists and radiologists, among others)<sup>3,4</sup> after being involved in an adverse patient event. This phenomenon can be very intense, lasting for years<sup>5-7</sup> and can lead to quitting the profession<sup>8,9</sup> or even suicide.<sup>10,11</sup>

Several investigations have characterized professionals who suffer from SV, showing that the prevalence is highest in nurses,<sup>12-14</sup> in women<sup>15,16</sup> and in intensive care units (ICUs). These are high-complexity and specialized units that receive critically ill patients with multiple pathologies and invasive procedures. All of this translates into additional risk factors for adverse events.<sup>17,18</sup> The prevalence of SV has been measured in several countries and health professions and has been shown to range from 9% to 50%.<sup>19</sup> SV has mainly been measured using the Second Victim Experience and Support Tool (SVEST) developed by Burlinson et al.<sup>20</sup> The SVEST has seven dimensions (psychological distress, physical distress, colleague support, supervisor support, institutional support, non-work-related support and professional self-efficacy) and two outcome variables (turnover intentions and absenteeism). This instrument has been translated and validated in Korea,<sup>21</sup> China,<sup>22</sup> Italy,<sup>23</sup> Denmark,<sup>24</sup> Germany,<sup>19</sup> Argentina,<sup>25</sup> Malaysia<sup>26</sup> and Turkey,<sup>27</sup> with psychological distress being the most prevalent symptom. Another SV instrument measures post-traumatic stress. A Korean study using this instrument found that the most prevalent symptom of SV was disordered sleep.<sup>28</sup>

SV is handled through both personal and organizational strategies. Regarding personal strategies, peer support is most valued.<sup>29,30</sup> In terms of organizational strategies, hospitals that have an approach for handling SV have a better culture of quality and safety, which, in the long term, results in a decrease in adverse events.<sup>31</sup> In addition, health professionals who experience SV value their organization's support.<sup>32-34</sup> Hospitals in the United Kingdom have made progress in reporting errors, but the culture of repair remains a concern.<sup>35</sup> In the United States, of 38 hospitals in the state of Maryland, 16% have programmes for second victims and 13% are developing them.<sup>36</sup> Furthermore, in a subsequent study, participants agreed on the importance of implementing institutional programmes to support second victims.<sup>37</sup> A Spanish organization has disseminated information about the importance of second victimhood as a factor in quality and clinical safety, and has created a checklist of aspects that organizations should consider in supporting second victims.<sup>38</sup>

In Latin America, the phenomenon of SV has been measured in different health professionals in Mexico,<sup>39</sup> Colombia,<sup>40</sup> Argentina<sup>41</sup> and Chile. In Chile, a study with a sample of health professionals established a negative relationship between the presence of SV and the quality of perceived support from colleagues and supervisors.<sup>42</sup> Adverse events are more prevalent in ICUs<sup>17,18</sup> and among nurses, but there is no data about the prevalence of this phenomenon in ICU nurses in particular and its relationship with the organization's response.

### What is known about the topic

- Following an adverse event, the nurse involved may experience a phenomenon known as the 'second victim', which is characterized by physical signs and symptoms.
- The phenomenon of second victim is more common among intensive care unit (ICU) nurses.
- Some hospitals have implemented support programmes specifically designed to assist second victims.

### What this paper adds

- After an adverse event, psychological stress is the greatest consequence for ICU nurses.
- Embarrassment is the most prevalent psychological symptom experienced by ICU nurses who are second victims.
- Nurses who had spent longer working in an ICU reported more support from their organization around adverse events.

## 2 | AIM

The objective of this research is to determine the prevalence of SV, focused on psychological distress, among Chilean adult ICU nurses and its relationship with their perception of the organization's support.

## 3 | DESIGN AND METHODS

### 3.1 | Design

A multicentre, quantitative, cross-sectional and correlational study was conducted following the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines.

### 3.2 | Scope

The study was conducted in Chile in the year 2022, focusing on adult ICUs of public hospitals. In Chile, there are 47 ICUs distributed across 16 regions. For the study, a random cluster sampling was established, which was divided into northern cluster (six regions in the northern part of the country), central cluster (three regions in the central part with higher population concentration) and southern cluster (seven regions in the southern part of the country). These clusters were determined based on how the country is commonly divided according to its geographical, demographic and cultural characteristics.

