Original Article

# The newly graduated nurse as a second victim

## O enfermeiro recém-formado na condição de segunda vítima

## El enfermero recién graduado en condición de segunda víctima

Julia Oliveira Alevi[1] https://orcid.org/0000-0001-7946-7444
Patricia Bover Draganov[1] https://orcid.org/0000-0003-3764-8911
Geisa Colebrusco de Souza Gonçalves[1] https://orcid.org/0000-0003-4714-9462
Guilherme dos Santos Zimmermann[1] https://orcid.org/0000-0003-2060-2204
Lucia Giunta[1] https://orcid.org/0000-0002-7737-0443
Jose Joaquin Mira[1] https://orcid.org/0000-0001-6497-083X
Elena Bohomol[1] https://orcid.org/0000-0002-7196-0266

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**Corresponding author**
Patricia Bover Draganov
E-mail: patricia.bover@unifesp.br

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(https://orcid.org/0000-0001-7455-1727)
Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, SP, Brazil

## Abstract

**Objective:** To describe the prevalence of newly graduated nurses as second victims of adverse events and to know the conditions of support received in health institutions.

**Methods:** Cross-sectional, descriptive, quantitative study. The population consisted of newly graduated nurses who agreed to answer the online questionnaire with questions related to being hired at the institution, involvement in adverse events and management of the second victim condition. Contacted was by email, intermediated by the Regional Nursing Council of São Paulo. Descriptive data analysis and the test of equality of proportions were performed.

**Results:** The final sample consisted of 138 nurses, 54.3% were unaware of the term 'second victim', 44.9% were unaware of the existence of institutional protocols for emotional support to professionals and 26.8% were involved in adverse events. Of these, 94.6% presented emotional distress, frustration, guilt, sadness, stress, inability, embarrassment and insecurity to perform their duties at work as an outcome of the event; 59.5% received some type of support and 21.6% received institutional punishment.

**Conclusion:** The prevalence of newly graduated nurses involved in adverse events was 26.8%, and among those who experienced this incident, the majority presented negative feelings and insecurity in performing their work as an outcome. After the event, most of the time, the support received came from work colleagues and significant others. Regarding institutional support, the need for programs for emotional support is also highlighted, so that these professionals can overcome when finding themselves in the place of the second victim.

## Resumo

**Objetivo:** Descrever a prevalência de enfermeiros recém-formados como segundas vítimas de eventos adversos e conhecer as condições de apoio recebidas nas instituições de saúde.

**Métodos:** Estudo transversal, descritivo e de abordagem quantitativa, cuja população foi constituída por enfermeiros recém-formados, que aceitaram responder ao questionário *online,* com perguntas relacionadas à admissão na instituição, envolvimento em eventos adversos e gerenciamento da condição de segunda vítima, contatados por e-mail, intermediado pelo Conselho Regional de Enfermagem de São Paulo. Foi realizada a análise descritiva dos dados e teste de igualdade de proporções.

**Resultados:** A amostra final foi de 138 enfermeiros, 54,3% desconheciam o termo segunda vítima, 44,9% desconheciam a existência de protocolos institucionais para apoio emocional aos profissionais e 26,8% estiveram envolvidos em eventos adversos. Destes, 94,6% apresentaram como desfecho diante do evento o sofrimento emocional, frustração, culpa, tristeza, estresse, incapacidade, constrangimento e insegurança para realizar suas funções no trabalho; 59,5% receberam algum tipo de apoio e 21,6% receberam punição institucional.

[1]Escola Paulista de Enfermagem, Universidade Federal de São Paulo, São Paulo, SP, Brazil.
**Conflicts of interest:** none to declare.

**Conclusão:** A prevalência de enfermeiros recém-formados envolvidos em eventos adversos foi de 26,8%, e, entre os que vivenciaram esse incidente, a maioria apresentou como desfecho, sentimentos negativos e de insegurança na condução do trabalho. Após o evento, o apoio recebido partiu, na maioria das vezes, de colegas de trabalho e pessoas significativas, e, quanto ao apoio institucional, destaca-se ainda a necessidade de programas para suporte emocional, a fim de que esses profissionais superem quando se encontram na condição de segunda vítima.

## Resumen

**Objetivo:** Describir la prevalencia de enfermeros recién graduados como segundas víctimas de eventos adversos y conocer las condiciones de apoyo recibidas en las instituciones de salud.

