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Nurses' Experiences of Caring in Disaster-Stricken Areas in Sri Lanka

- A qualitative interview study

Sjuksköterskors Erfarenheter av Omvårdnad i Katastrofdrabbade Områden i Sri Lanka

- En kvalitativ intervjustudie

Author: David Burgren
Clara Knautz

Supervisor: Petter Tinghög, Docent

Examiner: Jason Murphy, PhD, Lecturer

Swedish Red Cross University
Visiting address: Hälsovägen 11C, 141 57 Huddinge | Postal address: Röda Korsets Högskola, P.O. Box 1059, 141 21 Huddinge, Sweden | Telephone: +46 (0)8 – 587 516 00 | E-mail: info@rkh.se | www.rkh.se

ABSTRACT IN SWEDISH

Bakgrund: Sri Lanka har en historik av ett nästan 30-årigt inbördeskrig och tidigare ekonomisk kollaps. Dess utsatta geografiska läge gör landet sårbart för naturkatastrofer såsom översvämningar och cykloner, vilket inte minst visade sig under tsunamin 2004. Detta har resulterat i återkilliga katastrofsituationer med många skadade och ökad belastning för sjukvården. Sjuksköterollen ställs under dessa situationer på sin spets, och möjligheten till omvårdnad blir påverkad.

Syfte: Syftet var att undersöka sjuksköterskors erfarenheter av att vårda människor i ett katastrofdrabbat område i Sri Lanka.

Metod: En kvalitativ intervjustudie med induktiv ansats genomfördes. Tre sjuksköterskor intervjuades med semi-strukturerad intervjumetod. Intervjuerna analyserades med reflexiv tematisk analys beskriven av Braun och Clark.

Resultat: Fyra teman utvecklades med hjälp av underliggande sub-teman. De teman som togs fram var "Hands-on Disaster Response", "Challenges in Disaster Management", "Emotional Resilience and Professional Dedication" och "Psychological and Emotional Struggle".

Slutsats: Positiva och negativa upplevelser inom praktiska, teoretiska och emotionella delar av omvårdnadsarbete i katastrofer framkom av studiens resultat. Tidigare upplevelser har lett till utvecklingen av arbetsmetoder och nödvändiga förberedelser specifika för katastrofsituationer. Sjuksköterskornas omvårdnadsarbete var dedikerat trots emotionell påverkan, brist på material och personal samt osäkra miljöer.

Nyckelord: Katastrofer, Katastrof Omvårdnad, Komplex Humanitär Nödsituation, Sjuksköterska, Sri Lanka.

ABSTRACT

Background: Sri Lanka has a history of almost 30 years of civil war and previous economic collapse. Its exposed geographical location makes the country vulnerable to natural disasters such as floods and cyclones, which were not least evident during the tsunami of 2004. This has contributed to several disaster situations with many casualties and increased strain on the healthcare system. The nursing role is put to test in these situations, and the possibility of nursing is affected.

Aim: Explore Nurses' experience of caring for people in disaster-stricken areas in Sri Lanka.

Method: A qualitative interview study with inductive approach was conducted. Three nurses were interviewed with semi-structured interview method. The interviews were analysed with reflexive thematic analysis from Braun & Clark.

Result: Four themes got developed with help from sub-themes. The themes were: “Hands-on Disaster Response”, “Challenges in Disaster Management”, “Emotional Resilience and Professional Dedication” and “Psychological and Emotional Struggle”.

Conclusion: Positive and negative experiences emerged from the study results. Previous experiences have led to the development of working methods and necessary preparations. Nurses' work was dedicated despite emotional impact, shortage of materials and personnel along with unsafe environments.

Key Words: Complex Humanitarian Emergency, Disasters, Disaster Nursing, Nurse, Sri Lanka.

INTRODUCTION

Since 1854 when Florence Nightingale was asked to take a group of nurses with her to Turkey and the Crimean war to provide healthcare and avoid poor hygiene, nurses have been in the frontline of emergencies and disasters (Dominiczak, 2014). Nurses are the main health care providers during emergencies (Murphy et al., 2019). The increasing effects of natural disasters and its consequences are today hard to avoid and are therefore an inevitable part of our future (International Federation of Red Cross and Red Crescent Societies [IFRC], 2023, p. 225-227). Large inequalities between people are still existing and political unrest and wars are getting closer to our everyday life. The previous mentioned disasters have a major impact, on not only the environment, but also on the wellbeing and health of the society (World Health Organization [WHO], 2025). Because of these circumstances, disasters and the following injuries will increase (IFRC, 2023, p. 225-227). As a result, the need for healthcare will increase, which will affect nursing care globally.

