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ORIGINAL

# Experience of healthcare providers as second victims in a Pediatric Emergency Department

**Vanessa Arias Constantí[1,2], Mireia Urrea Ayala[3], Inés Dalmau Pons[4,6], Mónica Inchuste Grassi[5], Carles Luaces Cubells[1,2,6], Victoria Trenchs Sainz de la Maza[1,2,6]**

*[1]Environmental Impact on the Well-Being of Children and Adolescents. Institut de Recerca Sant Joan de Déu. Esplugues de Llobregat, Barcelona, Spain. [2]Emergency Department; [3]Department of Clinical Safety, Direction of quality and patient experience; [4]Joint Prevention Service; [5]Direction of People and Values. Hospital Sant Joan de Déu. Esplugues de Llobregat, Barcelona, Spain. [6]Universidad de Barcelona. Barcelona*

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## Abstract

*Objectives:* To evaluate the emotional impact on healthcare providers of a Pediatric Emergency Department (PED) involved in an adverse event (AE) and to analyze the effects of the experience and the support received/desired.

*Methods:* A survey including the Second Victim Experience and Support Tool (SVEST) questionnaire was sent to 180 healthcare providers working in the PED in 2022.

*Results:* We received 67 (37.2%) responses. Among the respondents, 35 (52.2%) participants had experienced an AE. The highest mean scores on the SVEST were observed in the dimensions of "diminished professional self-efficacy" (3.3), "inadequate institutional support" (2.7), and "psychological distress" (2.6); for the outcome variable, "turnover intentions" (2.5); and for the desired support resources, "An employee assistance program" (4.1).

*Conclusions:* AEs are common occurrences in PEDs and affected half of the respondents. Healthcare providers often experience a loss of self-confidence, feelings of depression and ineffectiveness, and may consider changing their profession. They would require more institutional and peer support.

## EXPERIENCIA DE LOS PROFESIONALES SANITARIOS COMO SEGUNDAS VÍCTIMAS EN UN SERVICIO DE URGENCIAS PEDIÁTRICAS

## Resumen

Objetivos: *Evaluar el impacto emocional de los profesionales de un Servicio de Urgencias Pediátricas (SUP) involucrados en un evento adverso (EA), analizar el impacto de la experiencia y el apoyo recibido/deseado.*

Métodos: *Se envió una encuesta que incluía el cuestionario* Second Victim Experience and Support Tool *(SVEST) a 180 profesionales del SUP en 2022.*

Resultados: *Se obtuvieron 67 (37,2%) respuestas. Treinta y cinco (52,2%) participantes habían experimentado un EA. Las puntuaciones medias más altas del SVEST fueron para las dimensiones "autoeficacia profesional disminuida" (3,3), "apoyo institucional inadecuado" (2,7) y "malestar psicológico" (2,6); para la variable de resultado, "intención de rotación" (2,5), y para las opciones de apoyo deseadas, "Un programa de asistencia al empleado" (4,1).*

Conclusiones: *Los EA son frecuentes en los SUP afectando a la mitad de los encuestados. Los profesionales pierden la confianza en sí mismos sintiéndose deprimidos e ineficaces, consideran cambiar su profesión, y les gustaría más apoyo institucional y de los compañeros.*

Corresponding author:
Dra. Vanessa Arias Constanti.
Área de Urgencias. Hospital Sant Joan de Déu. Passeig Sant Joan de Déu 2. 08940 Esplugues de Llobregat, Barcelona. España.
*E-mail:* vanessa.arias@sjd.es

## INTRODUCTION

The risk of adverse events (AE) is particularly high in the PED, mainly due to the type of the care provided in these settings[1,2]. AEs are usually analyzed in terms of the consequences for the patient, while the impact on the healthcare provider, who is ultimately also a victim, is underestimated. In 2000, Wu[3] defined the term second victim (SV), with Scott[4] in 2009 further examining this concept and defining it as a "healthcare provider who is involved in an unanticipated adverse patient event, medical error and/or patient-related injury and becomes a victim in the sense that the provider is traumatized by the event." Those who have encountered such situations firsthand are acutely aware of the negative emotional aftermath, which can impede their ability to perform effectively, leading to feelings of guilt or inadequacy. In severe cases, this emotional distress may even prompt drastic decisions such as leaving the profession.

