

Review

Missed nursing care in emergency departments: A scoping review

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ABSTRACT

Background: Patient safety is a global health priority. Errors of omission, such as missed nursing care in hospitals, are frequent and may lead to adverse events. Emergency departments (ED) are especially vulnerable to patient safety errors, and the significance missed nursing care has in this context is not as well known as in other contexts.

Aim: The aim of this scoping review was to summarize and disseminate research about missed nursing care in the context of EDs.

Method: A scoping review following the framework suggested by Arksey and O'Malley was used to (1) identify the research question; (2) identify relevant studies; (3) select studies; (4) chart the data; (5) collate, summarize, and report the results; and (6) consultation.

Results: In total, 20 themes were derived from the 55 included studies. Missed or delayed assessments or other fundamental care were examples of missed nursing care characteristics. EDs not staffed or dimensioned in relation to the patient load were identified as a cause of missed nursing care in most included studies. Clinical deteriorations and medication errors were described in the included studies in relation to patient safety and quality of care deficiencies. Registered nurses also expressed that missed nursing care was undignified and unsafe.

Conclusion: The findings from this scoping review indicate that patients' fundamental needs are not met in the ED, mainly because of the patient load and how the ED is designed. According to registered nurses, missed nursing care is perceived as undignified and unsafe.

1. Background

Patient safety is a global health priority and can be understood as a framework of activities that create patient safety cultures and processes in healthcare [1]. Strategies to minimize patient safety errors and future harm to patients aim at the underlying systems [2], such as mandating minimum nurse-to-patient ratios in hospitals [3]. According to the International Council of Nurses (ICN), registered nurses (RNs) have a significant role in maintaining high patient safety because they address patient safety in all aspects of the care they provide [4]. This relationship is further underscored by the fact that a high level of RN competence and low numbers of patients a RN is responsible for are associated with decreased patient mortality [5,6]. Inquiries have also revealed that patient safety is compromised when RNs have failed to deliver fundamental care to patients [7,8]. This type of patient safety threat is categorized as an error of omission, which encompasses nursing care that is either delayed or omitted [9].

Missed Nursing Care (MNC) is one of the health concerns worldwide. MNC refers to those elements of nursing care that are not provided or are significantly delayed for patients. Various concepts have been used such as 'nursing care left undone' [10], 'care left undone' [11], 'unmet nursing care needs' [12], 'implicit rationing of nursing care' [13], and 'MNC' [9,14] in this line of research. Nursing care activities are distributed on a continuum between performed and missed. If, for any reason, the necessary care activities are omitted, left incomplete, or performed at a time that is not appropriate, they are categorized as missed [15]. Usually, MNC is surveyed using instruments measuring the distinction between required patient needs and the care delivered [16]. Outcomes from that research indicates that adverse events have an association with MNC, such as medication errors and nosocomial infections [17]. In acute hospital contexts, research has come to encompass e.g. medical and surgical wards [18] and critical care [19]; however, emergency departments (EDs) are often not included. Thus, how MNC in EDs affect patient safety and quality of care is not well

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known. From a patient safety perspective, it is important to enhance the scope of MNC research to the ED setting because EDs are identified as significant settings of preventable human errors and adverse events [20,21].

There have been several reviews of MNC, with a focus on the frequency of MNC, factors that influence it and outcomes from hospital settings; however, there is limited knowledge about MNC in the ED context. Therefore, a scoping review with the aim of summarizing and disseminating the research about MNC in EDs was carried out.

2. Methods

2.1. Design

To explore the research about MNC in EDs, a broad range of research designs were of interest; therefore, a scoping review was chosen. The scoping review process followed the five stages proposed by Arksey and O'Malley [22], as elaborated and clarified by Levac et al. [23]: (1) identifying the research question, (2) finding relevant studies, (3) study selection, (4) charting the data, (5) collating, summarizing, and reporting the results, and (6) consultation. The scoping review is reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping review guidance (PRISMA-ScR) [24]. A review protocol [25] was registered with the Open Science Framework.