Disaster nursing often means working in a tough environment with limited resources (International Council of Nurses [ICN], 2021). Disaster affected individuals must seek help from healthcare as well as rely on family members. Our clinical experience comes from our exchange studies in Tanzania. Health care work in Tanzania often involves limited resources, and in many cases, it is the family members who are primarily responsible for providing nursing care to the patient. The possibilities to provide care with limited resources was something we got more interested in and wanted to explore further. With the Swedish Red Cross University's global approach and as future Red Cross Nurses, we feel that disaster nursing has a central role in our profession. Increased knowledge in disaster nursing provides a huge societal and nursing benefit as we live in a world where natural disasters and different types of humanitarian emergencies are inevitable. Sri Lanka's population have been victims of disasters during several decades, and Sri Lanka is therefore an interesting country to explore regarding nursing during disasters.

BACKGROUND

Disasters

Definition

According to the United Nations Office for Disaster Risk Reduction [UNDRR] (n.d.) the definition of a disaster is "A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts". The following effects of a disaster can be direct but will usually last for a long time ahead. When disasters occur, the society is often in need of help from other areas since it is no longer manageable to handle the situation itself. Similar to UNDRR, the International Federation of Red Cross and Red Crescent Societies [IFRC] (2024) describes a disaster as "serious disruptions to the functioning of a community that exceeds its capacity to cope, using its own resources. Disasters can be caused by natural, man-made and technological hazards, as well as various factors that influence the exposure and vulnerability of a community". A disaster in healthcare is when resources available is not enough to manage the urgent need and when the normal quality standards can no longer be maintained (despite adequate measures) because of the high strain (Socialstyrelsen, 2018). In the present study, the authors have focused on natural disasters and complex humanitarian emergencies (CHE).

Natural disasters are the kinds of disasters such as cyclones, floods, landslides, volcanic eruptions, earthquakes and tsunamis (WHO, 2006, p. 5). Natural disasters seem to increase in both number and size due to climate change (IFRC, 2023, p. 225-227). Climate change is one of the most severe threats to human health and today 3,6 billion people live in areas that are highly susceptible to being negatively affected by the consequences that follow (WHO, 2023). These changes lead to dangerous environments, destruction of safe shelters, evoke disease outbreaks and worse education systems which all affect the quality of health (IFRC, 2023, p. 131-135). The man-made disasters are in some way caused by the human being and could for example be accidents within the industry that are causing dangerous chemicals to leak or war (UNDRR, n-d., p. 13-14). Despite the high numbers of devastating consequences that follow natural disasters like high mortality and economic loss, the consequences of complex humanitarian emergency (CHE) are even worse.

Complex Humanitarian Emergency

The term "complex emergency" or "complex humanitarian emergency" (CHE) emerged in response to the increasing number of civil conflicts worldwide (Inter-Agency Standing Committee [IASC], 1994). A complex humanitarian emergency is defined as; a) a humanitarian crisis occurring in a country, region, or society where there is a total or considerable breakdown of authority due to civil conflict and/or foreign aggression; b) a humanitarian crisis requiring an international response that exceeds the mandate or capacity of any single agency; and c) a humanitarian crisis in which the IASC determines that intensive and extensive political and managerial coordination is necessary. These conflicts often lead to lack of food, water and shelter and are affecting a big part of the population (Hammer et al., 2018). CHE presents a major threat to public health. Additional characteristics for CHE are high numbers of mortality that would not exist if the conflict or war was not present (Heudtlass et al., 2016). Just like in the case of natural disasters, many vital functions are destroyed (water, food, health facilities etc.) (Hammer et al., 2018). The CHE is often related to civil war and usually lasts for many years (IASC, 1994). Civilians are put under high risks of being forced to leave their homes, getting hurt or even killed. A well-known weapon of war is the systematic way to torture, rape, and expose civilians to sexual abuse (Al Issa & Beck, 2021). Hsiang et al. (2013) explains that there is a relationship between increasing number of incidences in civil conflict and climate changes. It is probably not the

triggering factor for conflicts, but the two phenomena are often strongly linked. The increasing need for healthcare is met by destroyed healthcare facilities (Haar et al., 2021). Humanitarian organizations are often prevented from accessing the areas where they are most needed. In some cases, these organizations even become targets, despite their protective right.

