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Nurses' Experiences in Resuscitation

A descriptive literature review

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Abstract

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The purpose of this descriptive literature review is to describe the nurses' experiences in resuscitation and what are the factors affecting nurses' experiences. Therefore, the aim of this literature review is to gather knowledge on nurses' experiences in resuscitation which could be further utilized to improve the holistic care approach in clinical nursing practices.

Data was collected from the databases which were CINAHL, PubMed, and Medline, according to the inclusion and exclusion criteria. Thirteen research articles were selected through PRISMA. Inductive content analysis was conducted to analyze the data.

In this descriptive literature review, 13 research articles were used to answer the research questions: " What are nurses' experiences in resuscitation events?" and " What are the factors affecting nurses' experiences?". These articles were analyzed using inductive content analysis. Subsequently, 21 sub-categories, 7 generic categories, and 2 main categories were created in the inductive analysis. Two main categories are 1) Nurses' experiences in resuscitation events which resulted from three generic categories and 12 sub-categories and 2) Factors affecting nurses' experiences, which was created from four generic categories and 9 sub-categories.

This descriptive literature review will explore the multifaceted realm of nurses' experiences in resuscitation, shedding light on the factors that impact their performance in critical situations. The study identifies key elements that shape nurses' experiences, emphasizing the critical role of knowledge, training, and practical exposure. It underscores the importance of equipping nurses with up-to-date knowledge and providing them with opportunities for continuous learning, which translates into improved patient outcomes. The study also identifies factors that affect nurses' experiences, including the presence of significant others during resuscitation, the impact of assigned wards, frequency of CPR involvement, infrastructure-related issues, and patient's health status.

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Keywords	nurses, experiences, resuscitation

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Tämän kuvailevan kirjallisuuskatsauksen tarkoituksena on kuvata sairaanhoitajien kokemuksia elvytyksessä ja hoitajien kokemuksiin vaikuttavia tekijöitä. Tämän kirjallisuuskatsauksen tavoitteena on kerätä tietoa sairaanhoitajien kokemuksista elvytystyössä, jota voitaisiin edelleen hyödyntää kokonaisvaltaisen hoidon lähestymistavan parantamiseksi kliinisissä hoitotyön käytännöissä.

Tiedot kerättiin tietokannoista, jotka olivat CINAHL, PubMed ja Medline, valinta- ja poissulkukriteerien mukaisesti. PRISMA:n avulla valittiin 13 tutkimusartikkelia. Aineiston analysoimiseksi suoritettiin induktiivinen sisältöanalyysi.

Tässä kuvaavassa kirjallisuuskatsauksessa 13 tutkimusartikkelia vastasi tutkimuskysymyksiin: "Millaisia sairaanhoitajien kokemukset ovat elvytyksessä?" ja "Mitkä tekijät vaikuttavat sairaanhoitajien kokemuksiin?". Nämä artikkelit analysoitiin induktiivisen sisältöanalyysin avulla. Myöhemmin induktiivisessa analyysissä luotiin 21 alaluokkaa, 7 yleistä luokkaa ja 2 pääluokkaa. Kaksi pääkategoriaa ovat 1) Hoitajien kokemukset elvytystapahtumissa, joka luotiin kolmesta yleisestä kategoriasta ja 12 alakategoriasta ja 2) Hoitajien kokemuksiin vaikuttavat tekijät, joka luotiin neljästä yleisestä kategoriasta ja 9 alakategoriasta.

Tässä kuvaavassa kirjallisuuskatsauksessa tarkastellaan sairaanhoitajien elvytyskokemusten monipuolisuutta ja tuodaan esille tekijöitä, jotka vaikuttavat heidän suoriutumiseensa kriittisissä tilanteissa. Tutkimuksessa tunnistetaan keskeisiä sairaanhoitajien kokemuksia muokkaavia elementtejä korostaen tiedon, koulutuksen ja käytännön osaamisen kriittistä roolia. Opinnäytetyömme korostaa, että on tärkeää varustaa sairaanhoitajia ajan tasaisella tiedolla ja tarjota heille mahdollisuuksia jatkuvaan oppimiseen, mikä merkitsee parempia potilastuloksia. Tutkimuksessa tunnistetaan myös tekijöitä, jotka vaikuttavat sairaanhoitajien kokemuksiin, mukaan lukien perheenjäsenen läsnäolo elvytysvaiheessa, määrättyjen osastojen vaikutus, elvytystoiminnan tiheys, infrastruktuuriin liittyvät asiat ja potilaan yleisterveydentila.

Tämän opinnäytetyön alkuperä on tarkastettu Turnitin-ohjelmalla, samankaltaisuusprosentti on 9 %.

Keywords	Sairaanhoitajat, kokemukset, elvytys

Contents

1   Introduction

As the foundation for Basic Life Support (BLS), Cardiopulmonary resuscitation, or CPR, is the combination of rescue breathing and chest compressions. Several authors have noted that different numbers of healthcare professionals who are trained and untrained in BLS work in healthcare settings where resuscitative care is provided. Furthermore, errors during resuscitation may be caused by nurses' lack of training as well as insufficient knowledge and skills in triage. (Muthelo et al. 2023: 2.)

Cardiovascular diseases continue to be the main cause of death, resulting in nearly 40% of all deaths in Europe under the age of 75. Sudden cardiac arrest (SCA) is the cause of more than 60% of these. Additionally, it is anticipated that there will be 1–5 cases of in-hospital cardiac arrest (IHCA) for every 1000 hospital admissions. However, as demonstrated in multiple clinical investigations, the timing and quality of cardiopulmonary resuscitation (CPR) after SCA are strongly connected to survival rates and patient outcomes. The opportunity to perform CPR is limited, but it is a crucial part of the Chain of Survival. If CPR is delayed or poorly performed the entire chain of survival becomes compromised, and patient outcomes rapidly degrade. In fact, survival to discharge has been observed to be more than twice for individuals who received CPR during the first minute after IHCA versus those who received CPR later. Additionally, if CPR is initiated shortly after ventricular fibrillation in an out-of-hospital cardiac arrest, survival rates can double or triple. (Pettersen et al. 2018: 337.)

Accordingly, the purpose of this descriptive literature review is to describe the nurses' experiences in resuscitation and what are the factors affecting nurses' experiences. The aim of this literature review is to gather knowledge on nurses' experiences in resuscitation that could be utilized to improve the holistic care approach in clinical nursing practices.

2   Background

Cardiac arrest ranks as one of those most life-threatening situations. Resuscitation is required to begin as soon as it is possible in such events. In the event of a sudden cardiac arrest, necessary action should be implemented rapidly and effectively. Cardiac arrest is the third most significant cause of mortality. In Europe, The yearly average for out-of-hospital cardiac emergencies is 67 and 170 per 1,000 individuals. In approximately 50 - 60% of cases, emergency medical service (EMS) staff initiate or continue resuscitation. (Koželj et al. 2022: 2.)