2.2. Stage one: Identifying the research questions

The aim was to summarize and disseminate research about MNC in EDs. In line with this, the following research questions were identified:

- What is the character, prevalence, and causes of MNC in the context of EDs?
- What is known about MNC in relation to patient safety and quality of care in the context of EDs?

2.3. Stage two: Finding relevant studies

All four researchers participated in drafting the search strategy. Index terms and keywords were identified and structured according to the population concept context (PCC). The PCC mnemonic is recommended for scoping reviews [26], and pilot database searches were performed. The target population was ED patients and RNs, the concept was MNC [15], and the context was hospital EDs. The final selection of databases and search terms was reached through an iterative process. One researcher (HD) performed repeated database searches and added or retracted index terms and keywords, continuously assessing both the breadth and depth of the search strategy. During this phase, regular research group meetings were held to refine the precision of the search strategy by applying consensus reasoning in which disagreements were identified. The different development stages of the search strategy were logged into an Excel spreadsheet logbook. The final search strategy was assessed by two librarians with subject expertise, which led to further improvements. The chosen databases were Ovid Medline, Cumulative Index to Nursing and Allied Health Literature (Cinahl), and Web of Science (WOS). The search strategy for Medline can be viewed in Table 1, where the corresponding index terms and keywords were used in Cinahl and WOS. The first database searches were conducted in January 2022 leading to 4,329 results. An updated database search was conducted in February 2023 which yielded 417 additional results, in total 4,746 results. The search limitations in all databases were studies published from 2012 to February 2023 and in the English language. During the title/abstract and full text screening process, minor revisions of how the inclusion and exclusion criteria were applied were made [27].

Table 1

Index terms and keywords used in Ovid Medline.

#	Searches	Results
1	emergency Service, Hospital/ or acute care.mp. or emergency care.mp. or emergency Medical Services/ or emergency department*.mp. or emergency unit*.mp. or emergency room.mp. or "accident* and emergency department*".mp.	206 628
2	nursing care/ or emergency nursing/ or unmet patient need*.mp. or missed care.mp. or care left undone.mp. or rationing of nursing care.mp. or ration* care.mp. or implicit rationing of nursing care.mp. or unfinished nursing care.mp. or missed nursing care.mp. or error* of omission.mp. or delayed care.mp. or unmet care need*.mp. or fundamentals of care.mp. or quality of nursing care.mp. or nursing process/ or quality of care.mp.	101 046
3	patient* view* or patient* experience* or patient* perspective* or emergency patient*.mp. or nurses/ or nursing staff, hospital/ or nurse attitude.mp. or patient satisfaction/	246 587
4	1 and 2 and 3	1693
5	limit 4 to (english language and yr="2012 – 2022")	852

2.4. Stage three: Study selection

A systematic and iterative approach was used to select the relevant studies. Data from the three databases were imported to citation software (EndNote 20) and merged. In the merged database, 966 duplicates and 223 reviews were identified and removed, resulting in 3,557 articles exported from EndNote to Rayyan [28] for a blinded peer review screening.

Before starting the screening process, testing was carried out by the research group in several meetings regarding the usability of the screening software [28] and applicability of the inclusion and exclusion criteria's (Table 2) on a limited number of references. One author (HD) screened 3,557 references. Three authors (KB, IK, and CB) independently screened approximately one third each ($\approx 1,186$), which led to two blinded decisions for each reference. In total, 3,336 references were excluded either because of populations other than ED patients or RNs, concepts other than MNC, or contexts other than hospital EDs. Following the same procedure, 221 full text references were screened by one author (HD). Three authors (KB, IK, and CB) screened one third each (≈ 74), which led to 172 excluded references and 49 included references.

One author (HD) assessed the reference lists from both database searches of the 49 included studies, which led to 83 new additional references. These references were screened by two authors (HD and CB), leading to 68 exclusions. All authors screened the 15 full texts together. This process resulted in six new additional studies included in the review

Table 2

Inclusion and exclusion criteria.

