

ORIGINAL ARTICLE

RN4Cast Study in Portugal: Nurses and care left undone

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ABSTRACT

Background: Over the past decades, nursing in Portugal has evolved greatly both academically and professionally and this evolution brought along growing concerns about the quality of the healthcare provided. Due to lack of time or poor organization of the workload, nurses are often faced with the need to choose between what must be done and what will have to be postponed or even not be done at all.

Objective: To investigate the care activities that are most frequently left undone or are postponed by nurses working in medical and surgical inpatient units in Portugal.

Methods: A descriptive, cross-sectional, quantitative study that follows the RN4CAST (Nurse Forecasting in Europe) methodology was carried out from October 2013 to April 2014. A total of 31 hospitals and a random sample of adult medical-surgical units were involved. The data were collected using a socio-demographic questionnaire and a nursing questionnaire that included the identification of the nursing activities of surveillance and direct patient care that were necessary but postponed or not performed by nurses in their most recent shift.

Results: A total of 2,235 nurses participated. Almost all participants had a nursing bachelor degree (98.2%). The most frequently left undone or postponed care items were “Educating patients and family” (50.2%) and “Comfort/talk with patients” (50.1%); the least frequently left undone items were “Treatments and procedures” (3.9%) and “Pain management” (5.6%). Nurses in the North and Center regions of the country were the ones who reported less care left undone due to lack of time. Nurses under the age of 40 were those who reported a highest number of activities left undone.

Conclusions: Nurses make selective choices about the care activities that are crucial for the patient. Some activities that may not have an immediate impact on the health of the patients are sidelined, although they may have an impact on other important healthcare quality indicators.

Key Words: Care left undone, Nurses, Medical-surgical units, RN4Cast

1. INTRODUCTION

The quality of healthcare provided has become a source of concern for many nurses. Nurses know that the planning and implementation of healthcare should be founded on a safe practice that provides all the necessary care to patients. However, investigation and reflection on the practice of nurses

has shown that many of the necessary nursing activities are not performed or are postponed. Poor management and work overload are often reported as the reasons given for postponing or not delivering the care.

Kalisch et al.^[1] defined missed care as any aspect of the nursing care needed by the patient which is missed or delayed,

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considering this as a missed care failure.

The literature reveals the terms “Missed care”, “Missing care” and “Care left undone”,^[1,2] but despite this variety and as mentioned by Ausserhofer et al.,^[3] they all refer to nursing care activities that are partially or totally skipped.

The literature mentions several factors that lead to Nursing Care Left Undone (NCLU), such as the number of hours worked^[2,4] or an inadequate hospital organization.^[5]

In a qualitative study carried out by Kalisch,^[6] one of the research issues was the reasons identified by the nurses for not performing certain nursing care activities. Using a focus group, seven items were highlighted: shortage of employees; time required for the nursing task; misuse of existing human resources; “It’s not my job” syndrome; inefficient task delegation; habits; and denial of the need to perform the task.

The prevalence, patterns and predictors of NCLU were analyzed in the transversal study *Nurse Forecasting: Human Resources Planning in Nursing* that was organized by RN4CAST in 12 European countries and covered the period 2009-2011. The RN4Cast “studied how organizational features of hospital care impact on nurse recruitment, nurse retention and patient outcomes”^[7] and used a survey. It was funded by the European Commission.^[8]

The phenomenon of NCLU appears to be common: In the hospitals investigated nurses make decisions about the activities they perform and the ones they skip or delay. Nurses build a list of priority activities that are always carried out and other activities that, because they regard them as less valuable, are more frequently discarded.^[3]

The activities left undone by nurses are listed by several authors: the two activities most frequently overlooked are “Psychosocial care” and “Paperwork related to care”,^[3] but this group also includes “Comfort patient” and “Educating patient”.^[2] On the other hand, activities related to “Physical care” and “Monitoring” are the ones that are less frequently left undone.^[3]

The literature shows that there is a strong correlation between the phenomena of NCLU and management measures: nursing care left undone are reduced in a practice-friendly environment and with a well trained and professional nursing team.^[2,4,9] On the other hand, several studies show that the level of development of the nursing team is a predictive factor for the activities left undone.^[10,11]

The literature also refers to several NCLU precipitating factors, such as the number of hours worked^[2,4] and an inappropriate hospital organization.^[9]

In a South African study including 1,166 nursing professionals, NCLU were considered the major factor of job dissatisfaction.^[12]

A recently published article^[13] analyzed the correlated factors and predictors of NCLU. These were directly related to the type of hospital and units, the age of the participants and their functions, as well as the perception of nurses about the appropriate number of nurses and the type of teamwork.

