

DOI: <https://doi.org/10.36489/saudecoletiva.2021v11i68p7179-7190>

# Performance of nurses in the preservation of forensic traces in cases of sexual violence: integrative review

Desempeño de enfermeras en la conservación de huellas forenses en casos de violencia sexual: revisión integrativa  
Atuação do enfermeiro na preservação de vestígios forenses nos casos de violência sexual: revisão integrativa

## ABSTRACT

**Objective:** To describe how nurses work to preserve forensic remains in cases of sexual violence. **Methods:** integrative review carried out using the Latin American and Caribbean Literature in Health Sciences databases (LILACS), Nursing Database (BDENF) and Scientific Electronic and Library Online (Scielo). The collection period took place in September 2020. **Results:** In this systematic review, 06 articles were analyzed that met the inclusion criteria previously established and, next, an overview of the evaluated articles was presented. The scarcity of scientific knowledge regarding violence and forensic nursing leads health professionals to encounter difficulties in the use of specific techniques for the preservation of evidence. **Conclusion:** the forensic nurse has a range of responsibility towards survivors of sexual violence, from the approach to the proper handling of evidence.

**DESCRIPTORS:** Nursing Care, Sex Offenses, Forensic Nursing, Women's Health, Women's Health Services.

## RESUMEN

**Objetivo:** Describir cómo trabajan las enfermeras en la preservación de rastros forenses en casos de violencia sexual. **Métodos:** revisión integradora realizada utilizando las bases de datos de Literatura Latinoamericana y Caribeña en Ciencias de la Salud (LILACS), Base de Datos de Enfermería (BDENF) y Bases de Datos Científico Electrónico y de Biblioteca en Línea (Scielo). El período de recolección tuvo lugar en septiembre de 2020. **Resultados:** En esta revisión integradora se analizaron 06 artículos que cumplieron con los criterios de inclusión avanzada y, a continuación, se presenta un resumen de los artículos obtenidos. La falta de conocimiento científico sobre la violencia y la enfermería forense lleva a los profesionales de la salud a encontrar dificultades en el uso de técnicas específicas para preservar la evidencia. **Conclusión:** el enfermero forense tiene un rango de responsabilidad hacia las sobrevivientes de violencia sexual, desde el abordaje hasta el adecuado manejo de las pruebas

**DESCRIPTORES:** Atención de Enfermería, Delitos Sexuales, Enfermería Forense, Salud de la Mujer, Servicios de Salud de la Mujer.

## RESUMO

**Objetivo:** Descrever como atua o enfermeiro na preservação de vestígios forenses em casos de violência sexual. **Métodos:** revisão integrativa realizada por meio das bases de dados Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), Base de Dados em Enfermagem (BDENF) e Scientific Electronic e Library Online (Scielo). O período da coleta aconteceu no mês de Setembro de 2020. **Resultados:** Na presente revisão integrativa, analisou-se 06 artigos que atenderam aos critérios de inclusão previamente estabelecidos e, a seguir, apresentou-se um panorama geral dos artigos avaliados. A escassez de conhecimento científico referente à violência e enfermagem forense levam aos profissionais de saúde encontrarem dificuldades na utilização de técnicas específicas para a preservação dos indícios. **Conclusão:** o enfermeiro forense possui uma gama de responsabilidade perante os sobreviventes de violência sexual, desde a abordagem até o manuseio adequado das provas.

**DESCRIPTORES:** Cuidados de Enfermagem, Delitos Sexuais, Enfermagem Forense, Saúde da Mulher, Serviços de Saúde da Mulher.

RECEIVED ON: 04/07/2021 APPROVED ON: 04/16/2021

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**INTRODUCTION**

The IAFN (International Association of Forensic Nursing) states that forensic nursing is a specialty defined as the application of nursing science to the population and to justice. Its main objective is to support investigations in victims of the most varied types of violence, such as physical and sexual, emotional and psychological violence, social isolation, economic violence, domestic violence, traumatic accidents, deaths and/or trauma treatment for aggressors and victims, between others.<sup>(1)</sup>