	Inclusion criteria	Exclusion criteria
Population	Registered nurses.Adult patients (≥ 18 years old).	Relatives.
Concept	Missed nursing care (MNC) according to Hübsch et al. (2020) <ul style="list-style-type: none"> • necessary care activities omitted • necessary care activities left incomplete • necessary care activities performed at a time that is not appropriate. 	<ul style="list-style-type: none"> • Inability to derive MNC from results. • Medical activities missed but related nursing care activities not presented. • Potential reason to or effect of MNC given but no explicit connection to MNC stated. • Quality improvement studies missing baseline data.
Context	Hospital bound Emergency departments (EDs).	<ul style="list-style-type: none"> • Acute care settings if no explicit claim of including EDs. • Aggregated MNC results including EDs among other health care settings. • Studies including registered nurses from other wards temporary working in EDs.

rendering a total of 55 studies. The selection process is presented in a PRISMA flow diagram [29] (Fig. 1). During the selection process, conflicting results between researchers were resolved through discussion until a consensus was reached; a third or fourth research member could also participate to facilitate the discussion to reach a consensus.

The Mixed Method Appraisal Tool (MMAT) [30] was chosen to appraise the methodological quality of the included studies ($n = 55$). The MMAT appraisal is comprised of selecting and assessing a category of quality criteria ($n = 5$) based on the study design. Reporting MMAT results can be done through a detailed presentation of the ratings of each criterion or an overall score [31]. In this review, each MMAT assessment was given an overall score (0, 0.2, 0.4, 0.6, 0.8, 1.0), in which 0 indicated low quality and 1.0 indicated high quality. Every fifth MMAT assessment was verified by another author (CB) and compared and discussed. A median value was then calculated for all assessments and presented as an overall quality indicator for the included studies. The aggregated MMAT quality assessment of the included studies was assessed as high (median = 0.8).

2.5. Stage four: Charting the data

Three data charting forms based on the study design (qualitative, quantitative, and mixed methods) were iteratively designed by the authors. Common data charting items extracted from the studies were as follows: author, year of publication and country, aim, design, data collection instruments, analysis, sample, setting, ethical approval, population, key findings, causes to and character of MNC, and patient safety/quality of care. Quantitative and mixed methods studies had prevalence as an additional data charting item.

2.6. Stage five: Collating, summarizing, and reporting the results

In the fifth stage [22], an analysis of the included studies was conducted to produce the outcome that refers to the research questions. Qualitative data were analyzed using the framework method [32], and descriptive numerical summary analysis was used for the quantitative data.

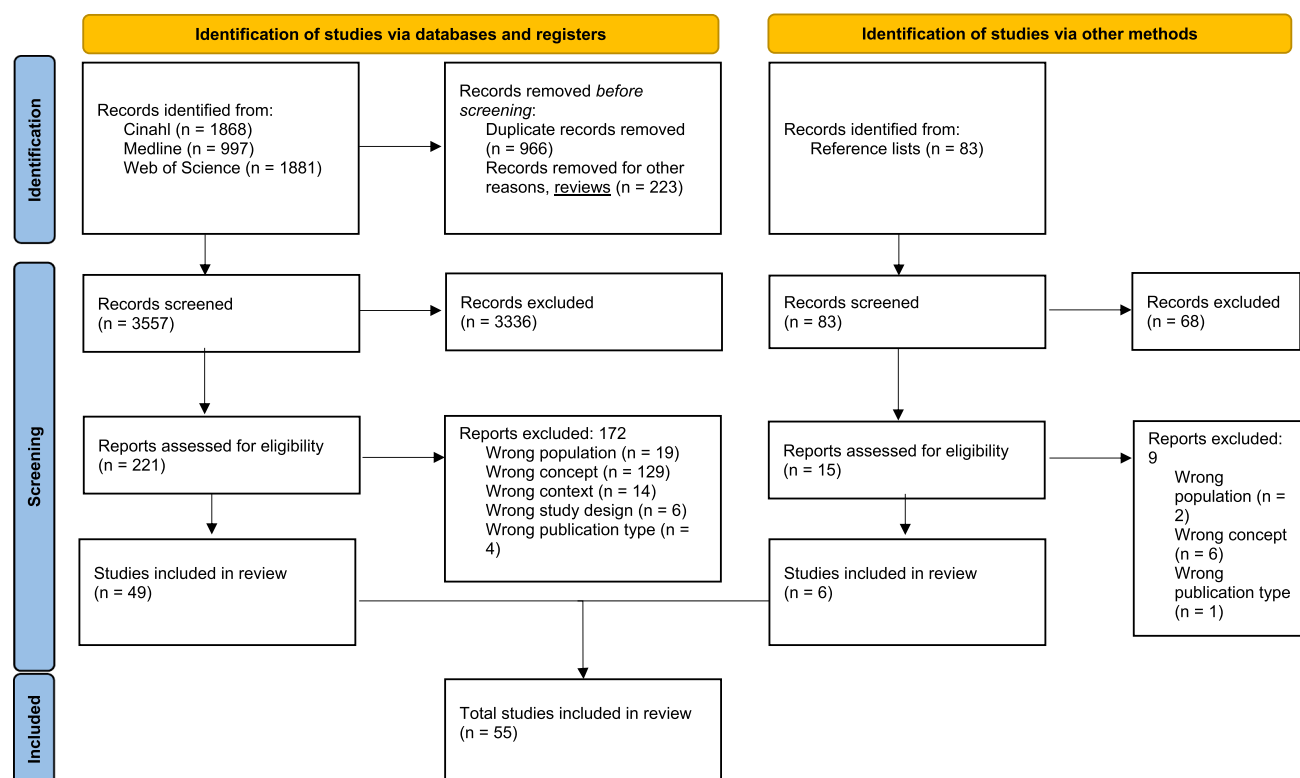
2.7. Stage six: Consultation.