### 3.3 | Population and sample

The study population were nurses who at the time of the study had been working in the adult ICU in Chile for more than 6 months. Professionals who had a medical licence or who were on a replacement assignment in the unit were excluded. The total number of critical beds in public hospitals in Chile is 528<sup>43</sup> and the allocation of nurses is one for every three beds.<sup>44</sup> The nurse-to-critical-bed ratio is 3, resulting in 176 nurses. Additionally, Chilean regulation<sup>44</sup> establishes one supervisory nurse per unit (47 critical patient units nationwide) and two additional daytime nurses. Furthermore, there are partial contracts assigned to critical patient units, with 199 reported in the year 2020.<sup>43</sup> Taking all this information into account, the total number of nurses working in adult critical patient units in public hospitals is 516. With this population and a confidence level of 95%, a sample of 221 nurses is necessary. We estimated a 15% attrition rate, so the final minimum sample was 254 nurses.

### 3.4 | Instruments and data collection

Three instruments were used in this research. The first instrument consisted of a sociodemographic survey about age, sex, knowledge about SV, length of time in the ICU, experience of an adverse event, how long ago the adverse event occurred and if hospital management was informed about it. The second instrument used was the SVEST in its validated Spanish version.<sup>25</sup> This instrument measures SV after an adverse event using a Likert scale (1–5, where 1 is ‘strongly disagree’ and 5 is ‘strongly agree’) for seven dimensions (psychological distress, physical distress, colleague support, supervisor support, institutional support, family support and professional self-efficacy) and two outcome variables (turnover intentions and absenteeism). With this instrument, a mean response  $\geq 4$  (‘agree’ or ‘strongly agree’) indicates the presence of second victimhood (e.g. ‘I felt embarrassed about the incident’), except for reverse-score items (e.g. ‘I appreciate the attempts of my co-workers to try to console me’), in which  $\leq 2$  points (‘disagree’ or ‘strongly disagree’) indicates the presence of SV. The third instrument used is a checklist created by a Spanish working group<sup>38</sup> that explores whether the organization has protocols for reporting adverse events and resources to support professionals who experience adverse patient events. This instrument consists of 13 dichotomous questions that explore formal aspects of responding to adverse events and supportive behaviours towards professionals who have experienced adverse events (Annexure 1). Each study participant first completed the sociodemographic instrument. If they reported experiencing any adverse events on this instrument, then each participant could respond to the SVEST instrument and the checklist, providing their personal assessment of the organization's protocols regarding adverse events and support for professionals who have experienced an adverse event.

**TABLE 1** Characteristics of the sample.

Sex	n	%
Female	264	80.9%
Male	62	19.1%
Total	326	100.0%
Age		
20–30 years	119	36.5%
31–40 years	156	47.8%
41–50 years	39	12.0%
$\geq 51$	12	3.7%
Total	326	100.0%
Time working in an ICU		
<6 months to one year	68	20.9%
1–3 years	121	37.1%
>3 years	137	42.0%
Total	326	100.0%
Knows the term ‘second victim’		
Yes	56	17.2%
No	270	82.8%
Total	326	100.0%
Involved in an adverse event		
Yes	294	90.2%
No	32	9.8%
Total	326	100.0%
How long ago was the adverse event?		
<1 year	96	32.7%
1–3 years	110	37.4%
>3 years	88	29.9%
Total	294	100.0%
Reported adverse event to management		
Yes	193	65.6%
No	101	34.4%
Total	294	100.0%

*Note:* Most participants were women, and the largest age group was 31–40 years old. In terms of experience, most had more than 3 years of experience in an ICU. Strikingly, 82.8% ( $n = 270$ ) did not know the term ‘second victim’, while 90.18% ( $n = 294$ ) declared having been involved in an adverse event. Of these, 34.3% ( $n = 101$ ) did not report the adverse event to the management.

For the data collection procedure, once the permission of the ethics committee corresponding to each hospital was obtained, a video explaining the research was sent to each ICU and the nurses were invited to participate according to the inclusion criteria of the study. This video only provided explanatory information about the research, with practical aspects of the informed consent process and only defines what is understood by an adverse event. Those who agreed to participate and met the inclusion criteria received the three instruments to complete. At some hospitals the instruments were completed in paper and at some using an online survey.