The primary goal of basic life support (BLS) is to provide cardiopulmonary resuscitation (CPR) and defibrillation with an automated external defibrillator (AED). This involves identifying medical conditions such as heart failure, unexpected cardiac arrest, foreign body obstruction of the airways, or stroke. (Alkubati et al. 2022: 1). Emergency department nurses who are exposed to resuscitation events are at higher risk of post-traumatic stress disorder development. This is particularly problematic in emergency rooms when nurses have fewer resources as well as time to predict and manage these incidents. Interventions to proactively reduce nursing trauma in those environments have received little to no focus. For guidance on these types of efforts, an in-depth examination of these nurses' experiences is necessary. (Bentz, Vanderspank-Wright, Lalonde and Tyerman 2022: 701.)

When performing resuscitations, emergency nurses usually arrive first. Knowing about their resuscitation experiences will help to illuminate the resuscitative environment in which nurses operate, as well as the factors that either facilitate or complicate their ability to provide safe and efficient resuscitation care. (Riley, Middleton, Wilson, and Molloy 2021: 1164.) Cardiopulmonary resuscitation is a pressuring experience for an ED nurse, and it may affect their performance in non-critical care hospital wards. Globally, there have been reports delays in starting basic life support and in applying the current basic life support algorithms. (Dermer, James, Palmer, Christensen and Craft 2022: 1.)

One of the most stressful situations in a crisis is giving cardiopulmonary resuscitation (CPR). ED Nurses who perform basic and advanced resuscitation procedures are thus exposed to particular strain. The engagement of nurses in resuscitation instances might result in a specifically increased extent of psychological stress known as post-code stress, as well as the activation of coping precautions. This research describes various features of nurses' experiences during and after resuscitation operations, as

well as the stresses associated with resuscitation that nurses face and the amount to which these stressors have an impact on nurses. (Koželj et al. 2022: 1.)

Excellent CPR is essential to the Chain of Survival and is still the mainstay of treating SCA in the early stages before defibrillation and advanced life support become available. When performed properly, CPR can improve patient outcomes and rates of survival. The results of this study indicate that cardiovascular nurses lack theoretical and practical knowledge of CPR. Nurses who regularly received CPR training and had access to it at work performed more in line with current protocols than nurses without it. This emphasizes the significance of regular obligatory training sessions to keep these key abilities current. Because CPR skills decrease quickly, annual training sessions may be sufficient. (Pettersen et al. 2018: 343.)

Despite the significant amount of already existing research on the matter, there continues to be a need for deeper examination of the nurse's experiences during resuscitation events. This thesis intends to add to current information by researching and describing further the said experiences, challenges, and coping mechanisms.

3 Purpose, aim, and study questions

The purpose of this descriptive literature review is to describe the nurses' experiences in resuscitation and what are the factors affecting nurses' experiences. Therefore, the aim of this literature review is to gather knowledge on nurses' experiences in resuscitation which could be further utilized to improve the holistic care approach in clinical nursing practices.

The research questions are formed as follow:

1. What are nurses' experiences in resuscitation events?

2. What are the factors affecting nurses' experiences?

4   Methodology and methods

This study's methodological approach is qualitative, and descriptive literature review is the used method. Qualitative research implements words as data to identify experiences, ideas, and concepts. (Moorley and Cathala 2019: 10.)

A typical literature review comprises parts for research questions, methodology, findings, and discussion. On the other hand, literature reviews add to the existing evidentiary foundations of nurses' professional practices that are practiced every day. (Aveyard 2019: 2.)

4.1   Data collection method

This thesis was conducted by applying for a descriptive literature review, an assessment of research concentrating on what is previously known, presumed, and hypothesized about a given issue. The goal of the descriptive literature review is to provide a analytical discussion on the topic at hand, emphasizing what is similar as well as different in the research being reviewed. The descriptive literature review additionally provides an extensive structure for recognizing continuing knowledge and emphasizing the value of new research in an area of study. Before drawing conclusions on a certain issue, this sort of literature review synthesizes, summarizes, and analyzes the relevant information. (Snyder 2019: 333.)

The characteristics mentioned above determine conducting this study as a descriptive literature review.

4.2   Data search and selection

The data search and selection process was conducted by using scientific databases for search terms and keywords such as nurs* "AND" experience* "AND" resuscitation "NOT" nursing students. We were guided through an in-depth search using inclusive and exclusive criteria.

The data required for this thesis is reached through assessing, searching and analyzing previously published research articles and studies. A PICo tool was implemented to create keywords for a database search.

PICo framework was used for planning the search strategy as presented in Table 1 below. PICo in qualitative study describes nurses as the population in the study, and the study's interest is to provide understandable experiences. Thus, the context of this study is related to resuscitation events.

Table 1. PICo

P	Population	Nurses
I	Interest	Experiences
Co	Context	Resuscitation Events

With the assistance of inclusion and exclusion criteria (see Table 2), the database search was performed. The inclusion and exclusion criteria was crucial in this process to get a proper understanding on which publications to select, and which not to, as well as the reasons for those included and excluded.

The included materials were literature related to the nursing field, research regarding nurses' experiences in resuscitation, recent studies between 2018 and 2023, and peer-reviewed primary studies. Excluded materials were literature related to non-nursing field, literature regarding nursing students, literature written in other languages than English, research published before 2018, and secondary studies.

Table 2. Inclusion and Exclusion

Inclusion Criteria	Exclusion Criteria
Related to the Nursing field	Non–nursing field
Nurses' Experiences in Resuscitation	Nursing students' experiences in Resuscitation
Written in the English language	Written in other languages
Research between 2018 - 2023	Research before 2018
Peer-reviewed primary studies	Secondary studies

The data search process for this literature review was conducted using scientific database sources. The database search (Table 3) was conducted using CINAHL, PubMed, and MEDLINE with Boolean connectors" AND"," OR" and "NOT". Hits that were obtained from CINAHL is 232, PubMed is 622, and 445 hits from MEDLINE in nurses' experiences in resuscitation. From those 9 from CINAHL, 7 from PubMed, and 7 from

MEDLINE were selected based on the title. Then 8 articles from CINAHL, 6 from Pub-Med, and 6 from MEDLINE were selected based on the abstract. Decisively, four full-text articles were selected from CINAHL, three were selected from PubMed, and six were selected from MEDLINE. The literature was used from search results for search terms related to the topic and research questions.