In a study in Sweden involving 79 hospitals and 10,174 nurses, 74% of the nurses reported NCLU on the last shift and a significant relationship was found to exist with the shift worked, the type of client, the practice environment, the role of the nurse, and the working team.^[14]

Some studies point out that the analysis of NCLU can be an important indicator to identify emerging problems prior to the occurrence of serious consequences, thus allowing managers, regulators or others to detect possible problems that may put at risk the lives of the patients.^[2]

There were found no publications in Portugal on this subject. There are, however, several works in related areas such as the quality of the care provided, job satisfaction, burnout and engagement. It is therefore relevant to carry out this study in order to determine the activities that nurses most frequently leave undone or postpone in medical and surgical inpatient units in Portugal. We have also analyzed the correlation between NCLU and the gender, age and professional training of the nurses, as well as its distribution within the different regions of the country.

2. MATERIAL AND METHODS

The methodology followed was essentially the one defined by the international consortium RN4Cast.^[15,16] The nursing survey contained 118 questions comprising nursing work environment, burnout, job satisfaction, nurse-perceived quality of care, nurse staffing levels (number of nurses and level of education), and a demographics section.

The present study analyzed 13 of those questions about NCLU in the last shift completed by nurses,^[2,17] as well as the demographics section. The NCLU identified were: adequate patient surveillance; adequate documentation of nursing care; administering medication on time; comfort/talk with patients; develop or update nursing care plans/care pathways; educating patients and/or family; frequent changing of patient’s position; oral hygiene; pain management; planning care; preparing patients and families for discharge; skin care; undertaking treatments/procedures.^[2]

This was a descriptive, cross-sectional, quantitative study involving nurses and users of general hospitals (from the

public, private or social sector, publicly funded) with more than 100 inpatient beds and a minimum of four medical and/or surgical adult specialties from the various regions of mainland Portugal and from the Autonomous Regions.

2.1 Sample

From the 38 organizations that fulfilled the inclusion criteria, a total of 31 hospitals participated in the study (participation rate of 81.6%), regardless of their grouping form (Hospital, Hospital Center or hospitals integrated in a Local Health Unit).

Four to six medical and surgical units were randomly selected from each hospital according to their size (4 units if number of beds was below 500; 5 units if number of beds was between 500 and 1,000; and 6 units if number of beds was above 1,000). All nurses and specialist nurses of the selected units were invited to participate in the study by completing a questionnaire. For this study were selected Adult Medical units, Adult Surgical units; and Medical Specialties units like Endocrinology or Neurology and Surgery Specialties units such as Vascular Surgery or Plastic Surgery, and also Mixed Inpatient Units (surgical and medical patients).

2.2 Organization and data collection

Each potential participating nurse received a questionnaire validated for the Portuguese culture and an information leaflet containing, an invitation to participate on a voluntary basis, the statement that by completing the survey the participant would be providing consent to participate and an envelope for anonymous and confidential return of the information.

After completing the questionnaire, each nurse was instructed to place it in a closed envelope in a container to be later sent to Universidade Católica Portuguesa (UCP) – where it was subsequently opened.

As in the European study,^[3] 13 nursing care activities directly related to surveillance and direct patient care were selected, such as “Planning and documenting care” and “Psychosocial care”. Each respondent could select more than one item, identifying activities considered necessary by the nurses but left totally or partially undone in their last work shift due to lack of time.^[9,17]

In the last section, the questionnaire addressed issues directly related to the nurse, including his/her socio-demographic background, such as gender, age, nursing degree, holder or not of a specialty degree, the country of his/her training, the employment status (professional experience, the number of years worked at the present hospital, whether it was a full-time or part-time job, whether the nurse had another part-

time job, and whether he/she was satisfied with the job.^[3] The regions of the country were identified, as well as the size (number of beds) of the hospitals included in the study.

The data were collected between the last week of October 2013 and the last week of April 2014 in 31 Portuguese hospitals in a total of 144 medical-surgical units. Nurses in each unit were given a timeframe of two weeks to complete and return the questionnaires.