Five RNs previously working in EDs were informed about the results and asked to state if they thought the results were understandable [33]. They confirmed the results (e.g., fundamental care was missed) and suggested minor clarifications about the scope of concepts such as fundamental care or basic care. Teamwork with unexperienced physicians emerged in the consultation as a cause for MNC which was not accounted for in the result in this review. Their input led to clarifications in selected parts of the results.

3. Results

3.1. Description of the included studies

Of the 55 included studies [34–88], a qualitative design was used in 32 studies (58 %) (see [supplementary data Table 3](#)), a quantitative design was used in 20 studies (36 %) (see [supplementary data Table 4](#)), and a mixed method design was used in three studies (6 %) (see [supplementary data Table 5](#)). The 32 qualitative studies were categorized as 17 qualitative descriptive studies, four grounded theory studies, and four phenomenological studies. There were three qualitative interpretive studies, two case studies, one social ecological study, and one



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: <http://www.prisma-statement.org/>.

Fig. 1. Modified PRISMA 2020 flow diagram showing the selection of studies. From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. <https://doi.org/10.1136/bmj.n71>. For more information, visit: <http://www.prisma-statement.org/>.

focused ethnographic study. Of the 20 quantitative studies, ten were exploratory cross-sectional descriptive, four quasi-experimental, three observational, two quality improvement, and one participatory action research. Of the three mixed method studies, one was concurrent, one was sequential, and one did not specify design.

Out of the 55 included studies, the research was conducted in Australia (n = 18), USA (n = 11), Canada (n = 9), and Sweden (n = 8). Brazil, Denmark, Ireland, Jordan, New Zealand, South Korea, Thailand, the Netherlands, and the UK contributed with one study each.

RNs were represented in 35 out of 55 studies (64 %, n = 9,141 participants), and the patients were represented in 17 out of 55 studies (31 %, n = 41,704 participants). In three studies, both RNs and patients were included (5 %, n = 536 participants).

The results are presented based on themes and subthemes, which were constructed on different variations of the 55 included studies. The combination of the studies is presented in Table 6a, b, c (right column). The quality of the included studies in each theme was calculated using the MMAT values from the combination of studies, which indicated if the studies were of a high quality (median range = 0.6–1.0) (please see Fig. 2).

3.2. Characteristics and prevalence of MNC

Ten themes and 29 subthemes describing the characteristics and prevalence of MNC were derived from 51 of the 55 included studies (see Table 6a).