The next essential step in patient safety research involves examining the response of healthcare professionals following incidents and determining the extent of their involvement in the process. However, assessing the prevalence of second victimization (SV) is complex. In Spain, a multicenter study revealed that 72% of healthcare workers surveyed felt they were an SV[5], yet specific data for EDs, particularly PEDs, are lacking. The primary objective of this study was to determine the number of PED healthcare providers who were at some point involved in an AE and to analyze its emotional impact, as well as the changes it entailed in their clinical practice. The secondary objectives were to assess knowledge of and participation in the safety training program and the SV support program and the support options received and desired.

## MATERIALS AND METHODS

A descriptive survey study was conducted in a third level maternity and children's hospital with an average of 110,000 PED visits per year. The institution has a Safety Training Program and an SV Support Program. In February 2022, an email was sent to all 180 PED healthcare providers (77 physicians and 103 nurses/auxiliary nursing care technicians) inviting them to participate in the study. Those who agreed to participate answered the survey anonymously using the Google Forms® platform following the recommendations of the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). The survey (Appendix 1) was structured into six sections:

1. Socio-demographic and professional data.
2. Patient safety culture.
3. Previous experience with an AE in the last 5 years.
4. Psychological and physical impact of an AE on the individual involved.
5. Support received and subsequent changes in daily clinical practice.
6. Type of support desired.

The first section was created ad-hoc to collect data on different variables (sex, age, etc.). The second was based on the Spanish National Project on SV[6,7] and assessed knowledge of patient safety. Sections 4-6 were extracted from the Second Victim Experience and Support Tool (SVEST)[8] survey instrument validated in Spanish. The SVEST consists of 29 items grouped into 9 subscales: 7 dimensions and 2 outcome variables (turnover intentions and absenteeism). Of the dimensions, 3 measure the trauma of the SV (psychological distress, physical distress, impact on professional self-efficacy) and 4, support sources (colleagues, supervisors, institutional support, non-work-related support). The response indicates the degree of agreement with each item (Likert scale: 1 = strongly disagree to 5 = strongly agree). The SVEST items were scored according to the study by Burlison *et al.*[9]. For each respondent, the mean of the specific items of each dimension or outcome variable was defined after converting the responses of reverse-worded items (whose wording implied that the higher the score, the less SV experience, e.g., perceived support). The mean scores were calculated for respondents who answered more than 50% of the specific items of that dimension or outcome variable[9].

Using the mean scores for each respondent, the overall mean and standard deviation were calculated for each dimension and outcome variable, and the number and percentage of respondents with a mean score of 4 or higher were identified. The last part of the survey included seven additional items assessing desired support options following participation in an EA. Each option was rated on a Likert scale of 1 to 5 (1 = little desired, 5 = very desired), where a response of 4 or 5 indicated that the support option was desired.

The study was approved as a quality improvement and patient safety project.

## RESULTS

Sixty-seven (37.2%) responses were obtained (medical staff response rate 61.0%; nursing staff response rate 19.4%). Thirty-three (49.3%) were younger than 30 years, 28 (41.8%) were between 30 and 50 years, and the remaining 6 (9%) were older than 50 years. Fifty-five (82.1%) were female, 47 (70.2%) were physicians, and 39 (58.2%) had 10 or fewer years of professional experience. In terms of safety culture, 42 respondents (62.7%) were aware of and participated in the safety training program and 28 (41.8%) participated in the SV support program. Thirty-five (52.2%) participants had been involved in an AE within the last 5 years. Table 1 shows the results for the SVEST dimensions, outcomes, and desired support resources.

## DISCUSSION

In our study, half of the professionals who participated in the survey had been involved in an AE, which had caused significant emotional distress and potentially affected their daily clinical practice. A significant proportion reported a loss of confidence in their professional competencies. Most participants were young and had few years of work experience in the PED. This professional profile is consistent with the results of other surveys[10,11], except for the professional profile where most participants were nurses. In our sample, a significant number of respondents were physicians in training, who