The screening process is visually summarized in the PRISMA flow diagram (figure 1). It maintains records of the number of articles found in the first search followed by trans-parently reports on decisions made at various phases of the descriptive literature re-view search. The number of articles was assessed during different phases. Further-more, the PRISMA chart gives thorough information as well as a summary of all cited publications that are suitable for final submission into the literature review.
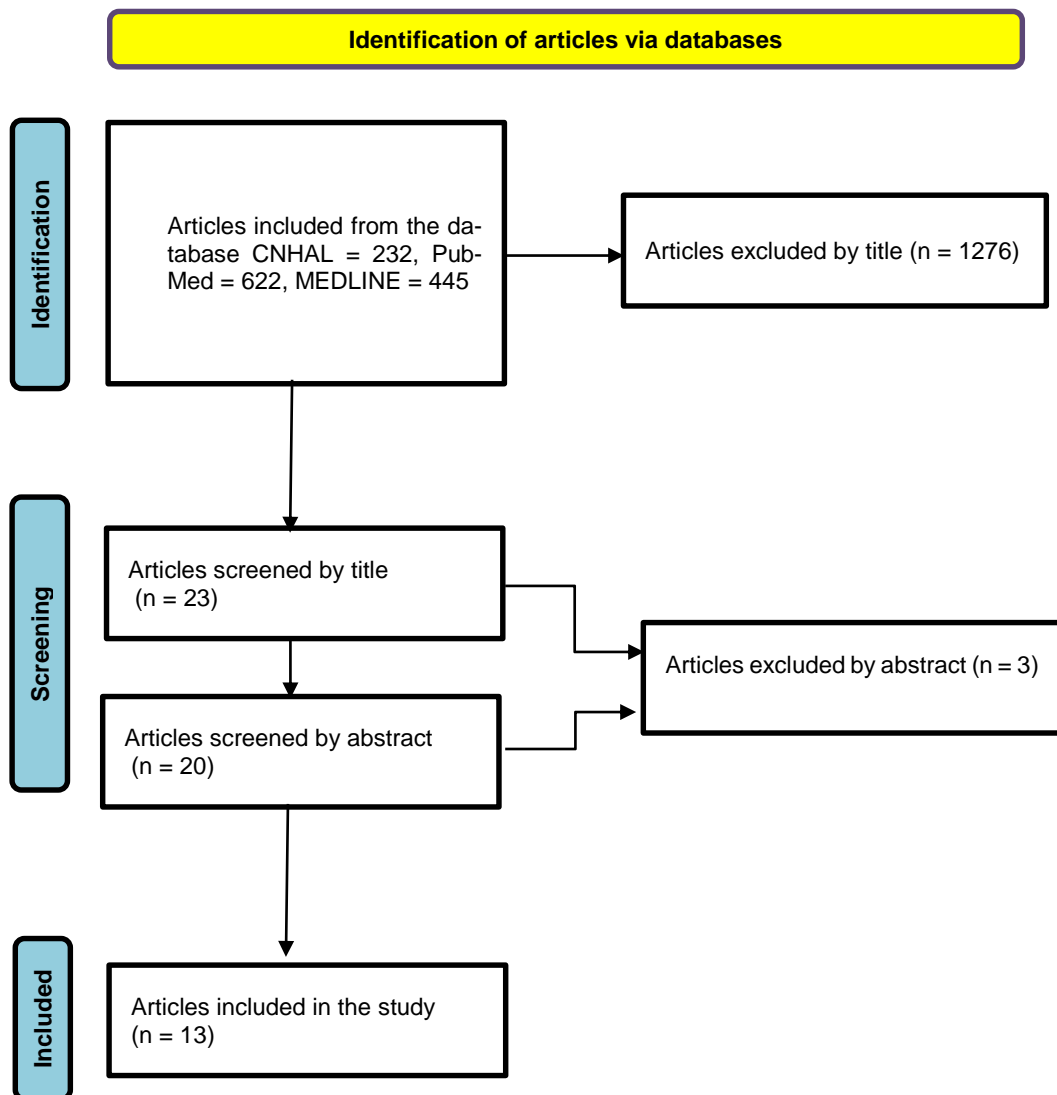

Figure 1. PRISMA flow chart

4.3 Data analysis method

Inductive content analysis is an approach to analyzing and categorizing information that involves exploring an extensive quantity of contextual information to determine the pattern of words based on their recurrence, co-relationship, and structure (Vaismoradi, Turunen and Bondas 2013: 398).

Inductive content analysis can be used when there is limited literature on the subject or when the context has changed. A deductive technique was utilized when the overall goal is to evaluate a previous idea against a contrasting background or to compare categories across time. Preparation, organization, and reporting are the three essential stages of inductive content analysis. Content-specific terms are used to name every category when constructing groups. Subcategories including connected events and incidents are grouped into categories, and the categories are merged into primary categories. (Elo and Kyngas 2008: 107.)

Inductive content analysis was used in the research. For the content analysis, a table was created. Meaning units were derived from paragraphs, sentences, and interview replies that contained material related to nurses' experiences in resuscitation, and factors affecting nurses' experiences. The meaning units were then condensed while retaining the basic meaning. In the coding procedure, meaning units from all thirteen articles were identified and grouped together with relevant information. Subcategories were then established and grouped under the generic category and then the main category. The data analysis method is shown in Table 4 with meaning units, coding, subcategories, generic categories, and main categories.

Table 4. An example of data analysis of the research article

Meaning units	Coding	Subcategory	Generic category	Main category
The barriers to successful CPR were developed in three main categories and nine subcategories. Some of the barriers to CPR success were: "delayed attendance of the CPR team and start of CPR", "inadequate experience and skill of the CPR team", "poor access to special units", "insufficient and deficient CPR equipment", "poor CPR location", "critical clinical conditions of the patient", and "interference of the patient's family members. (Article 7)	Delayed attendance of the CPR team and the start of CPR hindered the success.	delayed CPR	Work experience	Nurses' experiences in resuscitation events
	Inadequate experience and skills of the CPR team hindered the success.	inadequate experience and skills		
	Poor access of nurses to special units hindered CPR success.	poor access of nurses to special units	Work environment	Factors affecting nurses' experiences
	Poor CPR location hindered CPR success.	poor location		
	Insufficient and deficient CPR equipment hindered CPR success.	insufficient and deficient equipment		
	Critical clinical patient conditions hindered CPR success.	patient condition	Health status	
	Interference of the patient's family members affects CPR success.	Interference of family member	Significant others	

5   Results

In this descriptive literature review, 13 research articles were used to answer the re-search questions: "What are nurses' experiences in resuscitation events?" and "What are the factors affecting nurses' experiences?". In the chosen research articles, Four (n=4) of the thirteen articles were from Asia, with two (n=2) coming from Iran, one (n=1) from China, and one (n=1) from South Korea. There were three (n=3) articles from East Africa, two (n=2) from Ethiopia, and one (n=1) from Rwanda. Two (n=2) articles came from Europe, one (n=1) from Sweden and one (n=1) from Poland. Australia contributed two articles (n=2). One was from the United States of America, while the other was from the United Kingdom. Inductive content analysis was used for analyzing these articles. In the following inductive analysis, 21 sub-categories, 7 generic categories, and 2 major categories were developed. Two main categories are 1) Nurses' experiences in resuscitation events which resulted from three generic categories and 12 sub-categories and 2) Factors affecting nurses' experiences, which resulted from four generic categories and 9 sub-categories. These categories and results can be seen below in the Figure 2.