The studies outlined several forms of assessments that were missed or delayed. Examples of missed or delayed RN assessments concerned patients' vital signs, controlling pain, delayed triage, or follow-up on triage. It was also described that patients' nursing care needs (non-specified) were not met in the ED. This characteristic was described using various concepts such as fundamental care, basic care, essential care, or personal care. According to two studies, the prevalence of MNC in EDs was higher compared with hospital wards.

3.3. Causes of MNC

Eight themes and nine subthemes describing the causes for MNC came from 35 of the 55 included studies (see Table 6b). Most included studies described how, if the ED was not staffed or dimensioned in relation to the patient load, it could cause MNC. For example, crowding, a lack of space, staff and patient imbalance were noted problems. When RNs prioritized patients' acute care needs, they did not have time to prioritize basic care needs. Another example was when ED patients' fundamental care needs were not prioritized in favor of RNs waiting for potential incoming patients with acute care needs. RNs who had managed multiple competing priorities beyond those related to direct patient care, such as documentation, also caused MNC.

RNs who cared for patients with time-demanding needs could cause MNC for other ED patients. For instance, caring for patients with complex care needs, such as frail patients, or critical sick patients with circulatory failure, for example, could cause MNC for other patients.

3.4. MNC in relation to patient safety and quality of care.

Two themes and 11 subthemes describing patient safety and quality of care deficiencies in relation to MNC came from 21 of the 55 included studies (please see Table 6c). A comprehensive range of patient safety and quality of care deficiencies because of MNC was described. Patients had clinically deteriorated, developed pressure ulcers, or were exposed to medication and triage errors because of MNC. RNs' experiences related to their inability to provide dignified care, care not meeting their standard, or the patient's safety being perceived to have been compromised and unsafe were descriptions of nonspecified patient safety and quality of care deficiencies.

The aim of the present review was to summarize and disseminate research about MNC in EDs. A range of different concepts (e.g., basic care, personal care, and essential care) were used in the studies describing what we assessed as patients' fundamental care needs. Here, fundamental care is used as an umbrella term for these concepts. One of several MNC characteristics was that patients' fundamental care needs