2.3 Data analysis

The data was entered into a database created in the software IBM SPSS V22 and resorting to descriptive statistics.

2.4 Ethical considerations

The study was approved by the Ethics Committee of UCP and authorized by the boards of directors of the participating hospitals.

3. RESULTS

The study included 2,235 nurses out of the 2,905 who were working during the data collection period in the 144 units selected, representing a participation rate of 76.9%.

The majority of the nurses held a bachelor degree (98.2%) and 19.3% had a nursing specialty degree. Respondents were mostly female (80.2%), worked in medical units (31.9%) in hospitals with more than 500 beds belonging to the Northern Regional Health Administration (39.6%) and one in four nurses also worked in other places (part-time work). The mean age was 34.7 years (SD 8.1 years), had 11.6 years (SD 8 years) of nursing practice and had been working at the hospital in which they answered the questionnaire for 9.8 years (SD 7.6 years) (see Table 1).

Pattern and prevalence of the nursing care left undone

Table 2 presents the descriptive results referring to the question “In your last shift, which of the following activities were necessary but were not performed due to lack of time”?

From the analysis of the 2,235 questionnaires summarized in Table 2, we found that the items that were less frequently left undone are “Treatments and procedures” (4%) and “Pain management” (5.7%). The main nursing activities left undone in the last shift are “Educating patients and family” (50.2%) and “Comfort/talk with patients” (50.1%).

It was considered pertinent to verify the difference in the NCLU in variable “Gender” (see Figure 1).

Table 1. Socio-demographic and professional variables of the participants

Variable	n	%
Bachelor Degree in Nursing:		
Yes	2,146	98.2
No	39	1.8
Professional Title:		
Nurse	1,733	80.7
Nurse Specialist	414	19.3
Gender:		
Male	431	19.8
Female	1,746	80.2
Type of Unit:		
Medicine	701	31.9
Surgery	382	17.4
Orthopedics	322	14.7
Medical Specialties	359	16.3
Surgery Specialties	364	16.6
Mixte	69	3.1
Hospital dimension:		
Less than 500 beds	1,101	49.3
Equal or more than 500 beds	1,134	50.7
Working Area (Region):		
North	885	39.6
Centre	288	12.9
Lisbon and Tagus Valley	632	28.3
South	259	11.6
Autonomous Regions	171	7.7
Also working in other places:		
Yes	542	24.9
No	1,631	75.1

It was found that, excluding items “Frequent changing of patient position”, “Prepare patients and families for discharge” and “Comfort/talk with patients”, the other 10 items were identified in a higher percentage by men. The greatest disparity was found in item “Oral hygiene” (5.6%), with male nurses being the ones who most frequently refer it as a task not carried out (40.2%).

The activities that nurses identified as having been postponed were analyzed to see if there were differences between the various age groups (less than 29, from 30 to 39, from 40 to 49, from 50 to 59 and 60 or more years). Results are summarized in Table 3.

The analysis of the data shows that age groups 1 and 2 are the ones that most frequently leave care undone across almost all items, with the exception of the item “Adequately document nursing care”, which reaches the greater percentage in age group 5.

We have also checked if there were relevant differences by region of the country, and the data obtained are presented in Table 4.

Azores is the region where nurses most frequently refer care left undone due to lack of time (in 7 items), followed by the Lisbon and Tagus Valley region (in 5 items).

In line with the literature that indicates the level of professional development as a possible factor influencing NCLU, “Adequate patient surveillance” is the second item with the highest percentage difference (4%) between nurses who have a specialty (30.9% refer to this item as left undo) and those who do not have a specialty (26.9%); The highest is “Oral Hygiene” with a 5.8% difference (see Table 5).

Table 2. Relative descriptive results of the “care left undone”

Item	Answers	
	Yes, n (%)	No, n (%)
Adequate patient surveillance	604 (27.7)	1,579 (72.3)
Skin care	358 (16.4)	1,827 (83.6)
Oral hygiene	774 (35.4)	1,412 (64.6)
Pain management	125 (5.7)	2,062 (94.3)
Comfort/talk with patients	1,095 (50.1)	1,089 (49.9)
Educating patients and family	1,097 (50.2)	1,088 (49.8)
Treatments and procedures	87 (4.0)	2,097 (96.0)
Administer medications on time	134 (6.1)	2,053 (93.9)
Prepare patients and families for discharge	662 (30.3)	1,523 (69.7)
Adequately document nursing care	607 (27.8)	1,579 (72.2)
Develop or update nursing care plans/care pathways	838 (38.3)	1,349 (61.7)
Planning care	454 (20.8)	1,733 (79.2)
Frequent changing of patient position	311 (14.2)	1,876 (85.8)