Main category
Generic category
Subcategory
Knowledge and skills in BLS
Increase knowledge and gain skills in CPR
Perceived differences in resuscitation
Perceived psychological effect
Perception affects the resuscitation process
Cognitive growth
Good knowledge
Knowledge
Nurses' experiences in resuscitation events
Work experience
Pressure from CPR
Emotional experiences
Delayed CPR
Training
Training and reading guidelines
Debriefing training
Significant other
Family presence during resuscitation
Interference of family member
Family witnessing resuscitation
Upset family member
Good practice
Good knowledge and a nursing degree
Factors affecting nurses' experiences
Work environment
Poor access of nurses to special units
Poor location
Insufficient and deficient equipment

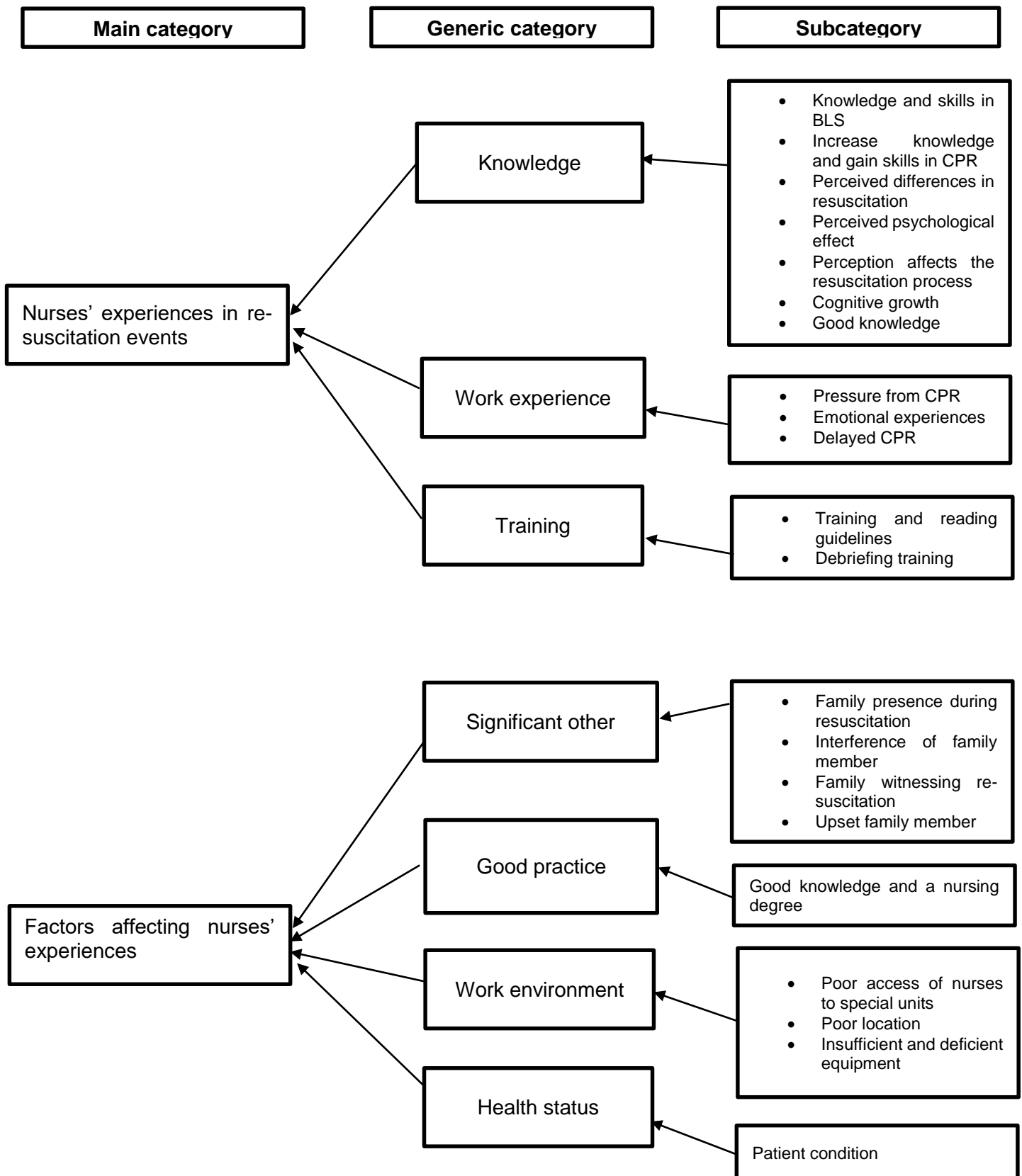

Health status
Patient condition

Figure 2. Categorization used in the inductive content analysis.

5.1 Nurses' experiences in resuscitation events

Based on the analysed data, nurses' experiences such as knowledge, work experience, and training are commonly used in resuscitation events. These experiences are explained below.

5.1.1 Knowledge

Emergency nurses had the chance to practice and acquire the skills needed for resuscitation with the current knowledge provided, as well as the assurance to use these skills in their day-to-day work. Increased confidence, knowledge and gain skills in CPR were perceived differences in resuscitation by nurses. Following attendance at the workstations, the majority had applied the knowledge they had learned in their clinical practice. Enhancing public awareness of CPR is another area in which ED nurses can step up their efforts. For example, there's a high chance the patient will survive if the nurses can provide CPR promptly and utilize good knowledge and cognitive growth. Following workstation participation, the majority of nurses reported increased knowledge and abilities, as well as increased confidence in using them. The majority had the opportunity to put their skills to practice, and they were all eager to urge their friends to attend the workstations. Emergency nurses exercised the motor skills required to execute duties at each workstation, which included BLS. Regular practice in contemporary resuscitation procedures was provided to emergency nurses, allowing them to keep current on information and practice the essential skills. (Ireland et al. 2020: 82.)