Natural disasters and CHE consequences for health and healthcare

People's health is affected by disasters and have an impact on people from the whole population (WHO, 2025). Disasters cause consequences on human health in multiple different ways, both physical and psychosocial (Hugelius, 2023, p. 37, 53). The consequences often vary depending on the nature of the event and the individuals affected. Health is impacted both immediately and over the long term (Hugelius, 2023, p. 37). Different types of disasters have different type of effects on people's health. For example, as presented by the Centre for Research on the Epidemiology of Disasters [CRED] (2022), tsunamis caused a significantly higher death-to-affected ratio (4:1) compared to earthquakes (1:4). Increased non-communicable diseases can be found during disasters. Research shows that the prevalence for cardiovascular diseases increases during natural disasters (Babaie et al., 2021). This occurred because of a lack of medication and lack of continuous blood pressure monitoring. The increasing amount and impact of natural disasters increases the need for healthcare services (Codjoe et al., 2020). Changes in the climate lead to new types of conditions to proceed from that are affecting the healthcare systems a lot. More and more people will need some kind of medical assistance, improved and more rapid help. Higher requirements are being put on the healthcare systems as well as the healthcare personnel. Healthcare services in poorer areas are generally under greater pressure than those in wealthier areas and are likely to be even more affected.

The consequences of complex humanitarian emergencies (CHEs) affect both individuals and organizations (Hugelius, 2023, p. 49). People are injured, and hospitals are often damaged during such events. Infrastructures such as water and electricity supplies are shut down, which makes it difficult to provide care. One difference between natural disasters and CHE are how the conditions for infrastructure improvement change over time. When a natural disaster strikes, health care, electricity, water and sanitation are taken out but are often restored fast. Unlike in war's where these things gradually deteriorate (Hugelius, 2023, p. 50). War claim victim's lives in the short term, but in the long-term war forces people to emigrate. Fleeing from war itself creates negative psychosocial effects (Tinghög, 2017). On top of the already known risk factors during CHE, there is also an increased risk of communicable diseases (Hammer et al, 2018). Some risk factors for increased communicable diseases during CHE are for example mass displacement of people, overcrowding, WASH (Water, sanitation and hygiene) insecurity and malnutrition/food shortage.

The nurse's work

Fundamental Nursing

Nursing care is the central subject in the profession of nurse's (Svensk sjuksköterskeförening (Swedish nurses' association), 2024). The International Council of Nurses [ICN] (2021) outline the four responsibility areas within nursing care: providing health, preventing illness, reconstructing health and stopping pain as well as providing a worthy death. Nursing care is based on respect for human rights and cultural rights and is not supposed to be affected by any social or biological determinants. Swedish nurses' association (2024) highlights the meaning of knowledge about significant factors and human characteristics. Nurses are valued and respected for their work in providing health care in every

aspect of the population, from personal all the way to global health (ICN, 2021). Swedish nurses' association (2024) describes the importance of knowledge in the different areas of the profession. It is stated that nurses must have knowledge and be able to accomplish the nursing process, person-centred care, cooperation in groups, practice evidence-based care, improved knowledge about quality development work, information, leadership and education.

Disaster Nursing

Since 1854 when Florence Nightingale was asked to take a group of nurses with her to Turkey and the Crimean war providing healthcare and avoiding poor hygiene (Dominiczak, 2014), nurses have been in the frontline of emergencies and disasters. Today, nurses are the main health care providers during emergencies (Murphy et al., 2019). Following nurses' work in disaster-stricken areas, ICN came up with the core competencies in disaster nursing (ICN, 2019). Nurses in disaster-stricken areas are working with providing first response, first triage, health care, information, and as counsellors. The ICN's formula in core competencies in disaster nursing is valuable because health care and systems are only successful if nurses have essential abilities and competencies for rapid and effective response (ICN, 2019, p. 3). Xue-E et al. (2023) presents nurses' competencies in emergencies. Five primary domains were found which are communication skills, self-protection skills, basic knowledge of public health emergencies, law and ethics and capacity for organisational collaboration. These domains are well in line with the domains both ICN and the Swedish nurses' association (2024) are highlighting. One of the most important things for healthcare staff handling disasters is the amount of education and training they are given (Labrague & Hammad, 2024). If the healthcare staff is well informed about what kinds of resources their organization has and has their routines well learned, the quality and flexibility in the acute situations will be a lot better.