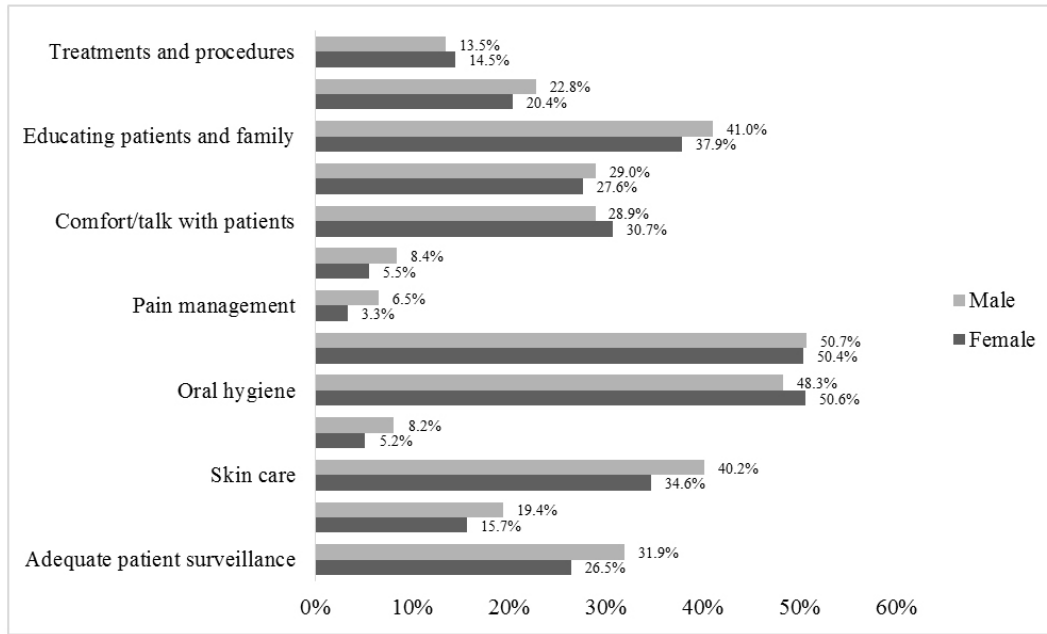


Figure 1. "Care left undone" - percentage distribution by gender

Table 3. Distribution of "care left undone" by age group

Item	Age Group				
	< 29 years n = 684	30-39 years n = 912	40-49 years n = 406	50-59 years n = 133	60+ years n = 7
Adequate patient surveillance	198 (29.0%)	259 (28.6%)	104 (25.8%)	29 (22.3%)	1 (16.7%)
Skin care	136 (19.9%)	138 (15.2%)	58 (14.4%)	19 (14.6%)	1 (16.7%)
Oral hygiene	267 (39.0%)	338 (37.3%)	116 (28.8%)	39 (30.0%)	0 (0.0%)
Pain management	40 (5.8%)	56 (6.2%)	19 (4.7%)	7 (5.4%)	0 (0.0%)
Comfort/talk with patients	364 (53.3%)	474 (52.3%)	173 (43.0%)	56 (43.1%)	1 (16.7%)
Educating patients and family	356 (52.0%)	468 (51.7%)	187 (46.5%)	60 (46.2%)	3 (50.0%)
Treatments and procedures	22 (3.2%)	44 (4.9%)	15 (3.7%)	4 (3.1%)	0 (0.0%)
Administer medications on time	47 (6.9%)	60 (6.6%)	17 (4.2%)	8 (6.2%)	0 (0.0%)
Prepare patients and families for discharge	230 (33.6%)	279 (30.8%)	105 (26.1%)	28 (21.7%)	2 (33.3%)
Adequately document nursing care	162 (23.7%)	293 (32.3%)	107 (26.6%)	32 (24.8%)	2 (33.3%)
Develop or update nursing care plans/care pathways	266 (38.9%)	375 (41.3%)	107 (35.0%)	39 (30.0%)	1 (16.7%)
Planning care	153 (22.4%)	200 (22.1%)	76 (18.9%)	19 (14.6%)	0 (0.0%)
Frequent changing of patient position	114 (16.7%)	127 (14.0%)	55 (13.6%)	12 (9.2%)	0 (0.0%)