**Métodos:** Estudio transversal, descriptivo y de enfoque cuantitativo, cuya población estuvo compuesta por enfermeros recién graduados, que aceptaron responder un cuestionario digital con preguntas relacionadas con la admisión en la institución, la participación en eventos adversos y la gestión de la condición de segunda víctima, contactados por correo electrónico e intermediado por el Consejo Regional de Enfermería de São Paulo. Se realizó el análisis descriptivo de los datos y prueba de igualdad de proporciones.

**Resultados:** La muestra final fue de 138 enfermeros. El 54,3 % desconocía el término segunda víctima, el 44,9 % desconocía la existencia de protocolos institucionales para apoyo emocional a profesionales y el 26,8 % estuvo involucrado en eventos adversos. De estos, el 94,6 % presentó, como consecuencia del evento, sufrimiento emocional, frustración, culpa, tristeza, estrés, incapacidad, vergüenza e inseguridad para realizar sus funciones en el trabajo; el 59,5 % recibió algún tipo de apoyo, y el 21,6 % recibió sanción institucional.

**Conclusión:** La prevalencia de enfermeros recién graduados involucrados en eventos adversos fue del 26,8 % y, de los que pasaron por estos incidentes, la mayoría presentó, como consecuencia, sentimientos negativos y de inseguridad en la conducción de su trabajo. Después del evento, el apoyo recibido, la mayoría de las veces, surgió de compañeros de trabajo y personas importantes. Respecto al apoyo institucional, también se observa la necesidad de programas para apoyo emocional para que estos profesionales se sobrepongan cuando se encuentren en condición de segunda víctima.

## Introduction

Adverse event is unintentional damage caused during the provision of health care, not directly related to the current condition or injury, often avoidable, which can cause numerous consequences for the patient, who is defined as the first victim involved in the incident.[1]

The health professional involved in the adverse event may become the second victim, and the institution, when dealing with the legal consequences and exposure in the media, the third victim.[1,2]

The term 'second victim' was introduced by Albert Wu, in 2000, and refers to the professional who suffers emotionally in the face of an unexpected adverse event for patient safety.[3]

Researchers have highlighted that the professional can be affected personally and professionally, and in response, develop sleep and concentration disorders, isolation, and, consequently, reduced quality of life. They may also present physical symptoms, fatigue, exhaustion, headaches, muscle tension, nausea, vomiting, and increased heart, breathing and blood pressure rates.[4,5]

It is estimated that half of health professionals can experience the condition of second victim at least once in their professional career, whose effects can be long-lasting, causing health problems and requiring professional treatment and work absence.[6,7]

Regarding the training trajectory, a Belgian study of nursing students in the last years of the course revealed that one in three had been involved in patient safety incidents during their clinical experiences. Of these, 84.7% presented suffering as a second victim, without an a posteriori approach to the situation, such as support from nurses or teachers responsible for education.[8]

Newly graduated nurses have insecurities related to professional inexperience, challenges in team management, difficulties in understanding their role, unconsolidated technical skills and doubts about the organizational culture, conditions that may predispose this group to become second victims of adverse events.[9,10]

Little is known about possible initiatives by health institutions regarding support for newly trained and hired professionals who were involved in a patient safety incident, hence this stands out as a gap in knowledge.[7]

Given this panorama, the objectives of this study were to describe the prevalence of newly graduated nurses as second victims of adverse events and to know the conditions of support received in health institutions.

## Methods

Cross-sectional, descriptive, quantitative study. The population comprised newly graduated nurses, who made new registrations at the Regional Nursing Council of São Paulo (COREn-SP). Those who completed their training and registration as nurses between July 2020 and the data collection period, which took place between March and June 2022, corresponding to 15-24 months of graduation, were considered as recent graduates.

This was a convenience, non-probabilistic and non-random sample, constituted from the availability of answers to the survey in the data collection period. The questionnaire prepared in Google Forms was addressed to all nurses through the Regional Nursing Council of São Paulo.

Inclusion criteria were: having registered as a nurse at COREn-SP in the selected period, working as a nurse or being in a professional residency program, or having had work experience after receiving care training and/or educational training.

Data collection took place through a questionnaire consisting of open- and close-ended questions; 18 questions about the characteristics of participants and the institution, and 12 questions about adverse events, the outcomes resulting from these, feelings as a second victim, and the support after the event. The instrument was evaluated and approved by three judges, researchers and specialists in patient safety, regarding the clarity and pertinence of questions.

Data were organized using Microsoft Office Excel® 2013 and descriptive analyzes were performed using the R software, version 4.1.3. Tests of equality of proportions were performed in variables with significance ($p < 0.05$).