Two concepts central for disaster nursing are "interprofessional collaboration" and "cultural competence" (Al Thobaity, 2024). Organised collaboration and communication between the different involved professions will result in a more coherent and effective emergency response." Cultural competence" is important in both research and disaster relief planning as well as for nurses practising their work. The combination of these two concepts will improve the emergency work noticeably. Nurses able to practise this concept are set to be more flexible and adaptive to the current situation, which improves the care and outcome for the patients. Disaster nursing could be ethically challenging when making decisions of which care that should be provided or perform duties never done before (Aliakbari et al., 2014). By discussing dilemmas, strategies and guidelines, nurses have a firmer ground to stand on when hard decisions need to be taken (Al Thobaity, 2024). It helps maintain ethics and nurses' possibility to provide morally right and empathetic care.

Another strategy for psychological preparation and support during a disaster is the HOPE model (Al Thobaity, 2024). "The HOPE model describes the core element in and essence of disaster nursing in the response phase. 'HOPE' stands for '**H**olistic health assessment and promotion; **O**rganization and management of immediate response; **P**rofessional adaptation; **E**ndurance and recovery' "(Hugelius & Adolfsson, 2019). The holistic health assessment and promotion is briefly about the disaster nursing needs of having knowledge and skills that are required for the situation, noticing, prioritising and promoting care with the limited number of resources they have. Organization and management of immediate response is about the nurses' role to plan and organize the operation to help and promote health for as many as possible in an acute situation. It also highlights the possible need of acting as a manager, collaborating with other instances and being prepared for unpredicted events. The professional adaptation describes how the nurses' work with providing help and saving lives are

dependent on their capacity to adjust methods and procedures to the situation. This puts much pressure on the nurses' improvisation and flexibility. Endurance and recovery are about the disaster nurses' ability to keep going, handling and easing human suffering as well as doing what is possible to gain recovery for anyone involved. Sharing experiences and wisdom with others affected and promoting self-efficacy is important for a sustainable recovery process, a process that takes time and requires support from others around you. To summarize, the HOPE model enables nurses to maintain as good and genuine care as possible in a catastrophic scenario. Many ethical considerations and hard decisions are forced to be taken but could be made a little bit easier with methods that help prioritising who is in most need for help.

Environmental awareness and Sweden's strategies for development cooperation

Natural disasters have a significant influence on global health, causing increased numbers of illness, death and disability (IFRC, 2023, p. 27-30). The same applies to the consequences that follow CHE as well (Hammer et al., 2018). The fourth element in the ICN ethical code "Nurses and global health" describes the importance of awareness regarding environment and climate changes (ICN, 2021). Nurses should collaborate and practise with other personnel and authorities to sustain, maintain and protect the natural environment, according to element 4.6. Nurses shall be aware about the climate changes and its impact on health consequences. ICNs element 4.4 declares that nurses shall contribute to population health and work towards the achievement of the UNs Sustainable Development Goals (SDGs). SDGs 3 and 13, Good health and well-being and Climate action are closely related to ICNs fourth element (United Nations, 2024).

The present study relates to Sweden's strategies for development cooperation and was conducted as a Minor Field Study (MFS). It aligns with the Swedish Ministry for Foreign Affairs' thematic priority outlined in section 3.2 (Utrikesdepartementet, 2023). This priority focuses on improving health for the most vulnerable. Section 3.2 highlights the aim of creating better conditions for good health and strengthening health systems. The Swedish government seeks to contribute by promoting health initiatives for the most vulnerable, including access to life-saving treatment, vaccinations, and mental health interventions, particularly in humanitarian crisis situations. The authors hope that the present study will contribute to improving health outcomes for the most vulnerable populations.