The forensic specialty covers several areas of competence, including attention to victims of violence, mass disasters, prison and psychiatric systems, among others. Among these, violence has become a major social problem and has grown alarming society, causing countries to generate government policies, in addition to the improvement of forensic science where it works with the public in cases of violence and justice, contributing to deliveries of traces.<sup>(2)</sup>

Traces are vital for the success of an investigation, as they can contribute to the discovery of a solution that will lead to the resolution of criminal proceedings. Criminal investigation seeks to discover the truth, with a view to prosecuting criminal agents, and the study of traces is decisive to prove the guilt or innocence of a specific suspect.<sup>(3)</sup>

"In the field of action of an investigation of sexual assault, it is essential to research the traces left on the victim's body or garments."<sup>(4)</sup>

Violent crime and associated traumas are entities that involve the performance of several professionals. Nurses as health professionals have as their main objective to assist the victim by promoting health care. Despite this vital priority, it is also important that they carry out the proper identification, safety and preservation of traces (biological and non-biological) found on the victim/aggressor's body or on the site, which may later be the target of expert evidence in Court with Medical Legal relevance.<sup>(5)</sup>

Taking into account the reported developments, the study was justified by

the notorious importance of deepening knowledge on the subject in order to try to enable the preservation of traces in case of sexual violence in order to facilitate the investigation of what happened. The idea of the theme arose from the interest in knowing what the literature brings about the role of the forensic nurse in preserving traces in cases of sexual violence.

Considering the aspects described, which indicate that the disappearance of traces makes the investigative process unfeasible, this study aimed to describe the role of nurses in preserving forensic traces in cases of sexual violence.

**METHODS**

This is an integrative review guided by the steps proposed by Mendes, Silveira and Galvão:<sup>(19)</sup> 1. choice and definition of the theme (preparation of the research question); 2. establishment of inclusion and exclusion criteria for studies; 3. literature search (sampling); 4. criteria for categorization of studies (data collection); 5. evaluation of the

studies included in the results; 6. discussion of the result and presentation of the integrative review.

Thus, it sought to answer the following research question: "How does the nurse act in the preservation of forensic traces in cases of sexual violence? This question was defined according to the acronym P.I.Co (P = Participant, I = Phenomenon of interest, Co = Study Context).<sup>(20)</sup> The analysis of evidence from the scientific literature on the subject was carried out during the month of September 2020, the studies were searched in a paired way, in the Decs: Nursing Care, Sexual Offenses, Forensic Nursing, Women's Health, Women's Health Services and in MeSh: Nursing Care, Sex Offenses, Forensic Nursing, Women's Health and Women's Health Services, using the Boolean AND operator for crossing the databases. Access to the studies was through the Journal Portal of the Coordination for the Improvement of Hi-

gher Education Personnel (CAPES), the databases were selected according to the scope of coverage and representativeness, which were: Latin American Medical Literature and of the Caribbean in Health Sciences (LILACS), Database in Nursing (BDENF) and Scientific Electronic Library Online.

In order to filter the studies, according to the emphasis of the investigated object, the inclusion criteria were used: qualitative and/or quantitative research articles that addressed the role of nurses in preserving forensic traces in cases of sexual violence, published in Portuguese, English or Spanish, between 2015 and 2020, available online, in full and free of charge in the databases. It is noteworthy that studies with various types of designs and scientific evidence were included, due to the characteristic of the guiding question, which is not related to the effectiveness of an intervention, which would necessarily refer to experimental studies with strong levels

of evidence, but, yes, to the breadth of knowledge produced about a certain theme. Exclusion criteria: The established exclusion criteria were: articles that addressed other types of violence, research target audience other than women who were raped, reports, technology development studies, review articles, theses, dissertations, duplicate studies and editorials.

The selection of articles took place in two stages. In the first stage, the titles and abstracts of 45 studies found in the aforementioned databases were carefully read. After applying the inclusion criteria and excluding 10 repeated articles and 15 that are not available in full, 20 articles remained. In the second stage, the articles were read in full and 14 articles that do not address the subject were excluded. The final sample consisted of 6 studies. The selection was presented in (Chart 1).

For the analysis of the studies, an instrument of its own elaboration was applied, including the following items: authors/country/year; type of study and level of evidence; objectives and results.