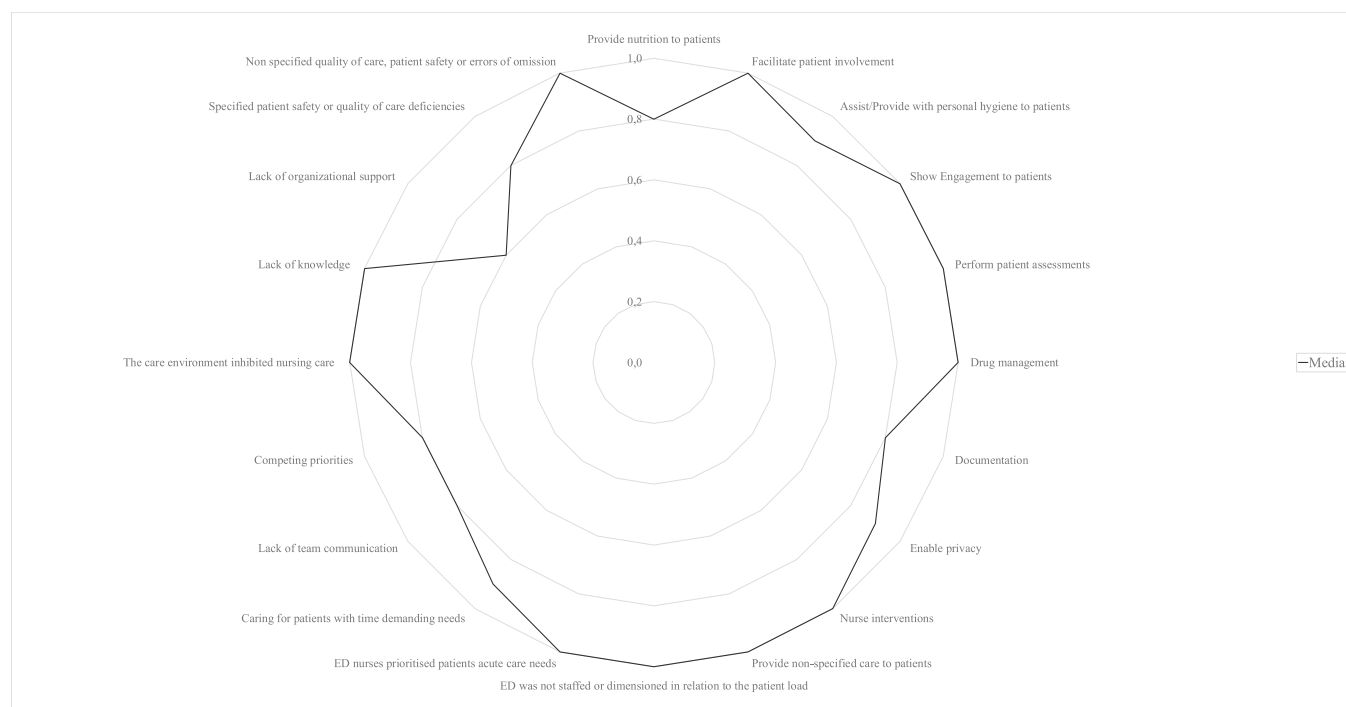


Fig. 2. Main themes are presented together with a MMAT value (range 0 lowest quality – 1.0 highest quality, 0.2 intervals). The themes median values were calculated on the MMAT values from the combination of studies belonging to a theme.

Table 6a

Characteristics of MNC, classified under main themes and sub-themes, and prevalence of MNC, connected to references.

Characteristics of MNC ^a	Prevalence ^b of MNC	Qualitative references	Quantitative references	Mixed method references
Provide nutrition to patients				
Food		<u>34^c, 56^d, 88</u>		<u>84, 67</u>
Hydration		35, 46 ⁱ , 54		<u>67</u>
Facilitate patient involvement				
Information	Missing up to 10%.	<u>34, 42, 44ⁱ, 52, 62, 63, 65, 87, 88</u>	37, 74	
Communication		43, 47, <u>56, 65, 86</u>	<u>37, 70</u>	
Assist/Provide with personal hygiene to patients				
Continence		35, 38, 46 ⁱ , 49, 87		85, <u>67</u>
Oral care		49		
Show engagement to patients				
Emotional support	Missed up to 24%	44 ⁱ , 47, 61	55, 74	
Interest		<u>43, 44ⁱ, 52, 56, 88</u>		
Compassion		54, 61, <u>62</u>	37	
Relationship		43, 48, 61, 87		
Perform patient assessments				
Triage or triage follow up		45, 59	79	85
Pain assessment or follow up		36, 45, 51, <u>52, 87</u>		
Follow up		39, 54, 59		
Patient identification	Missing in 20% to 41%.		<u>68, 80, 83</u>	
Risk assessment		54	37, 72	
Vital signs		53, 54		
Drug management				
General medication	Not given up to 38% of patients.	54	<u>68</u>	
Analgesia	80% of patients with pain score 7-10 did not received analgesia within 30 minutes.	<u>34, 36, 41, 58</u>	82	
Antibiotics	Patients waited for administration of antibiotics on average 228 minutes. 96% did not receive antibiotics within one hour.		79	
Documentation				
Non specified documentation		51, 54		
Pain assessment documentation.	Missing in: 24% to 64%		<u>71, 73</u>	
Allergy status documentation	Missing in: 12% to 49%		<u>68, 83</u>	
Intravenous therapy documentation (infusion and iv cannula insertion)	Missing in: 62% & 17%		83	
Enable privacy	Missing up to 36%	44 ⁱ , 53, 57, <u>62, 87</u>	55, 74	<u>84</u>
Nurse interventions	Missed up to 28%	39, 40, 53	<u>70, 78</u>	
Provide non-specified nursing care to patients				
Provide end of life care		48, 57, 61	50, 55, 74	
Provide basic care		<u>34, 35, 46ⁱ, 49, 53</u>		
Provide personal care		46 ⁱ , 60, 87		<u>84</u>
Provide ADL ^e				<u>85</u>
Provide fundamental care		58, 87		
Provide essential care		35		
	ED ^f MNC 3,2 (range 1-5, overall sample mean 2.43)		69	
	ED Care left undone up to 48,8%, (other hospital wards 21% - 46%).		77	
	Over 50% of nurses stated that many nursing tasks were left undone.		76	