Disasters in Sri Lanka

Natural disasters

As so often the most vulnerable people and places, like low-income countries and small island developing states, are the ones that are the worst affected by disasters (WHO, 2023). For example, during the last ten years the death rate due to extreme weather was 15 times higher in vulnerable areas than in more developed regions. According to WHO (2023) these are the people that have contributed least of all to climate change and at the same time suffer the most. These are also the people that have the least resilience and possibilities to protect themselves and their families from the consequences that follow (IFRC, 2023, p. 131-135). Sri Lanka is one of these most vulnerable places (De Silva & Kawasaki, 2018). Sri Lanka's location in the Indian Ocean contributes to being at risk of extreme weather (United Nations Sri Lanka, 2023b). Both droughts, landslides and storms causing floods are common, with an impact on the income and food security for the country's residents. Vulnerable and poor people with less money, often end up having a bigger loss and suffer more from these types of disasters than people with better economy (Eisenman et al., 2007). Another aggravating factor is that a big part of the poorest population is dependent on the income they get from their own

agriculture (De Silva & Kawasaki, 2018). In areas where for example floods occur, the people who live there can lose the only income they have, which of course have a big impact on their economy and thus also their health. These kinds of devastating natural disasters are often not a one-time occurrence, contrariwise they often occur on a regular basis. With already limited resources and money it takes a long time to rebuild and repair the damage that occurred. Which also means a long time with limited or even non income during this time. It has been shown that households with more than one source of income cope better with these kinds of happenings than households with only one source, given that the other sources of income are not easily impressionable by floods and droughts.

In March 2023, as many as nearly 20% of the Sri Lankan population were classified as having moderate acute food insecurity (United Nations Sri Lanka, 2023a). These events hit the country's poorer regions worse and tend to be even worse with the now increasing climate change. Sri Lanka was also in 2004 one of the affected countries that got stricken by the Asian tsunami, causing a major need of immediate help and consequences for the country in the long term as well (Khetrapal Singh, 2014). Many people lost their lives, family and friends, were injured and the damage on important infrastructure and healthcare facilities needed to be repaired.

Civil war

During the years of 1983–2009 Sri Lanka was plagued by a civil war between the Sinhalese-dominated Sri Lankan government and the Tamil minority, with a lot of criticism directed at whether the final battle was against human rights or not (UN Human Rights Council, 2015). During the civil war many people were hurt and killed, along with the violation against human rights, which of course had a big impact on the residents' health (Utrikesdepartementet, n.d., p. 1-2). The possibility of distributing aid fairly in crisis situations is a difficult job (Safarpour et al., 2020). When Sri Lanka was stricken by the tsunami in 2004 the civil war was still ongoing, which made the situation of providing humanitarian aid evenly even harder (Lee, 2008). Many of the communities along the coast were divided into different groups of class and ethnicities. The distribution of aid in these areas tended to follow these different groups and not reach everyone the way it was supposed to do. The international non-governmental organizations in Sri Lanka were actively trying to distribute the aid evenly but were in many situations manipulated. Sometimes the class differences even increased. This made the already existing tensions and suspicions between the country's residents even worse.

Economic crisis

Sri Lanka is right now in the recovery of a huge economic crisis with their worst peak in 2022 (World Bank Group, 2024). The situation is slowly getting better but is still affecting the residents that remain having weak personal finance and widespread food insecurity. In the public healthcare system, lack of medication, rising risk for noncommunicable diseases and a trend of healthcare personnel moving out puts a higher pressure on the healthcare system (United Nations in Sri Lanka, 2023). Due to the economic crisis the labour force participation rate has not been so low since the year of 2009. Women and girls were disproportionately affected by the crisis with increased stress due to their children's education being affected, just as the lack of electricity, fuel and gas.

Conceptual framework

Vulnerability

According to WHO (2022, p. 157) vulnerability is one of the risks for poorer health during disasters. Vulnerability is complex during disasters, as it can be both a risk factor for and an outcome of disasters. Vulnerability can affect a whole population or only specific individuals. It is determined by the disaster itself but also different biological and socio-economic capacity. According to Sellman (2005) vulnerability is a part of human life, which we can never be entirely free from. We cannot always be certain of the things and people we have around us, because tomorrow they may not be there anymore. Humans can be more or less at risk of vulnerability, but for most of us the days will pass by, and we will be relatively unscathed. Every human also has their own vulnerability from their inside and mind. It can be fear of losing a loved one or structural things keeping us safe. Sellman (2005) points out three different ways humans are in danger and if we can protect ourselves from it. First comes those types of risk for harm which individuals have their own capacity to protect themselves from. Second is those types of risks where individuals by themselves don't have enough capacity, so they must rely on others or structural things to avoid harm. Third types of risk are those in which the human being has no resources at all for protection. In general, they are powerless to protect themselves.