The study was approved by the Research Ethics Committee of the Universidade Federal de São Paulo under Certificate of Presentation of Ethical Appreciation (CAAE): 50528421.0.0000.5505 and received a positive opinion from those responsible for the COREn-SP. The guidelines of Circular Letter No. 1/2021-CONEP/CNS/MS were followed for research involving a virtual environment and after the end of data collection, a copy of the responses on the form and the Informed Consent form for research in a virtual environment were stored in hardware.

## Results

The total of 240 responses were obtained. Those that did not meet the inclusion criteria were excluded from the analysis. The final sample consisted of 138 participants; newly graduated nurses and in current or previous work or professional residency activities. The sample loss resulted from newly graduated respondents who still had no experience as nurses.

Of the respondents, 62 (44.9%) were aged up to 25 years; 115 (83.3%) were female; 83 (60.2%) declared themselves to be white; 108 (78.3%) had only one job; 51 (37%) had previous training as a nursing assistant and/or technician, and of these, 48 (94.1%) worked in these positions before graduation. At the time of data collection, 95 (68.8%) nurses were studying in specialization or professional residency. Regarding hiring, 98 (73.2%) were hired and of these, 73 (49.7%) worked in private institutions. As for the place of work, 72 (47.4%) worked in hospitals. As for the hiring process, 90 (65.2%) participants had no institutional onboarding training when hired. For the 48 (34.8%) who had training, it lasted up to one week for 24 (50%). The total of 75 (54.3%) professionals were initially mentored by the supervisor/manager, and for 19 (25.4%), this mentoring lasted a maximum of one month. Of the recent graduates hired, 78 (56.5%) did not receive any feedback in relation to the initial period or onboarding training. When questioned, 75 (54.3%) did not know the term 'second victim' and 23 (16.7%) reported that the institution offered a program, protocol or resources for emotional support to professionals. When asked if they had been involved in adverse events, 37 (26.8%) participants answered affirmatively and the main event was related to medication; 19 (51.4%) reported that the adverse event did not cause harm to the patient, although three (8.1%) reported death. Regarding the outcome for newly graduated professionals involved in adverse events, table 1 shows the distribution

of responses in dichotomous categorical variables. Negative feelings and insecurity were prevalent [35 (94.6%) and 26 (70.3%)] and 22 (59.5%) felt they had received support. However, eight (21.6%) reported receiving punishment.

**Table 1.** Distribution of variables related to outcomes for newly graduated nurses after the adverse event (n=37)

| Outcomes | Yes n(%) | No n(%) | NA* n(%) |
|---|---|---|---|
| Negative feelings | 35(94.6) | 2(5.4) | -(-) |
| Feeling insecure to perform their duties at work | 26(70.3) | 11(29.7) | -(-) |
| Received support | 22(59.5) | 15(40.5) | -(-) |
| Feeling discriminated by supervisor/manager | 10(27) | 24(64.9) | 3(8.1) |
| Feeling discriminated by co-workers | 8(21.6) | 26(70.3) | 3(8.1) |
| Received punishment | 8(21.6) | 27(73) | 2(5.4) |

*NA – no answer

Participants who answered yes to the dichotomous categorical variable "negative feelings" reported frustration, guilt, sadness, fear, stress, insecurity, anxiety, shame, embarrassment and incompetence after an adverse event. In addition, in the variable "received support", 22 professionals responded positively and described that this support came from co-workers, supervisor, manager, spouse/boyfriend/girlfriend/partner, friends, internal or external to the work institution, family members and companions of the patient. As for the efficiency of the support, 14 (63.6%) reported that it was adequate and sufficient. Seven out of the eight nurses who were punished received a verbal/written warning and the punishment of one professional was being fired from the institution. Tests of equality of proportions were performed, when comparing the variables "being or not involved in adverse events" with the other variables. No statistically significant differences were found, except for the variable "having received feedback on the training and hiring period". Proportionally, the group that received feedback was more involved in adverse events (Table 2).