**TABLE 2** SVEST instrument results.

Dimensions and variables	Responses indicating SV (% $\geq 4$ , or $\leq 2$ for inverse items <sup>a</sup> )	Mean (SD)
<b>Psychological distress</b>		
1. I felt embarrassed about the incident	69% (n = 202)	3.73 (1.05)
2. I felt afraid that an incident would happen to me again	66% (n = 194)	3.76 (1.07)
3. I felt sad about the experience of the event	68% (n = 200)	3.90 (1.07)
4. I feel deeply guilty for having made a mistake	66% (n = 194)	3.93 (0.96)
Total	67% (n = 197)	
<b>Physical distress</b>		
5. The stress it caused me was exhausting	67% (n = 197)	3.83 (1.07)
6. I had problems sleeping regularly as a result of this type of incident	59% (n = 173)	3.52 (1.18)
7. The tension from these situations made me feel physical symptoms (e.g. queasy or nauseated, etc.)	41% (n = 120)	2.96 (1.10)
8. Going through these situations affected my appetite	45% (n = 132)	3.18 (1.24)
Total	53% (n = 156)	
<b>Colleague support</b>		
9. I appreciate the attempts of my co-workers to console me <sup>a</sup>	17% (n = 50)	3.62 (0.87)
10. Talking about what happened with my colleagues gives me relief <sup>a</sup>	15% (n = 44)	3.54 (0.83)
11. My colleagues showed their support for what happened <sup>a</sup>	9% (n = 26)	3.71 (0.91)
12. My colleagues help me feel that I am still a good professional despite the mistakes <sup>a</sup>	11% (n = 32)	3.57 (0.86)
13. My colleagues were indifferent to what happened <sup>a</sup>	22% (n = 65)	2.57 (0.81)
Total	16% (n = 47)	
<b>Supervisor support</b>		
14. My supervisor acts to resolve the situation <sup>a</sup>	43% (n = 126)	3.30 (0.84)
15. My supervisor individuals on the team when these things happen	24% (n = 71)	2.79 (0.91)
16. I feel that my supervisor considers the complexity of the patient when evaluating these situations <sup>a</sup>	28% (n = 82)	3.19 (0.95)
17. I feel that my supervisor understood me given what happened <sup>a</sup>	29% (n = 85)	3.23 (0.96)
Total	28% (n = 85)	
<b>Institutional support</b>		
18. My hospital understands that those who make mistakes may need help <sup>a</sup>	61% (n = 179)	2.33 (0.86)
19. My workplace offers different resources to help professionals who made a mistake to overcome the consequences <sup>a</sup>	53% (n = 156)	2.50 (1.01)
Total	57% (n = 168)	
<b>Family support</b>		
20. When I made a mistake I looked to my close friends and family to seek emotional support <sup>a</sup>	18% (n = 53)	3.31 (0.91)
21. The affection of my closest friends and family helps me overcome these incidents <sup>a</sup>	13% (n = 38)	3.79 (1.0)
Total	15% (n = 44)	
<b>Professional self-efficacy</b>		
22. After being involved in the incident I felt insecure about my professional skills	55% (n = 161)	3.32 (0.95)
23. This experience makes me wonder whether or not I am really a good professional	30% (n = 88)	2.96 (0.93)
24. After my experience, I was afraid to try to perform difficult or high-risk procedures	43% (n = 126)	3.14 (1.07)
25. These situations make me question my professional abilities.	33% (n = 97)	2.96 (1.01)
Total	40% (n = 118)	
<b>Turnover intentions</b>		
26. My experience with these incidents has led me to a desire to stop seeing patients	23% (n = 68)	2.66 (1.00)
27. Sometimes the stress of being involved in this type of situation makes me want to quit my job	35% (n = 103)	2.82 (1.07)
Total	29% (n = 85)	

TABLE 2 (Continued)

Dimensions and variables	Responses indicating SV (% $\geq 4$ , or $\leq 2$ for inverse items <sup>a</sup> )	Mean (SD)
Absenteeism		
28. My experience with an adverse event or error has caused me to take a day off because of stress	22% ( $n = 65$ )	2.63 (1.07)
29. I would have liked to take a day or a few days off after what happened.	70% ( $n = 206$ )	3.71 (1.21)
Total	46% ( $n = 135$ )	
Cronbach's Alpha = 0.917		
$n = 294$		

Note: Items here are back-translated into English from the validated Spanish version.