Table 4. Descriptive results regarding items of “care left undone” by region of the country

Item		Region				
		Northern (%)	Center (%)	Lisbon & Tagus Valley (%)	Southern (%)	Autonomous Regions (%)
Adequate patient surveillance	Yes	23.8	31.4	28.7	28.9	35.5
	No	76.2	68.6	71.3	71.1	64.5
Skin care	Yes	16.5	17.0	16.3	17.4	14.0
	No	83.5	83.0	83.7	82.6	86.0
Oral hygiene	Yes	35.0	35.0	36.1	34.5	36.8
	No	65.0	65.0	63.9	65.5	63.2
Pain management	Yes	4.3	7.2	6.3	5.9	8.2
	No	95.7	92.8	93.7	94.1	91.8
Comfort/talk with patients	Yes	47.2	50.5	55.9	49.0	45.0
	No	52.8	49.5	44.1	51.0	55.0
Educating patients and family	Yes	44.8	44.8	57.7	56.1	50.3
	No	55.2	55.2	42.3	43.9	49.7
Treatment and procedures	Yes	3.5	4.3	4.2	3.2	6.4
	No	96.5	95.7	95.8	96.8	93.6
Administer medications on time	Yes	5.0	4.3	8.2	6.3	7.0
	No	95.0	95.7	91.8	93.7	93.0
Prepare patients and families for discharge	Yes	25.0	27.1	37.8	33.2	30.6
	No	75.0	72.9	62.2	66.8	69.4
Adequately document nursing care	Yes	27.8	24.6	31.0	20.6	31.6
	No	72.2	75.4	69.0	79.4	68.4
Develop or update nursing care plans/care pathways	Yes	38.6	31.0	40.1	34.0	48.5
	No	61.4	69.0	59.9	66.0	51.5
Planning care	Yes	18.1	20.9	23.6	19.0	26.3
	No	81.9	79.1	76.4	81.0	73.7
Frequent changing of patient position	Yes	8.8	13.0	23.3	13.8	11.1
	No	91.2	87.0	76.7	86.2	88.9

Table 5. Distribution of “care left undone” according to the level of professional development specialty

Item	Do you have a Nursing Specialty?	
	Yes (%)	No (%)
Adequate patient surveillance	30.9	26.9
Skin care	17.3	16.3
Oral hygiene	30.9	36.7
Pain management	7.1	5.5
Comfort/talk with patients	49.9	50.2
Educating patients and family	49.0	50.6
Treatments and procedures	5.4	3.6
Administer medications on time	6.8	5.9
Prepare patients and families for discharge	30.2	30.2
Adequately document nursing care	31.1	27.1
Develop and update nursing care plans/care pathways	39.9	38.3
Planning care	19.2	21.4
Frequent changing of patient position	13.4	4.6

Table 6. Comparison of the descriptive results regarding “care left undone” in Portugal and in two other studies

Item	Portugal	Ausserhofer et al. ^[3]	Ball et al. ^[14]
	%	%	%
Educating patients and family	50.2	40.6	26
Comfort/talk with patients	50.1	52.6	46
Develop or update nursing care plans/care pathways	38.3	41.7	34
Oral hygiene	35.4	34.4	31
Prepare patients and family for discharge	30.3	22.4	16
Adequately document nursing care	27.8	27.5	25
Adequate patient surveillance	27.7	27.2	20
Planning care	20.8	25.8	11
Skin care	16.4	24.5	25
Frequent changing of patient position	14.2	24.7	20
Administer medications on time	6.1	19.4	25
Pain management	5.7	10	6
Treatment and procedures	4	9.2	6

We compared our study with two European studies.^[3,14] The Ausserhofer et al.^[3] study was carried out in 12 European countries and the second in Sweden. The results of the comparison are listed in Table 5. The item “Educating patients and family” is the task with the greatest amplitude of results (24.2%) between our study (50.2%) and the Ball et al.^[14] study (26%) (see Table 6).

These results show that, with the exception of the item “Oral hygiene”, all the other activities related to direct care to patients are less frequently left undone in the Portuguese study than in the two other studies.