According to this study, nurses who are well-versed in CPR are far more likely than nurses who are not to do CPR correctly. A possible rationale is that theoretical knowledge serves as the foundation for executing the skill, implying that the information itself may serve as the drive for putting it into practice in real life. This conclusion may be confirmed by the finding that professionals who use their knowledge on a regular basis are more inclined to practice it. (Guteta 2022: 9.)

5.1.2 Work experience

Nurses in emergency rooms have a dynamic experience when doing cardiopulmonary resuscitation, involving mood swings and pressure from CPR. In order to support their professional development as well as their physical and emotional well-being, hospital nurses should actively engage in targeted cognitive guidance, skills development, and

psychological assistance. They should also pay attention to their work experiences and needs at different times of their careers. Simultaneously, in order to encourage the development of CPR for everyone, it is advised that the government actively enhance the public first aid infrastructure and related policy protection. (Hao et al. 2023: 6.)

Regardless of their level of work experience, nurses felt tense when performing CPR. Health professionals experience stress and anxiety when they don't have enough time to prepare for CPR. The emotions experienced by ED nurses might be reduced if there was a designated CPR team among the medical staff members who are on duty in the emergency department. Less knowledge about CPR may delayed in emergency situations, despite the fact that systematic and repetitive CPR training may enhance health professionals' confidence and performance. (Lee and Cha 2018: 32.)

The intervention of the patient's family relatives during resuscitation, according to the nurses, led to the procedure's failure. When the patient's family relatives participate in shared healthcare services, patient satisfaction may increase. Medical professionals disagree on whether or not the patient's relatives should be present during CPR. In this regard, European medical experts dispute that family relatives should be present when doing CPR. There is disagreement on whether family relatives should be present during CPR owing to potential emotional and mental damage to the patient and disruption of patient treatment. (Janatolmakan et al. 2021: 54.)

5.1.3   Training

That being said, neither "psychological first aid" for cardiac arrests, as recommended by the UK Psychological Trauma Society (UKPTS), nor formal training in basic life support (BLS), advanced life support (ALS), or advanced cardiac life support (ACLS) are available for debriefing after cardiac arrests. Inadequate training could be linked to ill-prepared debriefs, which could account for the unfavorable experience that numerous respondents expressed. Perhaps the first step should be training in effective debriefing, supporting the psychological aspects of resuscitation and reading the guidelines. (Spencer, Nolan, Osborn and Georgiou 2019: 176.)

We observed that requesting family members to assist in resuscitation was associated with prior training or information on the subject. This finding is consistent with previous interventional study that found that education can increase nurses' willingness to allow family members to be present during resuscitation. Perceptions and self confidence was shown to be significantly connected with nurses' requests for family participation

during resuscitation in the current study, instructional material and strategies should focus on improving these traits. (Powers et al. 2018: 103.)

5.2 Factors affecting nurses' experiences

Based on the analysed data, factors affecting nurses' experiences such as significant other, good practice, work environment and health status. These factors are explained below.

5.2.1 Significant other

European health care providers disagree that family members should be present when performing CPR. There is an upset or interference of family members of the patient should be present or witnessed during CPR due to concerns about interrupted patient care and potential mental and emotional harm to themselves. (Janatolmakan et al. 2021: 5.)

Family presence during resuscitation has an adverse effect, and nurses may lack confidence in applying it and are unlikely to offer significant others the choice to be present during resuscitation. Well define policy education is essential to promote continued awareness and compliance. The findings suggest that a few controllable elements can significantly improve self-confidence, perceptions, and encouraged to family presence during resuscitation. Currently, study observed that having experience with significant others, education on family presence during resuscitation, and awareness of a documented policy were the most influential, changeable factors. The emergency care nurses who acquired these traits were shown to have more heightened self-confidence and favourable perceptions, as well as an increased number of inviting significant other to be in the room during resuscitation. According to these research results, suggestions for practice include the development of policies, the provision of education, and the promotion of clinical experiences with family presence during resuscitation. (Powers and Reeve 2018: 110.)

By using inclusion or exclusion criteria for family members, similar to those published by Pasquale et al. and adapted to match specific clinical circumstances, nurses may be able to employ Family Presence During Resuscitation (FPDR) more consistently while lowering hazards. A continued implementation approach should also incorporate

simulation-based policy creation education, especially for staff members who have had little experience. (Douglas and Smith 2023: 5.)

5.2.2 Good practice

In this study, good practice was found to be substantially connected with good knowledge and having a degree, with nurses assigned to the emergency department being more likely to have good CPR practice than those allocated to the outpatient department. This could be explained by the fact that the majority of patients who end up in emergency rooms are severe cases that need to be revived with cardiopulmonary resuscitation. Consequently, nurses working in the emergency room are more likely than those working in another ward to encounter patients in need of CPR procedures and to repeatedly perform the procedures. This study found that there was a significant correlation between the frequency of CPR involvement and good practice, with nurses who practiced CPR either frequently or actively having a three- or four-fold higher likelihood of having good practice compared to those who did not. In this study, excellent practice was found to be strongly connected with the allocated ward, with nurses assigned to the emergency department are more likely than those assigned to the outpatient department to have strong CPR practice. One probable explanation is that the majority of patients who arrive in emergency departments are in critical condition and require cardiopulmonary resuscitation. Consequently, nurses in the emergency department are more likely than those in other wards to encounter patients in need of CPR and to perform the procedure frequently. (Guteta 2022: 173.)

5.2.3 Work environment

It is best to have one CPR team member monitor all CPR equipment during each work shift and report any flaws or shortcomings to the CPR team in order to solve this insufficient and deficient equipment. Other obstacles to CPR included poor location and poor access of nurses to special units. Research suggests that inadequate room and positioning may contribute to CPR failure. Because of the number of CPR team members and the location required for CPR equipment such as the ventilator, defibrillator, and trolley, a shortage of space was identified as a barrier to CPR. The small size of the CPR room, in their opinion, contributed to the failure of CPR. (Janatolmakan et al. 2021: 3.)

Competent nurses must overcome various challenges in work environment while also possessing the courage, ability to perform cardiopulmonary resuscitation, and fortitude. This study discovered an important relationship between the frequency of CPR engagement and great practice, with nurses who seldom actively practiced CPR having a three to four times higher probability of having good practice than those who never did CPR. (Guteta 2022: 10.)

5.2.4 Health status

Health status may have a negative impact on CPR result, according to the nurses. One of the reasons for CPR failure, according to them, was the patient poor physical state condition, particularly if they were affected by organ deficiencies. Patient conditions with different coagulation, cardiac, and renal disorders definitely have different CPR outcomes than patients in better clinical conditions. According to reports, one of the risk factors for CPR failure or ineffectiveness is the patient's condition. The patient's urgent circumstances also contributed to the CPR failure. According to research, the clinical status of the patient has a substantial impact on the success of CPR. The physical condition of the patient might determine whether or not they will survive and require CPR. Patients who have experienced a brain stroke, for example, have a reduced likelihood of success with CPR than other patients. (Janatolmakan et al. 2021: 4.)