<sup>a</sup>Reverse-worded item. Score  $\leq 2$  (disagree or strongly disagree) indicates SV.

### 3.5 | Data analysis

We calculated descriptive statistics, including frequency and percentages, mean and standard deviation of each response and its item. To verify whether the difference between observed and expected values was because of chance or to a relationship between the variables, the sociodemographic variables were considered with respect to organizational support using chi-square analysis at a 95% confidence level. Likewise, for the relationship between two categorical variables, Fisher's Exact Test was used at a 95% confidence level when the theoretical frequencies were less than 5. The relationship was considered to be statistically significant when  $p$ -value  $\leq .05$ . The calculations were made with SPSS software v.22.0.

Regarding the ethical aspects, this research has received authorization from an accredited university ethics committee and, additionally, from the scientific ethics committee of each participating hospital.

## 4 | RESULTS

The generated results have come from seven highly complex hospitals. All the seven hospitals have all medical specialties and over 500 beds.

A total of 326 nurses met the inclusion criteria and responded to the sociodemographic survey. Among these nurses, 294 reported experiencing an adverse event, thus completing the following two instruments. The characteristics of the sample are detailed in Table 1.

Table 2 shows SV in relation to the dimensions studied.

According to the SVEST instrument, the most prevalent dimension of SV was psychological distress with 67% ( $n = 197$ ). Within this dimension, the most prevalent symptom was feeling embarrassed about the incident with 69% ( $n = 202$ ). Additionally, 53% ( $n = 156$ ) had physical distress after the adverse event, and the most prevalent symptoms were stress (67%,  $n = 197$ ) and sleep disturbances (59%,  $n = 173$ ). In the dimension of professional self-efficacy, 40% ( $n = 118$ ) of the participants' scores fell in the range of second victimhood. Within this dimension, 55% ( $n = 161$ ) of the participants felt insecure in their professional abilities after the adverse event. In terms

TABLE 3 Institutional support.

Criteria	Yes	%
1. There is an agreed-upon procedure about how to issue an apology to the patient	108	36.7
2. There are recommendations to ensure transparency and preserve the legal certainty of professionals	28	9.5
3. Staff training workshops include information for patients who are victims of an AE and information about institutional actions to be taken in case of an AE	11	3.8
4. There is an action plan for what to do after an AE	190	64.6
5. The procedures for what to do in case of a serious or very serious AE are distributed to health professionals	8	2.8
6. Key figures have been assigned to ensure that activities are completed and performed properly	3	1.1
7. The effectiveness of AE procedures are evaluated periodically	8	2.8
8. Health professionals are trained in the care units to provide initial support to colleagues who are second victims	2	0.68
9. Professionals are trained as part of a crisis management team so that they can provide support to colleagues involved in an AE	1	0.4
10. Professionals who have been second victims are trained to provide support to colleagues in this situation	0	0
11. A crisis communication plan has been developed	2	0.68
12. Action plans and explanations of how they can benefit from them are distributed to professionals	1	0.4
13. A procedure for evaluating the effectiveness of the measures to attend to second and third victims is in place	1	0.4

Abbreviation: AE, adverse event.

of support, institutional support was the most precarious and, overall, 57% ( $n = 168$ ) disagreed or strongly disagreed that the institution provided support. Within this dimension, 61% ( $n = 179$ ) disagreed or