**Table 2.** Relationship between the group of newly graduated nurses involved and not involved in adverse events and dichotomous categorical variables (n=138)

| Variables | Newly graduated nurses involved in adverse events | | | |
|---|---|---|---|---|
| | Yes n(%) | No n(%) | Total n(%) | p-value* |
| | 37(100) | 101(100) | 138(100) | |
| Works in two or more jobs | | | | |
| Yes | 7(18.9) | 23(22.8) | 30(21.7) | 0.81 |
| No | 30(81.1) | 78(77.2) | 108(78.3) | |
| Has nursing assistant or technician training | | | | |
| Yes | 9(24.3) | 42(41.6) | 51(37) | 0.07 |
| No | 28(75.7) | 59(58.4) | 87(63) | |
| Worked as a nursing assistant or technician | | | | |
| Yes | 9(24.3) | 39(38.6) | 48(34.8) | 0.15 |
| No | 28(75.7) | 62(61.4) | 90(65.2) | |
| Currently studying | | | | |
| Yes | 23(62.2) | 72(71.3) | 95(68.8) | 0.30 |
| No | 14(37.8) | 29(28.7) | 43(31.2) | |
| Had initial training through continuing education | | | | |
| Yes | 14(37.8) | 34(33.7) | 48(34.8) | 0.68 |
| No | 23(62.2) | 67(66.3) | 90(65.2) | |
| Was mentored by a supervisor/manager at the beginning of activities | | | | |
| Yes | 21(56.8) | 54(53.5) | 75(54.3) | 0.84 |
| No | 16(43.2) | 47(46.5) | 63(45.7) | |
| Had feedback regarding the training period | | | | |
| Yes | 22(59.5) | 38(37.6) | 60(43.5) | 0.03 |
| No | 15(40.5) | 63(62.4) | 78(56.5) | |

*test of equality of proportions

## Discussion

The study described the prevalence of newly graduated nurses as second victims from a convenience sample, and identified that 26.8% of 138 respondents were involved in adverse events, and 94.6% and 70.3% had negative feelings and insecurity, respectively, in performing their duties at work. For professionals, such outcomes can configure them as a second victim after an adverse event.

While recognizing the controversies and concerns that the term second victim generates,[5] it is agreed that it is not a matter of denying the responsibility of professionals, but emphasizing the attention and institutional support required by the topic, especially when there are also negative outcomes for the professional. From this perspective, when experiencing an adverse event, it was also possible to identify the support actions received by this newly graduated professional.

The profile of participants comprised a young population aged up to 25 years, contrary to a Brazilian multicenter study with graduates in which 46.9% of participants were aged between 26 and 30 years.[11] Most were female and self-declared as white, corresponding to the profile of Brazilian nursing identified in a national study.[12] A significant percentage of black and mixed race nurses was

found in this study, which may be a result of affirmative action policies instituted in Brazil.[13]

Note that a significant number of participants had previous training and experience in the area, as a nursing assistant or technician, converging with a study that identifies a tendency to seek nursing qualification within nursing itself.[14]

Regarding the employment relationship, most were on temporary work contracts, demonstrating that this is a common possibility to enter the professional world after graduation. However, we highlight that the study was developed during the Covid-19 pandemic, a situation that demanded immediate responses from governments and health institutions, and consequently, demanded emergency hiring and training in reduced times.[15]

Newly graduated nurses face insecurities in their first job, and onboarding training becomes essential to qualify the performance, identify theoretical and practical difficulties and direct how to solve development gaps.[9,16] It draws attention that in the results of this study, most nurses reported not having received onboarding training, and among those who received it, the predominant duration was only a week. This situation may have been influenced by the pandemic period, when many institutions canceled their formal educational programs.[17] However, this finding denotes the importance of workers' training and development process regardless of the context, with the search for new conceptions of learning, review of teaching strategies, implementation of different technologies, good practices for embracement of new hires and appraisal of the individual and his/her integration.[15,17]

Although most were mentored by the supervisor/manager at the beginning of their activities, participants mentioned there was no feedback in relation to the training period. When analyzing the recommendations in the literature - formal training lasting of at least one month and weekly meetings with a supervisor to assess the development[16] - it was identified that the training offered by the institutions may be insufficient and not address the particularities of recent graduates.