When focusing on patients it is important to know that even if vulnerability is part of human life, all humans have different susceptibilities for vulnerability (Sandman, 2021, p. 274). There is nothing wrong with focusing on vulnerability as a starting point while meeting patients. Acknowledging one's own vulnerability and sometimes understanding that help and care from others are important abilities to possess (Sandman, 2021, p. 274).

Compassion

To understand compassion, it is essential to first understand suffering. Suffering can be seen from two different perspectives, from the inside or from the outside of your body (Wiklund Gustin, 2022, p. 411) It can be expressed as severe pain, fear, anxiety or being worried about a loved one's health and life. Nurses must be aware of the fact that suffering can be expressed with a big variety of faces, which we in many ways cannot explain or understand. We will just have to be there for the person suffering. How we meet that other person who is suffering and our actions to it, that is compassion (Wiklund Gustin, 2022, p. 179).

Compassion is closely connected to all professions in the health care sector. In meetings with nurses, compassion is something to be expected (Wiklund Gustin, 2022, p. 179; Arman, 2020, p. 102). Matos et al. (2023) did research on how compassion changes over time over a longer period during a disaster. The result showed that healthcare professionals' compassion for others increased over a 10-months period. It was also shown that fear of compassion decreased among the society during the disaster period. Compassion is seen as a connection between people where you perceive and understand the suffering as well as being able to feel involved and being touched within the other person's condition (Arman, 2020, p. 110). Being able to feel and being touched about a person's history is important. One thing to have in mind is that the other person can be offended, because as a health care worker you have never been in that exact position or state of mind. It does not matter how much you try getting yourself into the patient's situation and try to understand. If you have not been in that exact situation, it will always be an interpretation based on your own experiences, which can be seen both as a benefit or obstacle based on the situation (Wiklund Gustin, 2022, p. 182)

It has also been found that lack of compassion can negatively reinforce patient's experience from a traumatic event (Doohan & Saveman, 2015). Compassion from health care personal is crucial in emergencies, so that patients can sense the feeling of empathy and safety. Compassion acknowledges the other person's suffering and vulnerability. It is based on caring, sensitivity, non-judging and acting towards an end to suffering. There is also so much more than some intervention at technological level which purpose is to ease symptoms or relieve pain. Compassion is in line with the phenomenological term intentionality, which is when one's presence and attention is directed to the person and situation (Wiklund Gustin, 2022, p. 181-182). Wiklund Gustin declares that compassion needs to be expressed in actions. Gilbert (2009) came up with key characteristics for attributes and skills that should be used for compassion. These skills and attributes are incredibly important to be aware of and use in caring encounters with patients.