**TABLE 1.** Results for the different dimensions and outcomes variables and desired support options (n= 35).

| SVEST dimensions and outcomes[1] | Number (%) and mean ≥ 4 points | Media (DE) |
|---|---|---|
| Dimensions[2] | | |
| Psychological Distress | 0/35 (0%) | 2.6 (0.5) |
| Physical Distress | 4/35 (11.4%) | 2.4 (1.1) |
| Colleague Support | 0/35 (0%) | 2.3 (0.5) |
| Supervisor Support | 1/35 (2.9%) | 2.2 (0.6) |
| Institutional Support | 6/31 (19.4%) | 2.7 (0.8) |
| Non-Work-Related Support | | 1.9 (0.7) |
| Professional Self-Efficacy | 15/34 (44.1%) | 3.3 (1.2) |
| Outcomes[3] | | |
| Turnover Intentions | 6/34 (17.6%) | 2.5 (1.0) |
| Absenteeism | 1/34 (2.9%) | 1.6 (0.8) |
| **Support options[4]** | **Deseado, n (%)** | **Media (DE)** |
| The ability to immediately take time away from my unit for a little while | 15/34 (44.1%) | 3.2 (1.2) |
| A specified peaceful location that is available to recover and recompose after one of these types of events | 25/34 (73.5%) | 3.7 (1.0) |
| A respected peer to discuss the details of what happened | 29/35 (82.9%) | 4.0 (0.7) |
| An employee assistance program | 29/35 (82.9%) | 4.1 (0.9) |
| A discussion with my manager or supervisor about the incident | 27/34 (79.4%) | 4.0 (0.7) |
| The opportunity to schedule a time with a counselor at my hospital to discuss the event | 25/34 (73.5%) | 3.9 (0.9) |
| A confidential way to get in touch with someone 24 hours a day to discuss how my experience may be affecting me | 19/34 (55.9%) | 3.6 (1.1) |

*SVEST: Second Victim Experience and Support Tool.*
*[1]The score of the respondents for each dimension or outcome was defined as the mean of 2 to 4 items, each rated on a 5-point scale (1= strongly disagree and 5= strongly agree). Results are presented for respondents who answered more than 50% of the items for a specific dimension or outcome (e.g., ≥ 3 of 4 items, ≥ 2 of 3 items, or both of 2 items).*
*[2]A higher score for each specific dimension represents experiencing more psychological and physical distress, decreased professional self-efficacy, and a greater perception of inadequate support.*
*[3]A higher score represents more intentions to change jobs and more absenteeism.*
*[4]The responses for these items are rated on a 1–5 Likert scale, where a response of 4 or 5 represents the support option being desired.*

are generally more interested in participating in this type of study[11]. We noted the low response rate from more experienced professionals, who a priori have more responsibility in the organization and are more involved in patient safety. This low response rate may be due to a lack of motivation and professional burnout, which sometimes leads them to participate less in such studies.

Half of the respondents had been involved in an AE, the impact of which was mainly manifested in decreased professional self-efficacy (feelings of incompetence), inadequate institutional support, psychological distress, and increased intention to change jobs. These findings are consistent with other studies conducted both in our environment and in other areas. Although it is a subjective experience, traumatic events are experienced in a similar way regardless of the environment, personality, working conditions, or environmental factors[12]. In addition to the widely studied psychological distress, it is important to assess other dimensions such as physical suffering and loss of professional self-efficacy, which may be equally affected and should be considered in the approach to the SVs[13].

When analyzing the items regarding desired support options, respondents considered it most important to have an SV support program. It should be noted that about 40% of the 65 respondents were unaware of the AE training and notification program (included in the center's safety plan) and 60% were unaware of the existing SV support program at the study center. Given that a negative correlation has been found between perceived support and psychological and occupational outcomes for SVs[10,12], greater dissemination of the program is essential to improve adherence and participation of professionals. However, independently of the adequacy of the support programs for SV, it should be noted that the first barrier to overcome is reluctance to ask for help[14]. It is necessary to change the safety culture, with a proactive attitude towards the professionals involved in an AE. In addition, training in psychological first aid is necessary to reduce the consequences of an AE for the healthcare provider[15].

The limitations of this study include those inherent to survey-based studies and the fact that it was conducted in a tertiary hospital with a high rate of trainees, which may make it difficult to extrapolate our findings.

In conclusion, half of the respondents may have suffered the consequences of being involved in an AE. Many of the affected professionals lose self-confidence and feel depressed and ineffective in the performance of their work, have considered changing jobs, and would like to have more institutional and peer support. Consequently, this need for support to SVs should be emphasized; it is essential to invest in support resources and to disseminate the programs to all professionals in the institution. It is to be hoped that the positive impact of these measures will benefit the professional, the institution, and the patients themselves, who are the main focus of our care.