As for the central object of this study, most participants were unaware of the term second victim, which demonstrates the importance of raising awareness and offering education about this phenomenon, since the impact of adverse events on health professionals is common, especially when they suffer or feel responsible for the outcome of the event.[3]

Although a significant percentage of newly graduated nurses has been involved in an adverse event, a previous occurrence to identify the second victim condition, there is still the possibility that many have answered that they were not involved given the lack of clarity in the definition of terms, both adverse events and second victim. Such an understanding is corroborated by a study in which 57% of participants conceptualized adverse events unsatisfactorily.[18]

Most recent graduates involved in adverse events reported that the patients did not suffer harm. However, in addition to the difficulty in identifying an adverse event, there is consequently, difficulty in recognizing the impact of the event on patients' clinical condition, since they receive numerous interventions. From this perspective, studies indicate the importance of talking openly about the occurrence of events without blaming or punishing. When leaders promote a safety culture and support the reporting of adverse events, organizational learning is achieved.[1] A study on the incidence and nature of adverse events in hospitals highlights the importance of their analysis from the perspective of improving processes, even when consequences for the patient did not occur or have not been identified.[19]

In studies that reported the patient's death after an adverse event, the literature highlights the association between patient outcomes and the occurrence of adverse events in health services; in addition to death, which is catastrophic, there is also an extension of the length of stay, higher expenses for institutions, deterioration of image and breach of trust.[20]

Medication error was more prevalent among recent graduates, which is in line with a study on the most common adverse events in nursing, pointing to the following as the main causes: work overload, lack of attention during the process, illegible medical prescriptions, incorrect scheduling and inexpe-

rience of professionals about the preparation and administration of certain medications.[21]

As for the outcome for nurses involved in adverse events, even without harm to the patient, most professionals had negative feelings, insecurity at work, frustration, guilt, sadness, stress, disability and embarrassment, similar results to those of another study.[4]

Furthermore, the adverse event and the second victim condition are not limited to nursing. A Spanish study identified that 28-57% of physicians had experienced at least one serious adverse event in their careers and felt fear, shame, frustration, anger, anxiety and lack of confidence in their professional decisions.[22] A Swedish study suggests that the emotional impact on the professional is directly related to the patient's response to the event and the severity of harm,[23] parameters that were not measured in this study.

Most newly graduated nurses received support after an adverse event, whether from co-workers, supervisor/manager and significant others, describing it as adequate and sufficient. Emotional support can have different configurations, and studies with second victims suggest that social support through conversations can reduce the emotional burden related to the event.[7,8,24] Furthermore, when they do not receive support, there is a risk of aggravation of the emotional impact, increased duration of feelings, and increased rates of absenteeism and presenteeism with requests to change areas, units or shifts.[1,6,25]

Institutions are expected to have consolidated flows of emotional support to second victims, a no-blame approach, active listening, words of comfort and encouragement, in addition to the analysis of adverse events with the purpose of promoting improvements for the institution and the team.[7,22] This differs from what was found in this study, in which some participants were punished, received verbal/written warnings and one reported being fired. This context brings to light the perpetuation of the punitive culture and the difficulties for the recovery of the second victim, who sometimes does not seek formal support for fear of negative repercussions, thereby mitigating opportunities for improving processes.[1,26]

In tests of equality of proportions between professional variables and nurses involved in adverse events, the group that received feedback regarding their training period was involved in more events. The literature suggests that during the training period, the new hire, especially when newly graduated, should have frequent meetings with the supervisor to assess the development and improve the gaps identified.[16,17,27]

Although the other variables were not significant, it draws attention that nurses who had two or more jobs and studied were not involved in more adverse events, because this situation causes overload of activities and may predispose to patient safety incidents with different consequences.[1,28]

Nurses who had training and worked as nursing assistants/technicians, despite having more experience in the area, were not involved in fewer adverse events. This result indicates that institutions should adopt a similar hiring approach to all professionals, regardless of previous experiences.[5,22,26]

The following limitations of the study stand out: understanding if the feedback from the supervisor was part of the hiring routine or resulted from involvement in the adverse event; regarding the collection of data through an online questionnaire; and the non-adoption of random statistical sampling for data representativeness.

## Conclusion

This study described the prevalence of newly graduated nurses involved in adverse events. Although being involved in the incident does not necessarily imply the second victim condition, most of them had negative feelings and insecurity in their work duties. Another highlight was in relation to the support received after the adverse event, since this can mean greater or lesser suffering for the professional, and, in this perspective, configure or not the condition of second victim. Although most received support, not all received formal and institutional support, but from significant people from work or personal life. It was identified that most institutions and co-workers did not blame or punish, although

these still occur. In this perspective, the need for post-event support programs is reaffirmed, especially for patients and their family members, and is also fundamental for professionals for the reduction of the impact on the outcome and the condition of second victim.

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## Collaborations

Alevi JO, Draganov PB, Gonçalves GCS, Zimmermann GS, Giunta L, Mira JJ and Bohomol E declare they have contributed to the design of the project, analysis and interpretation of data, writing of the article, relevant critical review of the intellectual content and approval of the final version to be published.

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