^gEmergency department.^a Missed Nursing Care.^b Missing data indicates no reported data in the studies.^c Underlined reference indicate patient population.^d Reference without underline indicate nurse population.^e Double underlined references indicate mixed registered nurse and patient population.^f Activities daily living.

were either delayed or missed. Neglecting patients' fundamental care needs has been shown to cause suffering for patients, as outlined in the Francis report [8]. The fundamentals of care framework [89] could aid RNs in meeting patients' fundamental care needs in the ED. To achieve this, nurse managers are important stakeholders [90]. Leadership managing to support and promote nursing care can improve RNs' abilities to fulfill their responsibilities in relation to their patient's fundamental care needs. Furthermore, identifying MNC is important when showing why RNs must be provided with sufficient resources necessary to fulfill their responsibility toward their patients.

This resource imbalance was partially described in the included studies as EDs that were not staffed or sized in relation to the patient

load. The RN-to-patient ratio is often used as a proxy to capture workload and, for example, rationing of nursing care [13]. The association between reduced RN staffing and increased prevalence of MNC has been demonstrated in different contexts [91–93]. A consequence of a staffing imbalance might be missed or delayed assessments and follow-up of patients such as taking patients vital signs, which was shown in the present review. This result further builds on research conducted in other contexts related to omitted patient surveillance [17]. Following triage, patients vital signs may change significantly, up to one third of patients who present with normal vital signs at triage show signs of deterioration within 24 h [94] which is associated to increased in-hospital mortality [95]. It is important that the follow up if these signs are conducted to

Table 6b

Causes of MNC and prevalence presented under main themes and subthemes, connected to references.

Causes to MNC ^a	Prevalence ^b	Qualitative references	Quantitative references	Mixed method references
ED ^c was not staffed or dimensioned in relation to the patient load				
Staff and patient imbalance	Nurse staff ratio significantly increased errors of omission up to 19,1%. Time to analgesia increased 9.6% as the nurse-to- patient ratio increased by one.	35 ^d ,36,38,40,41,42,53,54,59, <u>65</u> ^e	37,50,55,68,75	85
Congested/busy		39,40,42,44 [†] ,57,58,61	50	85
Lack of time		42,46 [†] ,48,53,57,61,86	50,74	
Lack of space		38,39,44 [†] ,53,61	50,66	
Crowding		40,45,46 [†] ,51,53,54	50	
ED nurses prioritized patients acute care needs				
When prioritizing acute patients, other patients were missed		35,41,43,44 [†] ,48,49,54,57,61,86,87	37, 50	
Patients fundamental care needs was not prioritized in favour of potential incoming patients with acute care needs		38,43,44 [†] ,45,49, <u>65</u> ,86,87	37	85
Caring for patients with time demanding needs				
Caring for patients with complex care needs led up to missed nursing care for other patients		43,46 [†] ,53,59		85
Caring for critical patients led up to missed nursing care for other patients.		40,51	74	
Lack of team communication	29% to 50% of nurses unable to complete or omitting critical communication to other staff.		76, 83	
Competing priorities		41,42,46 [†] ,49,57,61	37, 50	
The care environment inhibited nursing care		36,44 [†] ,54,57	55, 66, 74	
Lack of knowledge		44 [†] ,48,64,87		85
Lack of organizational support		44 [†]	50	

^fDouble underlined references indicate mixed registered nurse and patient population.^a Missed Nursing Care.^b Missing data indicates no reported data in the studies.^c Emergency department.^d Reference without underline indicate nurse population.^e Underlined reference indicate patient population.**Table 6c**

MNC in relation to patient safety or quality of care deficiencies, classified under main themes and sub-themes, and prevalence of MNC, connected to references.