6 Discussion

The findings of this study have yielded important insights into the complex nature of nurses' experiences in resuscitation and the multifaceted factors affecting these experiences. Three main components of nurses' experiences in resuscitation emerged from the analysis: knowledge, work experiences, and training. The findings highlight the crucial role of knowledge in shaping nurses' experiences during resuscitation. The knowledge gained through training and educational opportunities significantly influences how nurses handle resuscitation events. Nurses equipped with up-to-date knowledge exhibit increased confidence in applying their skills, ultimately leading to improved patient outcomes. Educating the public about CPR can contribute to more successful outcomes, so knowledge dissemination among healthcare professionals and the broader community is essential. (Ireland et al. 2020: 83.)

Nurses' experiences during resuscitation events are dynamic and influenced by shifts in mood and cognitive growth. It is crucial to recognize that nurses require varying levels of support and guidance at different stages of their careers. Creating a supportive work environment and infrastructure for first aid through targeted skills training, cognitive guidance, and psychological support are some of the measures that can be implemented to improve nurses' professional development and overall well-being. (Hao et al. 2023: 5; Lee and Cha 2018: 30.)

There is a notable gap in formal training in basic life support (BLS) and advanced life support (ALS) or advanced cardiac life support (ACLS) courses. This lack of training in debriefing and psychological first aid has been associated with poorly organized debriefs, resulting in negative experiences. There is a need to establish training programs aimed at addressing these deficiencies, thereby emphasizing the importance of effective debriefing and psychological support in resuscitation events. (Spencer et al. 2019: 176.)

The study's findings also demonstrate four vital factors affecting nurses' experiences during resuscitation events: significant others, good practice, work environment and health status. A contentious issue among healthcare professionals is the presence of patients' significant others during resuscitation. Concerns regarding interrupted patient care and potential emotional harm to family members underscore the importance of well-defined policies, ongoing education, and clinical experiences to manage family presence effectively. (Janatolmakan et al. 2021: 5; Powers and Reeve 2018: 110.)

Moreover, the study illustrates that a nurse's assigned ward significantly influences their CPR practices. Given the nature of the cases nurses encounter, those who work in the hospital's emergency department are more likely to have appropriate CPR abilities. The frequency of CPR involvement is also associated with good practice, highlighting the need for practical exposure to maintain competence. (Guteta 2022: 173.) Additionally, adequate space for CPR and patient access were identified as critical factors affecting the success of resuscitation efforts. Addressing these infrastructure issues is crucial to improving outcomes and reducing barriers to effective resuscitation. Finally, patients' physical condition, especially organ function, is essential for CPR success. Patients' clinical conditions and comorbidities play a pivotal role in determining the effectiveness of resuscitation efforts. This emphasizes the need for individualized approaches based on the patient's health status. (Janatolmakan et al. 2021: 3.)

7 Ethics and Validity

Ethical scientific practice includes general responsibility, honesty, documenting, reporting, and presenting of results. It is crucial to understand the significance of ethics because qualitative research frequently involves subjects that need to be researched and involve people in person. (TENK 2021: 5.)

On the other hand, when doing a review of descriptive literature, validity is an essential component. Validity describes how accurately the review's methodology measures the variable factor that's intended to be measured. This can be made sure of by employing a dependable and consistent process. (Ahmed and Ishtiaq 2021: 2401.)

Validity has significance when conducting research since it evaluates the quality of the research. To obtain a usable result, it is critical to employ proper data collection procedures and to guarantee that the research is measuring precisely what it is intended to measure. This also contributes to the validity of data debates and conclusions. (Middleton 2022: 1.)

This thesis was conducted in according to the standards of the Finnish Advisory National Board on Research. All authors' work has been correctly recognized and referenced. The articles chosen were peer-reviewed to ensure data accuracy. To prevent plagiarism, the internet-based plagiarism detection program Turnitin was implemented. References and text references are properly used. Our University of Applied Sciences' provided databases were employed in all searches. (TENK 2021: 5.)

8 Conclusion

This descriptive literature review, will explore the multifaceted realm of nurses' experiences in resuscitation, shedding light on the factors that impact their performance in critical situations. The study identifies key elements that shape nurses' experiences, emphasizing the critical role of knowledge, training, and practical exposure. It underscores the importance of equipping nurses with up-to-date knowledge and providing them with opportunities for continuous learning, which translates into improved patient outcomes.

Moreover, this study uncovers the dynamic nature of nurses' experiences, influenced by work experience, mood shifts, and cognitive growth. The findings stress the significance of targeted cognitive guidance, skills training, and psychological support at various career stages to foster nurses' professional development and well-being. Furthermore, the study illustrates a lack of formal training in debriefing and psychological first aid within resuscitation courses, indicating an urgent need for structured training programs to address this gap. The study also identifies factors that affect nurses' experiences, including the presence of significant others during resuscitation, the impact of assigned wards, frequency of CPR involvement, infrastructure-related issues, and patient's health status.

These findings highlight the importance of well-defined policies, adequate infrastructure, ongoing education, and clinical experiences to manage family presence effectively. This study provides valuable insights that can inform clinical practices and education strategies in pursuing comprehensive, high-quality resuscitation care. Addressing the various aspects highlighted in this study's findings will be essential to enhancing nurses' experiences during resuscitation, ultimately improving patient outcomes and the quality of care in emergencies.

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Appendix 1. Table 3. Database Search Results

Database	Search sentence	Number of hits	The number in-cluded is based on the title	The number included is based on the abstract	The number in-cluded is based on full-text
CINAHL	Nurs* **AND** experience* **AND** resuscitation **NOT** nursing students	n=232	n=9	n=8	n=4
PubMed	Nurs* **AND** experience* **AND** resuscitation **NOT** nursing students	n=622	n=7	n=6	n=3
MEDLINE (Ebsco)	Nurs* **AND** experience* **AND** resuscitation **NOT** nursing students	n=445	n=7	n=6	n=6
Limiters	Years 2018 – 2023, English language, peer-reviewed				
Total		n=1299	n=23	n=20	N=13