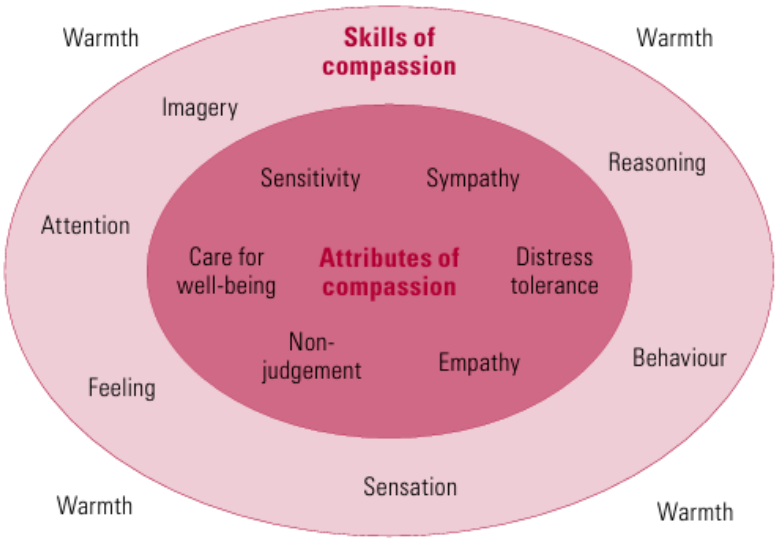


Figure 1. Gilbert's compassion model

Problem statement

There is no doubt Sri Lanka has been and still is affected by both complex human emergencies and natural disasters. Exposed areas are affected by floods, tsunami, extreme heat, storms and often it is often the most vulnerable areas that are suffering the worst. Political and religious conflicts have resulted in devastating civil war and economic collapse. The spreading of diseases, injured people, lack of the fundamental functions in a society and damaged areas have a big impact on people's health. This means that more people are going to need healthcare services which increases the pressure of the healthcare system. Disaster nursing is becoming an increasingly recognized and necessary part of the nursing profession, as nurses are more frequently confronted with the effects of disasters in their work. To be able to improve both the quality of healthcare and nurses' work, we need to know how these people are experiencing disaster situations. Not only how they perceive their own knowledge and manageability, but also how they are affected physically and mentally, and if the nursing for the patients is changed or affected. The aim for the study is therefore to explore Nurses' experience of caring for people in disaster-stricken areas in Sri Lanka.

AIM

The aim of the study was to explore Nurses' experience of caring for people in disaster-stricken areas in Sri Lanka.

METHOD

Design

The present study is a qualitative interview study with semi-structured interviews. Qualitative approach was chosen since the aim of the study was to examine experiences from nurses (Polit & Beck, 2021, p. 471). According to McGrath et al. (2019) qualitative research interviews are preferable due to its ability to collect and understand subjective perspectives. Reflexive thematic analysis was used, which is a method where you identify, analyse and report patterns of shared meanings, such as themes within the data that has been collected. The reflexive TA gave the authors an inductive approach since it allows the authors do dig into the data and search for shared meanings, without any predetermined hypothesis (Braun and Clark 2006; 2021).

Sample

Polit and Beck (2021, p. 498-499) explain some guidelines while picking samples for qualitative studies. First, the participants were selected carefully through a purposive sampling. It's preferred since participants with knowledge and possibility to reflect over the situation tend to talk longer with the researchers. The second guideline states the sample should not be too big, as the importance is to be provided with a good amount of data from the participants. The authors reviewed earlier bachelor's theses for inspiration on how many participants these types of empirical studies should include. The data for the present study is based on three interviews.

<u>The studies inclusion criteria were:</u>

-Registered nurse (RN)

-Experience within disaster nursing

-English speaking

-Practiced the nursing profession in Sri Lanka

The authors contacted a manager at Teaching Hospital Jaffna, Sri Lanka, by email and asked if they were interested in participating in the study, with a request letter attached regarding information about the study and its aim (see Attachment I). The manager accepted that interviews could be held at Teaching Hospital Jaffna. The authors asked if the manager could help with suggesting participants that matched the inclusion criteria. On site at Jaffna Teaching Hospital, the hospital manager proposed and introduced the principle of Nursing College of Jaffna. The principal got the same information about the study's aim and layout and accepted the study to continue. The principal later recommended and asked three nursing teachers at the hospital which he knew matched the inclusion criteria. Table 1 shows demographic information about the participants. The participants were named as x,y,z without mutual order from when they got interviewed. This is to keep full confidentiality since the participants knew in which order the interviews had been held.

Table 1. Demographic information of the participants

Nurse	Registered Nurse	Earlier work experience	Employment during the study	Disaster experience
X,Y,Z	For 24-26 years	Surgical unit Intensive care unit Theatre	Teachers at Nursing College of Jaffna	Civil war Tsunami Flooding Cyclone

Data collection

Semi-structured interviews were used for the present study. With semi-structured interviews, it was possible to receive subjective responses from individuals with experience from a specific situation or phenomenon (Mcintosh & Morse, 2015). Using semi-structured interviews made sure that the topic of the study was covered in this qualitative interview study. What could not be controlled was the outcome of the study (Polit & Beck, 2021, p. 514). According to Polit & Beck (2021, p. 511) the researchers must gain and maintain trust throughout the interview, with focus on empathic neutrality. This is also important because in semi-structured interviews it is the interviewer's job to make the participant feel confident and encouraged to tell their own stories and talk freely about the subject (Polit & Beck, 2021, p. 514).