## RESULTS

In this integrative review, 06 articles that met the previously established inclusion criteria were analyzed and, then, an overview of the evaluated articles was presented.

Table 2 shows us studies that were

Chart 1- Selection of research articles in LILACS, Scielo and BDENF databases according to the established inclusion criteria.

	TOTAL
Production found	45
Not available online	15
Repeated	10
Does not address the theme	14
Total selected	06

Source: Prepared by the authors (2020).

Chart 2 - Characterization of studies regarding authors, year, type of study, objectives and main results.

AUTHORS/YEAR	TYPE OF STUDY	OBJECTIVES	RESULTS
Rocha, Rodrigues, Paula, Araújo, Gomes, Souza, Sanchett e Carvalho (2020) <sup>10</sup>	Qualitative	Reflect the role of the forensic nurse with the multidisciplinary team in the preservation of criminal traces during urgent and emergency hospital care	It is possible to see how much nurses are needed in the work of Urgent and/or Emergency Services, as they will have direct contact with the victims who will mostly be surrounded by trauma
Santos, Eloi, Santos, Santos e Silva (2019) <sup>13</sup>	Analytical, descriptive and quantitative.	To analyze the level of knowledge and executability of health professionals in the preservation of forensic traces in the care of patients victims of sexual violence in the trauma hospital in Aracaju	The results showed that the higher the level of knowledge, the greater the execution of procedures related to documentation, preservation and collection of traces

Gomes (2018) <sup>16</sup>	Qualitative	Present the various criminal situations that occur in the pre-hospital context and present the respective traces that must be preserved.	Disposable material, including gloves, which must be placed in paper bags, must be left in place, and these must be sealed and handed over to the authority.
Camilo, Dantas, Musse, Silva e Assis (2017) <sup>11</sup>	Qualitative	Knowing the role of nurses in preserving forensic traces in urgent and emergency services	There are many difficulties during the procedures for collection and conservation of traces, and the lack of guidance protocols
Santos, Lucas, Ferro, Matos e Rosa (2017) <sup>15</sup>	Analytical, descriptive and quantitative.	Highlight the role and skills of forensic nurses with a focus on the preservation of traces in urgent and emergency services, showing the importance of their role, as well as deepening knowledge in this area	It is possible to see the need for forensic nurses in the different categories of activity, as they must be prepared to provide qualified and specialized care to victims and aggressors.
Souza, Martins e Silva. (2017) <sup>18</sup>	Analytical, descriptive and quantitative.	To investigate the preservation of traces by nurses during the care of women victims of sexual violence in an emergency service in the state of Sergipe.	The results show that nurses working in the emergency department at the study site, although they consider it important to preserve and collect traces in the care of women victims of sexual violence, they do not feel technically and scientifically prepared to perform them.
Source: Prepared by the authors (2020).			

published in various journals with 6 journals. Regarding the type of scientific journal in which the selected articles were published, it was noticed that all were framed in health journals, a favorable factor for the dissemination of scientific knowledge produced by health, given that the target audience that seeks the subject in question will also benefit from updates on the subject.

Of the studies found, (4) had a qualitative approach and (2) a quantitative approach. The target audience for the articles was varied.

## DISCUSSION

Health professionals are the first to have contact with the victims, especially the hospital's nursing staff. Forensic science usually starts at the crime scene. If the traces are not recognized and carefully collected, preserved and registered, little or nothing can be done at the laboratory level, in order to get around this problem.<sup>(10)</sup>

The nurse is the professional who is on the front line in relation to patient care and, consequently, the first person

**Health professionals are the first to have contact with the victims, especially the hospital's nursing staff. Forensic science usually starts at the crime scene.**

to receive victims of violence when they arrive at health services; the role in confronting violence is broad and complex, ranging from the identification of physical and behavioral signs, as well as educational actions aimed at the family and community, in addition to mandatory notification. However, these professionals are not always able to deal with this scenario, that is, nurses are not trained to deal with victims resulting from situations of violence.<sup>(11-21)</sup>

Although the priority is the reception, the assessment of injuries and the maintenance of life, it is in these environments that the first opportunities for collection of traces are found. In this scenario, nurses are privileged for identification and conservation, however few studies address their participation in the discovery of evidence. Many have difficulties during the procedures for the collection and conservation of traces, and the lack of guidance protocols adjusted to the reality of each country is one of the contributing aspects for this.<sup>(12)</sup>