Appendix 2. **Summary of Reviewed Articles**

Author(s), year, country	Topic / Title	Methodology & Methods	Participants	Main Outcomes	Limitations
1. **Douglas and Smith** **2023** **Australia**	Family presence during resuscitation: Perceptions and confidence of intensive care nurses in an Australian metropolitan hospital	A descriptive, cross-sectional study design	ICU registered nurses n=428	Fifty-six percent (n = 45) of respondents had never witnessed FPDR. Respondents were divided on whether families had the right to be present or should be given the option. ICU nurses perceived benefits for families but not for the patients involved or for the nurses participating. Nurses indicated they felt conflicted between the needs of the family, preserving the quality of the care delivered to a deteriorating patient, and protecting the safety of all stakeholders. Support for FPDR was often dependent on the availability of resources such as a family support person.	Due to a lower response rate as well as a single-site and department focus, the results are unlikely to be generalizable to the greater population of nurses. The results may represent the culture of the specific unit studied; further multicentre studies of ICUs are required to confirm these results.
2. **Goodarzi, Khodaveisi, Abdi, Salimi and Oshvandi** **2022** **Iran**	Healthcare providers' experiences in hospital resuscitation of patients with COVID-19: a qualitative study	A qualitative study was conducted using semi-structured interviews	Participants in the emergency departments of Besat, Golestan, and Imam	The mean age of the participants was 38 years. Most of them (61.5%) were male and had a Bachelor's degree in nursing (46.1%). The data analysis resulted in extracting four super-ordinate and	The COVID-19 crisis influenced the study's main limitations. Workload constraints and adherence to health regulations made full participation in interviews difficult for healthcare professionals. The use

			Reza hospitals n=26	nine sub-ordinate themes. "Human Aspects of Care", "Perceived Psychological Effects of Resuscitation in COVID-19", "HCP's Perceptions of Factors Affecting the Resuscitation Process in COVID-19", and "Perceived Differences in COVID-19 resuscitation compared to non-COVID patients" were super-ordinate themes.	of a mask made it difficult to observe facial expressions. Some participants were at first hesitant about sharing their CPR experiences in COVID-19 circumstances, but confidentiality agreements helped. Also, the study acknowledged limits in generalizing qualitative data, emphasizing the importance of cautious interpretation.
3. Guteta 2022 Ethiopia	Factors Affecting Cardiopulmonary Resuscitation Practice Among Nurses in Mizan Tepi University Teaching Hospital, Tepi General Hospital, and Gebretsadik Shawo Hospital, Southwest Ethiopia	Cross-sectional study	Nurses in the three selected hospitals	The prevalence of good practice towards CPR was 31.8% (95% CI: 27.5–36.3) in the study area. Experience of 6–10 years (AOR = 2.27, 95% CI: 1.25–4.13) and >10 years (AOR= 1.81, 95% CI: 1.10–2.98), rarely (AOR = 3.77, 95% CI: 1.26– 11.30) or actively (AOR = 4.60, 95% CI: 1.51–13.98) involved in CPR practice, assigned to the emergency department (AOR = 1.02, 95% CI: 0.55–1.90), having CPR good knowledge (AOR = 1.37, 95% CI: 0.28–2.14) and having a nursing degree (AOR = 1.54, 95% CI: 0.93–2.54) were predictors of CPR good practice.	Among the possible limitations of the study are recall bias and no indication of source and consequence association.

4. **Gutysz-Wojnicka et al.** **2018** **Poland**	Family presence during resuscitation – The experiences and views of Polish nurses	Cross-sectional survey design	Intensive Care Nurses n=240	Out of the sample, 113 (47%) nurses worked in adult intensive care units (ICUs) and 127 (53%) in other acute clinical settings. ICU nurses reported having experiences of FPDR (n = 66, 54%); out of this group 12 (10%) had positive encounters and 46 (38%) reported negative ones. ICU nurses had undetermined opinions on the benefits and potential negative effects of FPDR. Having positive experiences with FPDR influenced ICU nurses' views on the negative effects of FPDR ($Z = - 2.16$, $p < 0.03$).	The study had limitations, including the fact that it was conducted during a conference, which may have influenced the results. The study also did not include nationwide data, limiting the scope of the findings.
5. **Hao et al.** **2023** **China**	Experience of cardiopulmonary resuscitation by healthcare professionals in emergency departments	A qualitative descriptive phenomenological study	Healthcare professionals who had participated in CPR situations within 2 weeks.	The study identified 3 themes and 11 sub-themes. These themes and sub-themes include 1) emotional experience (A sense of achievement, A sense of powerlessness and trauma, Stress, Empathy, Psychological resilience strengthens), 2) cognitive growth (Understanding CPR rationally, Increasing concern for personal and family health, Mastering self-relaxation methods), and 3)	The HCPs in this study were drawn from four hospitals in western China. Given the vast geography, cultural diversity, and variable allocation of healthcare resources in China, the limitations of this study are that the results are only representative of the experience of ED HCPs in western China. In addition, all authors had experience in emergency care, which is another limitation of the study.

				the desire for continued development (Seeking professional development, Hoping for professional psychological assistance, Strengthening team support).	
6. **Ireland et al.** **2020** **Australia**	Emergency nurses' experience of adult basic and advanced life support workstations as a support strategy for clinical practice in the emergency department	Thematic analysis and descriptive statistics. Survey	Emergency Department n=143	A total of 143 nurses working in the Emergency Department consented to participate. Following attendance at the workstations, most reported increased knowledge and skills (93.7 %), increased confidence (91.9 %) and that they practiced skills (91.9 %) during workstation participation. At 6-months follow-up the majority of nurses (97.1 %) found the programme to be beneficial and 82 (80.4 %) reported using the knowledge and skills gained from the programme in their clinical practice.	This research was a single-centre study using a convenience sample of emergency nurses. It is limited with regard to the self-selection of participants; therefore, generalisation to other emergency nurses working in the ED or the broader community of emergency nurses should be undertaken with caution and potentially after external validation. In addition, due to the nature of self-selection, participants may have had a keen interest in resuscitation practice and held high levels of knowledge and skill. As such, selection bias may have inflated the positive experiences and perceptions reported in this study. Staff performance during workstation attendance does not necessarily translate to staff performance in clinical practice.
7. **Janatolmakan, Nouri, Soroush, Andayeshgar and Khatony** **2021**	Barriers to the success of cardiopulmonary resuscitation from the perspective of Iranian nurses	Qualitative content analysis. In-depth semi-structured interviews	Iranian nurses participants n=14	The barriers to successful CPR were developed in three main categories and nine subcategories. Some of the barriers to CPR success	Limitations not cited in this article.