**TABLE 4** Relationship of the sociodemographic variables of the participants with the organizational support.

Instrument criteria	Sex (Fisher)	Age (chi-square)	Time working in ICU (chi-square)	Hospital (chi-square)
	<i>p</i> -value*	<i>p</i> -value*	<i>p</i> -value*	<i>p</i> -value*
1. There is an agreed-upon procedure about how to issue an apology to the patient	0.092	0.352	0.014	0.000
2. There are recommendations to ensure transparency and preserve the legal certainty of professionals	0.449	0.227	0.477	0.000
3. Staff training workshops include information for patients who are victims of an AE and information about institutional actions to be taken in case of an AE	0.999	0.086	0.000	0.000
4. There is an action plan for what to do after an AE	0.502	0.192	0.000	0.000
5. The procedures for what to do in case of a serious or very serious AE are distributed to health professionals	0.881	0.815	0.102	0.000
6. Key figures have been assigned to ensure that activities are completed properly	0.867	0.030	0.221	0.000
7. The effectiveness of approved procedures in case of AE is periodically evaluated	0.649	0.418	0.075	0.000
8. Health professionals are trained in the care units to provide initial support to colleagues who are second victims	0.544	0.187	0.187	0.000
9. Professionals are trained as part of a crisis management team so that they can provide support to colleagues involved in an EA	0.163	0.487	0.507	0.004
10. Professionals who have been second victims are trained to provide support to colleagues in this situation	n/a	n/a	n/a	n/a
11. A crisis communication plan has been developed	0.474	0.270	0.240	0.000
12. Action plans and explanations of how they can benefit from them are distributed to professionals	0.999	0.249	0.295	0.000

Note: N/A: Not applicable because 100% of the population answers 'no'.

\*A chi-square or Fisher's exact test value <0.05 rejects the null hypothesis at a 95% significance level.

strongly disagreed that their hospital understood that those who make mistakes may need help. Colleague support was the most valued, and only 16% ( $n = 47$ ) disagreed or strongly disagreed that their colleagues' support was helpful to them after an adverse event. Family support was also highly valued, with only 15% ( $n = 44$ ) disagreeing or strongly disagreeing that this kind of support was helpful.

Regarding the support of supervisors, 28% ( $n = 85$ ) of participants' scores fell in the range of second victimhood. Within this dimension, 43% ( $n = 126$ ) disagreed or strongly disagreed that the supervisor acted to resolve the situation. The scale obtained a Cronbach's  $\alpha$  of 0.917.

In the outcome variables (turnover intentions and absenteeism) participants did not show an intention to quit. Only 29% ( $n = 85$ ) agreed or strongly agreed that they wished to stop caring for patients or quit their job because of the adverse event. In the absenteeism variable, only 22% ( $n = 65$ ) stated that they took a day off after the adverse event, despite the fact that 70% ( $n = 206$ ) would have liked to do so.

Regarding the support provided by the organization, the results are presented in Table 3.

For 64.6% ( $n = 190$ ) of the sample, the participant's hospital had an action plan for what to do after an adverse event, but only 36.7% ( $n = 108$ ) said that there was an agreed-upon procedure for issuing an apology to a patient. Participants reported that support for professionals was scarce. Thus, only 9.5% ( $n = 28$ ) agreed that there were recommendations to ensure transparency and preserve legal certainty for professionals. Additionally, 100% ( $n = 294$ ) of the sample declared that their hospital did not train professionals who have experienced SV to be a source of support for other professionals and declared that a crisis communication plan has not been developed.

The relationship between sociodemographic variables and the support participants reported receiving from their organization is seen in Table 4.

Statistically significant variations exist among hospitals for all aspects pertaining to how professionals perceive organizational support. Furthermore, significant differences were observed among the duration of ICU work for certain aspects related to how organizations manage adverse events. Additionally, the item 'Key figures have been assigned to ensure that activities are completed properly' demonstrates a significant difference in terms of age. Additionally, there

were significant differences according to time working in an ICU for the criteria:

- There is an agreed-upon procedure for how to issue an apology to the patient
- Staff training workshops include information for patients who are victims of an AE and information about institutional actions to be taken in case of an AE
- There is an action plan after an adverse event.

## 5 | DISCUSSION

This study revealed that the vast majority of nurses working in adult ICUs have experienced an adverse event. Among them, a large part has reported experiencing psychological stress as a consequence of facing this adverse event. In this study, it was found that the dimension most affected among the participants was psychological stress, and nurses showed a tendency to agree with the statement 'I felt embarrassed about the incident'. This finding is very similar to that reported in a large study conducted in China with health care professionals. Therefore, we can emphasize that psychological stress was the most impacted dimension among the participants in this study.