Patient safety or quality of care deficiencies	Prevalence ^a of MNC ^b	Qualitative references	Quantitative references	Mixed method references
Specified patient safety or quality of care deficiencies				
Pressure ulcers		49 ^c ,54	37	
Patient distressed		57, <u>62</u> ^d , <u>63</u>		
Patient clinically deteriorated	Up to 12.9% (n=24/186)	53, 54	<u>81</u>	
Medication errors		36	37	
Patient dehydrated		54		
Pain			37	
Urinary tract infections			37	
Triage errors		59		
Patient falls			37	
Undignified care		35		
Missed sepsis recognition			78	
Non specified patient safety, quality of care or errors of omission		<u>34</u> ,35,38,42,46 [†] ,49,53,54,57,64,86,87		85

^cDouble underlined references indicate mixed registered nurse and patient population.^a Missing data indicates no reported data in the studies.^b Missed Nursing Care.^c Reference without underline indicate nurse population.^d Underlined reference indicate patient population.

avoid adverse events. To detect deteriorated patients, repeated measurements of vital signs in the ED is common practice [96] which is the RNs responsibility. It is important to highlight that missed assessments may impair patient safety.

Another cause for MNC was that the patient's fundamental care needs were not prioritized in favor of potential incoming patients with acute care needs. When RNs, because of labor or material resource shortages, have to prioritize among a range of necessary care elements

required by patients, care that is of less value to patients will not be prioritized and missed [9]. However, the cause of this particular result was not described in relation to an imbalance of resources. It is possible that RNs' habits and norms were implicitly described in those studies. This points to the complexity of the care context. The result indicates that a common cause of MNC is the imbalance of workload. However, there are a range of causes that contribute to MNC, further building on the need to better understand the antecedents to MNC to reduce it [18].

This scoping review showed that RNs expressed concerns about undignified and unsafe care in the ED. Some of the examples were triage errors, medication errors, and patients who have clinically deteriorated because of MNC. These results are in line with another study that identified the increased odds of quality of care being reported as poor and care-related injuries as higher according to RNs when MNC was reported as high [91]. In contexts other than EDs, associating the adverse outcomes with MNC derived from RN self-reported data is common [17]. In relation to this, a proposed way forth to investigate the association between MNC and adverse outcomes could be based on objective staffing and outcome measures [17]. In the ED setting, there could also be other variables in addition to the RN-to-patient ratio, high priority patient ratio and occupancy rate to assess workload and MNC, such as a combination of ratios of time from registration to first physician contact, and total patients hours [97]. Another finding was the significant role RNs' prioritization of care had in relation to MNC and patient safety in the ED. This finding further underpins the need to further explore RNs' perceptions of prioritizing care in relation to MNC and their responsibility for their patients' care.

4. Strengths & limitations

One of the strengths of this review is the use of a recommended and rigorous methodology by Arksey and O'Malley, which included a thorough and extensive database searching. A collaborative process involved academic librarians and the researcher group; for example, all articles were assessed in a replicable, systematic, and transparent way. Another strength could be that this scoping review was verified by the MMAT as being of good quality, and the corresponding MMAT values were calculated on the review results themes. Given that the construction of the 20 themes consisted of a varying combination of the 55 included studies and that each study was given a quality assessment translated to a metric, we attempted to describe how the combination of studies were reflected in a quality perspective (please see Fig. 2). This scoping review also has its limitations, such as including only studies published in the English language during 2012 and 2023 and not gray literature. Therefore, it is possible that other potentially relevant studies may have been missed. As children constitute a substantial part of the ED census, a further limitation could be that we did not included patients under 18 years old.

5. Conclusion

The findings from this scoping review demonstrate that a patient's fundamental needs, assessments, and follow-up were missed in the ED, to a large extent because of the patient load and how the ED was designed. The RNs described MNC as undignified and unsafe. The included studies were of high quality; however, there is a lack of research about how RNs perceive their responsibility toward ED patients' needs and MNC in the ED. Clinical implications based on this review outline that necessary nursing care in EDs are omitted, possibly leading to patient safety shortfalls.

Ethical statement.

Ethical approval was not required.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ienj.2023.101296>.

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