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| APPENDIX 1. Second Victims Survey. | |
|---|---|
| Sociodemographic data<br>(age, sex, professional category, professional experience, shift) | |
| **With respect to the last 5 years, please indicate the answer that best reflects your personal experience**<br>*Please rate according to the following scale:*<br>*1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree* | |
| At my hospital... | |
| 1. | There is an annual patient safety training program that operates at different levels: awareness and specific training (workshops or courses). |
| 2. | There is an anonymous incident and adverse event (AE) reporting system that allows us to collect useful information to avoid risks to patients. |
| 3. | When an AE with serious consequences for a patient is detected, we always analyze its causes and how to avoid it in the future (we systematically learn from our experience). |
| 4. | Most of the AEs I know of are due to organizational factors, not human error. |
| 5. | Most AEs with serious consequences are preventable. |
| 6. | Healthcare providers involved in an AE receive, if they wish, psychological support from the hospital to reduce the distress they suffer as a second victim. |
| 7. | I have received training in how to communicate an adverse event to a patient. |
| 8. | When a medical error occurs that affects the patient, the patient or the patient's family is always notified. |
| 9. | Notifying patients of an AE that has no relevant impact on their treatment causes unnecessary alarm. |
| 10. | Notifying a patient of an AE can provoke a negative reaction that affects their subsequent relationship with their healthcare providers. |
| 11. | When a serious AE occurs, the healthcare provider involved receives support from his/her own team. |
| Have you ever experienced a safety incident? Yes / No | |
| **On the experience of second victims after having suffered an AE and the available means of support**<br>*Rate according to the scale:*<br>*1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree* | |
| 1.1. | I have experienced embarrassment from these instances. |
| 1.2. | My involvement in these types of instances has made me fearful of future occurrences. |
| 1.3. | My experiences have made me feel miserable. |
| 1.4. | I feel deep remorse for my past involvements in these types of events. |
| 2.1. | The mental weight of my experience is exhausting. |
| 2.2. | My experience with these occurrences can make it hard to sleep regularly. |
| 2.3. | The stress from these situations has made me feel queasy or nauseous. |
| 2.4. | Thinking about these situations can make it difficult to have an appetite. |
| 3.1. | I appreciate my coworkers' attempts to console me, but their efforts can come at the wrong time. |
| 3.2. | Discussing what happened with my colleagues provides me with a sense of relief. |
| 3.3. | My colleagues can be indifferent to the impact these situations have had on me. |
| 3.4. | My colleagues help me feel that I am still a good healthcare provider despite any mistakes I have made. |
| 4.1. | I feel that my supervisor treats me appropriately after these occasions. |
| 4.2. | My supervisor's responses are fair. |
| 4.3. | My supervisor blames individuals. |
| 4.4. | I feel that my supervisor evaluates these situations in a manner that considers the complexity of patient care practices. |
| 5.1. | My organization understands that those involved may need help to process and resolve any effects they may have on care providers. |
| 5.2. | My organization offers a variety of resources to help me get over the effects of involvement with these instances. |
| 5.3. | The concept of concern for the well-being of those involved in these situations is not strong at my organization. |
| 6.1. | I look to close friends and family for emotional support after one of these situations happens. |
| 6.2. | The love from my closest friends and family helps me get over these occurrences. |

.../...

| APPENDIX 1 (Cont.). Second Victims Survey. | |
|---|---|
| 7.1. | Following my involvement, I experienced feelings of inadequacy regarding my patient care abilities. |
| 7.2. | My experience makes me wonder if I'm not really a good healthcare provider. |
| 7.3. | After my experience, I became afraid to attempt difficult or high-risk procedures. |
| 7.4. | These situations don't make me question my professional abilities. |
| 8.1. | My experience with these events has led to a desire to take a position outside of patient care. |
| 8.2. | Sometimes the stress from being involved with these situations makes me want to quit my job. |
| 9.1. | My experience with an adverse patient event or medical error has resulted in me taking a mental health day. |
| 9.2. | I have taken time off after one of these instances occurs. |
| 10.1. | The ability to immediately take time away from my unit for a little while. |
| 10.2. | A specified peaceful location that is available to recover and recompose after one of these types of events. |
| 10.3. | A respected peer to discuss the details of what happened. |
| 10.4. | An employee assistance program that can provide free counseling to employees outside of work. |
| 10.5. | A discussion with my manager or supervisor about the incident. |
| 10.6. | The opportunity to schedule a time with a counselor at my hospital to discuss the event. |
| 10.7. | A confidential way to get in touch with someone 24 hours a day to discuss how my experience may be affecting me. |