In several countries where SV has been investigated, psychological distress also appears as the most prevalent dimension of the phenomenon.<sup>23,45,46</sup> In a recent systematic review and meta-analysis, psychological distress and embarrassment appear to be very prevalent within the psychological signs and symptoms experienced by second victims.<sup>47</sup> In Argentina,<sup>25</sup> the prevalence of psychological distress had a mean score of 4.0. This consistency in the results for psychological distress can be explained by the natural history of SV first described by Scott et al.<sup>48</sup> The first stage of this phenomenon is characterized by the search for causes of the adverse event. This stage, defined as one of chaos, is closely associated with anxiety and other psychological symptoms. Given the storm of emotions that the professional can experience after an adverse event<sup>6</sup> and the possibility that these symptoms can last for a long time,<sup>48</sup> it is unsurprising that psychological distress is the dimension that most characterizes SV. With this same perspective, recent studies have highlighted the need to normalize the use of resources (including psychological support resources) for health care professionals.<sup>49</sup>

Regarding coping strategies, our participants valued colleague support most highly. A similar finding appears in a systematic review<sup>30</sup> and in a recent meta-analysis seeking advice from colleagues has a prevalence of 60% as a coping strategy.<sup>29</sup> This need to share one's experiences with peers makes sense given that peers understand the clinical environment in which adverse events occur, and thus they can better understand the circumstances surrounding them.<sup>50</sup> While also pointing to the need for support by relatives, many think that their relatives will not be able to understand the work circumstances in which the event occurs and/or want to protect the feelings of their relatives.<sup>6</sup>

The organization's support for second victims is very important to the organization's quality culture. In this research, it was

evidenced that organizations are focused on the adverse event, centred on the patient, but have not established plans for professionals who face adverse events. In this sense, reactions to adverse events provide support not only to the patient, but also to professionals. It has been pointed out that organizations that want to have a systematic approach to quality should have support plans for second victims.<sup>51</sup> Support for ICU nurses is especially important because they tend to self-stigmatize in the face of depressive symptoms caused by SV.<sup>52</sup> Our study reveals that organizations are taking some first steps, such as having an agreed-upon procedure for issuing an apology to the patient or organizing workshops so professionals will know how to act after an adverse event. However, there was a difference in how nurses perceived organizational support.

Nurses who had spent more time working in the ICU had a more positive perception of the organization's support, suggesting that the difference was because of greater clinical experience and knowledge of available organizational support. It also may be that greater ICU experience means that they had been involved in or witnessed more adverse events, leading them to grow as professionals.<sup>53</sup>

Another important finding is that for all organizational support criteria there were significant differences between the seven hospitals included in this study. This reaffirms that each hospital can be a separate system shaped by its own culture. In this sense, significant differences between leadership styles and organizational culture have already been reported between hospitals in the same country.<sup>54</sup> Therefore, successful support programmes for second victims such as *Foryou*,<sup>55</sup> *RISE*<sup>56,57</sup> and others<sup>58,59</sup> should be considered as each country develops policies according to local culture. Notably, the World Health Organization has outlined in its patient safety plan 2021–2030 the need to protect health workers who face adverse events.<sup>60</sup>

One limitation of this study is that while all the included hospitals are highly complex, with similar conditions in their ICUs (number of beds and procedures performed), there may be differences between hospitals that could influence nurses' responses and second victim experiences. All of this should be taken into account when interpreting the external validity of the study.

## 6 | CONCLUSION

Two-thirds of ICU nurses in Chile who experienced a patient adverse event reported psychological distress and there were statistically significant differences among hospitals in nurse perceptions of organizational support. These results should be considered in the Latin American and international context, because ICU nurses are the ones who suffer the most from SV, and SV has implications both for retention of nurses and for the quality of care.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## ETHICS STATEMENT

This study has been conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and has been approved by the scientific ethics committee. All procedures involving human subjects were performed with informed consent and adherence to the applicable regulations and guidelines.

## PATIENT CONSENT

Participants in this cross-sectional study were recruited from a pool of nurses working in intensive care units and provided written informed consent in accordance with current ethical standards. All participants were informed of their rights and had the opportunity to ask questions about the study before consenting to participate.

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