Iran				were: "delayed attendance of the CPR team and start of CPR", "inadequate experience and skill of the CPR team", "poor access to special units", "insufficient and deficient CPR equipment", "poor CPR location", "critical clinical conditions of the patient", and "interference of the patient's family members.	
8. **Lee and Cha** **2018** **South Korea**	Emergency department nurses' experience of performing CPR in South Korea	Qualitative study, Interviewed	Emergency Department n=17	Four themes emerged: Pressure from the urgency of the CPR, becoming sharp tempered in addressing personnel during CPR, keeping psychological conflicts of CPR patient care to oneself, and growing as an ED nurse through CPR.	No indication of limitation.
9. **Mersha, Egzi, Tawuye and Endalew** **2020** **Ethiopia**	Factors associated with knowledge and attitude towards adult cardiopulmonary resuscitation among healthcare professionals at the University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia	Cross-sectional study	Participants a total of health professionals were included n=406	Among the study participants, 25.1% (95% CI 21.2 to 29.3) had good knowledge and 60.8% (95% CI 55.9 to 65.5) had a good attitude towards adult CPR. Work experience (adjusted OR (AOR): 5.02, 95%CI 1.25 to 20.20), number of work settings (AOR: 6.52, 95%CI 2.76 to 15.41), taking CPR training (AOR: 2.76, 95%CI 1.40 to 5.42), exposure to	The study has several limitations, including a cross-sectional design (which restricts cause-effect understanding), the possibility of social desirability bias in responses, the exclusion of CPR practice assessment, and the findings may not apply to all Amhara Region health professionals. When compared to AHA criteria, it revealed a lack of knowledge and attitude toward adult CPR. CPR training and reading guidelines were

				cardiac arrest case (AOR: 2.16, 95%CI 1.14 to 4.07) and reading CPR guidelines (AOR: 5.57, 95%CI 2.76 to 11.20) were positively associated with good knowledge. Similarly, taking CPR training (AOR: 1.74, 95%CI 1.42 to 1.53) and reading CPR guidelines (AOR: 2.74, 95%CI 1.55 to 4.85) were positively associated with a good attitude.	linked to improved knowledge and attitude.
10. **Powers and Reeve** **2018** **USA**	Factors associated with nurses' perceptions, self-confidence, and invitations of family presence during resuscitation in the intensive care unit	A cross-sectional survey design	Intensive care unit nurses n=395	Despite the high frequency of performing resuscitative care, one-third of participants had never invited family members to be in the room during resuscitation during their careers, and another 33% had invited family members to be present just 1–5 times. Having had clinical experience with family presence during resuscitation was the strongest predictor of positive perceptions, higher self-confidence, and increased invitations. In addition, having received education on family presence during resuscitation and a written facility policy were found	The use of convenience sampling is a study limitation as there is the potential for selection bias. However, demographic distribution matches national trends and descriptive findings are similar to prior studies conducted with intensive care unit nurses in the United States. Another limitation involves the method of recruitment because it resulted in most participants (80%) being members of the American Association of Critical-Care Nurses. Findings may not be representative of nurses who are not members of this association. Finally, all measures were self-report items and there is the potential for response bias.

				to be key professional and workplace predictors of perceptions and invitations.	
11. **Spencer, Nolan, Osborn and Georgiou** **2019** **United Kingdom**	The presence of psychological trauma symptoms in resuscitation providers and an exploration of debriefing practices	Trauma-Screening Questionnaire (TSQ), questionnaire survey	Participants' total attendance at cardiac arrest n=1463	The response rate was 414/517 (80.1%); 312/414 (75.4%) were involved with IHCAs. Out of 1463 arrests, 258 (17.6%) were debriefed. Twenty-nine of 302 (9.6%) staff screened positively for PTSD. Healthcare assistants and Foundation Year 1 doctors had higher TSQ scores than nurses or more senior doctors (p = 0.02, p = 0.02, respectively). Debriefing was not associated with PTSD risk (p = 0.98). Only 8/67 (11.9%) of resuscitation leaders had prior debriefing training.	The study was not exhaustive among the target group, which may have introduced bias. Because this was a single-center study, the results may not be generalizable. A small fraction tested positive for PTSD, reducing the strength of the results. Counted on subjective questionnaire replies, which introduced information/recall bias. Conducted across four months, with the potential to influence cardiac arrest leader behavior. Some workers may have been misdiagnosed as a result of the PTSD screening exam. The questionnaire's scope was limited in order to optimize the response rate.
12. **Umuhoza, Chen, Unyuzumutima, McCall** **2021** **Rwanda**	Impact of structured basic life-support course on nurses' cardiopulmonary resuscitation knowledge and skills: Experience of a paediatric department in low-resource country	escriptive statistics i.e. percentage, mean, mode, median, interquartile range, and standard deviation were used to report findings of pre-test and post-	Nurses in the Department of Paediatrics n=80	Fifty-seven nurses working in paediatric department were included in the study, most with advanced nursing degrees. At baseline, only 3.5% scored above 80% on the knowledge test and none were able to perform high-quality one-rescuer CPR.	the study was only conducted in a paediatric department of a tertiary hospital in Rwanda, and only nurses were involved in the study. The results may not be generalised to the nurses working in other healthcare facilities where baseline characteristics and on-going exposures are different. Skills

		test, with box plots used to report differences between groups. For intergroup comparison, paired t-test was used for paired numerical data, Chi-square and Fischer's exact test for independent categorical data and the McNemar test was used for paired ordinal categorical data.		Knowledge and high-quality one-rescuer CPR skills improved significantly immediately after the training, with 63.2% scoring above 80% and 63.2% capable of performing high-quality one-rescuer CPR (p < 0.01). Six months later, only 45.6% scored above 80% and 15.8% were capable of performing high-quality one-rescuer CPR (p < 0.01). Some skills, such as delivering breaths using bag-mask device, showed better retention.	were evaluated using simulated scenarios which may not reflect the performance during the actual patient encounter.
13. **Waldemar and Thylen** **2019** **Sweden**	Healthcare professionals' experiences and attitudes towards family-witnessed resuscitation	A cross-sectional web-based multi-center survey study	Seven university hospital participants n=189	The most common concern was that the resuscitation team may say things that are upsetting to the family member during resuscitation, with 68% agreeing with this statement. Physicians opposed FWR more strongly than nurses (3.22 vs. 2.93, p < .001). Twenty-five percent stated that family should not be present during resuscitation, as it would be far too painful for them, while 23% of the nurses and 11% of the	The study includes limitations that must be carefully considered when interpreting the findings. The web-based data collection procedure implemented, in which questionnaire links were sent by Department Heads, may have resulted in potential participation duplication. In addition, the ability to precisely establish participant numbers was hampered by insufficient data from some hospitals. The tiny sample size could be attributed to the topic's unfamiliarity and sensitivity, which could affect

				physicians considered that FWR is beneficial to the patient, p < 0.001. There was strong agreement that there should always be a healthcare professional dedicated to take care of family (92%). None of the hospitals had local guidelines regarding FWR.	participation rates. These constraints call into question the results' representativeness and generalizability.