In a direct comparison between the Portuguese and the Ausserhofer et al.^[3] study, the item with the largest variation is “Administer medication on time” (6.1 and 19.4, respectively). When comparing the Portuguese and the Ball et al.^[14] studies, “Pain management” is the activity with the lowest difference (0.3%). On the other hand of the spectrum is the activity “Educating patients and family” (24.2%).

4. DISCUSSION

When managing care activities and prioritizing activities, Portuguese nurses give priority to interdependent activities. This is in line with what is argued in the Ausserhofer et al.^[3] study: nurses, based on their assessment of the immediate risk and their general concerns about the well-being of their patients, seem to make important decisions about which nursing care they can omit.

On the other hand, autonomous nursing activities, such as educating and comforting the patient, are identified more frequently as left undone, which is in accordance with other

studies.^[5,10,18] However, we find the fact that in Portugal these values are higher than 50% particularly worrying. This means that, when patients require these care activities, in more than half times they are not performed, which we consider to be at odds with any health quality policy that places the well-being of the patients at the center of its concerns.

When comparing this study with the two other European studies,^[3,14] it was noticed that in the Portuguese study direct care to the patient is less delayed or frequently left undone than in the other two studies. Since nurses in Portugal seem to place more emphasis on the immediate physical care activities, such as treatments and procedures, pain management and the administration of the therapy, this may reflect a greater concern for patient safety while in the hospital.

It is also observed that nurses under the age of 40 are the ones who most frequently report having postponed or left undone nursing activities due to lack of time. In the study of Bragadóttir et al.,^[13] the younger groups are also the ones that report more NCLU. There were differences between Gender in our study, like in Kalisch’s study.^[10] However, in the Kalisch study were women who most NCLUs identified and in this study were men.

Almost all Portuguese nurses have a bachelor degree (98.2%), which may also lead them to assign higher value as NCLU to the autonomous areas of nurse intervention (educating, comforting).

In other study, Kalisch et al.^[18] concluded that nurses identify more NCLU when their level of academic qualification is higher. Several studies highlight the importance of the level

of qualification and adequacy of the nursing team to a consistent provision of care to each patient. Furthermore, studies also point out that professional development has an impact on the mortality indicator and on errors by omission,^[18–20] including a decrease in the number of patients who suffer falls.^[11]

In the interventions performed by nurses, activities such as planning care or updating care plans are still relegated to second place, and they tend to favor those that are most directly related to the safety of the patient.

Nursing records have been given special attention in Portugal, by encouraging the use of the CIPE[®] language and reaffirming the need to create indicators for both the process and the outcome that demonstrate the work performed by the nurses.

However, the analysis of these data shows that there are clear discrepancies between the different regions of the country, the Northern and the Center regions being the ones in which the percentage of NCLU is lower. Other subjects have also been object of study, such as nursing staffing, leading to the conclusion that it is related, for example, with the increase in the readmission rate.

According to the study conducted by Lucero et al.,^[5] care activities left undone may be the cause of an increase in the number of adverse events. In fact, understanding the impact of NCLU on patient outcomes and job satisfaction may facilitate the development of new strategies to improve the quality of the care provided in hospitals.^[21]

Regarding documenting nursing care, we share Lang et al.^[22] opinion that problems that are not documented in the care process tend to be left out from the nurses' intervention.

5. CONCLUSIONS

Some of the findings of this study such as the gender and regional differences, need other type of studies to be better understood.

However, there is a long way to go to ensure that the patient gets the best care possible and that the nurse works in an environment that favours the delivery of quality care. Some studies point out that the analysis of NCLU due to lack of time can be an important indicator to identify emerging problems prior to the occurrence of serious consequences, thus allowing managers, regulators or others to detect possible problems that may put at risk the lives of the patients.^[2,23] It is also important to check the link between NCLU and cost-benefits and outcomes for the patients.^[24]

If, on one hand, it seems obvious that work overload may result in activities that are not performed by nurses, on the other hand, other factors such as professional development, staff involvement, teamwork, work engagement, burnout and social representation of the profession need to be further studied.

A culture of quality and safety should be instilled to ensure detailed attention when documenting nursing care so that any failures are honestly reported.

Certain limitations of the study were recognized, highlighting the fact that were used a descriptive, cross-sectional, quantitative study with a self-reported questionnaire.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there were no external sources of financing and that there is no conflict of interest regarding the present work.

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