Studies carried out on the knowledge and feasibility of health professionals in the preservation of forensic traces to

victims of sexual violence showed that the higher the level of knowledge, the greater the execution of procedures related to documentation, preservation and collection of traces. However, most subjects do not feel prepared to carry out the preservation and collection of traces and that most of the procedures listed are not performed by professionals, although they are known. It was also found that the most performed actions are those related to documentation, diverging from the procedures related to the collection of traces, which showed less execution. <sup>(13)</sup>

The forensic nurse has a large role in the sexual violence scenario, contributing from recognition, approach and assistance in courts. It is necessary, therefore, to be aware of any signs of violence, so that you can take conduct without erroneous assumptions, always preserving the victim and the process that she will go through after the recognition of the sexual violence suffered. The role of the forensic nurse allows the professional to collect materials for examinations, perform physical examinations to detect and treat violence and trauma, and also offer emotional support to rape victims and their families. Participates in the investigation of the cause of the victim's death, being an aid to experts and being able to testify in court, if necessary, assists survivors of any and all types of violence and negligence, including human trafficking, medical errors, among other situations. <sup>(1)</sup>

In countries where forensic nursing has legislation that guarantees the chain of custody and acts in the collection of forensic traces, in situations of sexual violence, in which physical contact between the victim and the aggressor commonly occurs, there is the exchange of various materials in addition to bodily fluids, as well as fragments of skin, fibers, glass and earth. To ensure the integrity of some of these traces, attention should be paid to the careful collection of clothes separately. Their removal must be done carefully, when necessary, cutting them along the se-

ams, removing and preserving the area of injury. Another important aspect is not to let it come into contact with the floor, avoiding cross contamination. It is recommended to use a clean sheet on the floor and a sheet of paper over it.

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Shoes also need to be collected in an individual package as they may contain soil samples. <sup>(14)</sup>

When working in crime scenes, the forensic nurse must approach with care, enter and exit through the same access and avoid circulation through the scene, in order to minimize the risk of contamination and changes in the place. It is essential to record pertinent information and use specific techniques in order to preserve the site and not hinder the expert assessment process. <sup>(13,14)</sup> In the case of garments that contain relevant information, they must be packaged in paper bags, glass or plastic jars, and folded for precaution, place a sheet of paper between the parts, in case the garment is wet or nurse should dry before packaging, if the victim's hands contain traces, if possible the hands should be contained in a sealed paper bag up to the elbow for analysis. <sup>(15)</sup>

It is known that knowledge is the basis of the entire process, however, there is a great difficulty in relation to prior knowledge and techniques for collecting and preserving forensic traces by nurses in urgent and emergency services. <sup>(16,17)</sup> The lack of scientific knowledge regarding violence and forensic nursing leads health professionals to encounter difficulties in the use of specific techniques for the preservation of evidence, contributing to compromise and loss of samples, non-optimization of time, physical and emotional exhaustion of the victim and professional, failure to conclude the case and perpetuation of the offense. In view of this, there is a need for forensic nurses in different scenarios, as they are the most prepared to provide qualified and specialized assistance to victims and aggressors. There is also a lack of inclusion of the subject in the curricular guidelines of training courses. <sup>(18)</sup>

## CONCLUSION

It is concluded that the forensic nurse has a range of responsibility towards survivors of sexual violence, from the



approach to the proper handling of evidence. However, there is still unpreparedness and lack of training, being highlighted as the main limitations. Professional qualification is another relevant factor, as a result of an incipient approach to this topic in undergraduate courses, both theoretically and practically, added to the lack of training and

protocols in the services. Therefore, it is necessary to insert content involving the issue in the disciplines, as well as carrying out extension projects and/or research in line with the services. It was also observed that there is a lack of articles on the subject. Thus, public health presents its punctual look with changes in quality of life and health standards.

It is hoped that this work can contribute to deeper discussions on the subject, as there is a certain lack of the fundamental role of nursing in written articles, emphasizing the extreme importance of prior knowledge about the approach and conservation of traces in cases of sexual violence. ■

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