Information about the study and the free will to participate were presented before the interviews were held. "Information for participant and consent form" were then signed (see Attachment II). An interview guide was prepared to make sure the topic was included in the interview (Polit & Beck, 2021, p. 514). In that way it was made sure that the participants could talk freely about the topic while still sticking to it (see Attachment III). There were 14 questions in the interview guide, most of them open-ended. The questions started off as "easy" and more general questions to make the interviewee feel relaxed and familiar within the subject (McGrath et al., 2019). The questions were then more specifically linked to answer the study's aim. Questions more specific to the aim were for example "Tell us about your nursing care for a disaster-stricken patient?" and "Has the nursing care of patients in disasters had an impact on you emotionally". A final question is often useful as the authors asked, "Would you like to add anything to this interview?". During the interview's, predetermined questions were asked in the same way and order to every participant (Mcintosh and Morse, 2015). However, the purpose with semi-structured interviews was to let the interviewer diverge slightly from the interview guide (Polit & Beck, 2021, p. 514). Sub questions or probes, such as for example, "In what way"? or "How come"? were added to develop the answer further. Probes can be scripted into the interview guide or come spontaneously (Mcintosh and Morse, 2015). As McGrath et al. (2019) suggests the interview guide was tested since the authors are novice with collecting data through interviews. The authors held a test interview between themselves by using the interview guide that was created. From the test interview, three questions were found which could technically be answered with a yes or no. Probes were prepared in these three questions in case the participants chose to answer with one word. The interview guide was sent to the contact person at the hospital in good time before the interviews were held who would provide it further to the participants for preparation purposes. However, as the sample was provided on site, the participants only got a few minutes to read through the interview guide.

The interviews were held on the 5th of February 2025 inside of Teaching Hospital Jaffna's premises. The interviews ended up being between 20-32 minutes and were recorded on two different phone devices. All interviews were held by the same author. The accompanying author took notes and

occasionally asked probes. The recordings of the interviews were as soon as possible after the interviews were held, transferred to the authors' password protected computers and then deleted from the phone devices. This was to ensure the confidentiality of the participants of the study (Polit & Beck, 2021, p. 512-513). The computers were only accessible by the authors themselves. The recordings did not contain any personal information that could reveal the participants identity. When the present study was published all recordings and transcriptions from the interviews were deleted from the authors computers as well.

Data analysis

Reflexive thematic analysis (TA) was used, which is a method where you identify, analyse and then report patterns such as themes with shared meanings within the data that was collected. The purpose of thematic analysis is to organize, provide structure to, and evoke meaning from data (Braun and Clark, 2006). Reflexive TA conceptualizes themes, either from latent or manifest content as meaning-based patterns, as a result from coding. The author's work was mainly about identifying and analysing shared meaning from manifest data. The transcription was compared to the audio recordings. Thus, the authors engaged in a subjective analysis of the data, which, according to Braun and Clarke, is an inevitable aspect of qualitative data interpretation. Reflexive TA is an inductive approach, which is in line with the studies aim to understand nurses' experiences without any predetermined hypothesis. The goal with reflexive TA is not to accurately summarize data from the codes and themes that have been developed. The author should tell the story that illuminates from data. The studies inductive approach will develop themes that will be data driven (Braun & Clark 2006; 2019; 2021).

Since the study's raw data was recorded as audio files, the material was transcribed in order to conduct thematic analysis (Braun & Clark, 2006). Transcription is highly important and a critical step in the data analysis (Polit & Beck, 2021, p. 535). If data would be transcribed inaccurately, important data for analysis could be deficient. The authors transcribed one interview each and shared the third one in two parts. The whole interview was listened to several times. Then the authors switched interview and interview part with each other. In that way the authors got familiar with all data while also keeping accuracy to the transcription. This process started the study's reflexive TA as phase 1 is to get familiar with the data. In phase 2 initial codes are generated. The authors discussed whether they should code all data or just particular identified and maybe limited data (Braun & Clark, 2006). The authors separately read the transcription once and marked data they believed did not answer the study's aim. These data were then compared, discussed and removed resulting in selection of specific data that possibly could answer the study's aim. The selected data relevant for the aim was again separately read and possible codes and important parts were commented and marked while reading. Data coding was then applied by the authors together on to specific data extractions. Phase 3 "Searching for themes" started when all initial codes had been found (Braun & Clark, 2006). As Braun & Clark suggests, visual representations of codes were used in form the of mind-maps or thematic-map. This made the codes easily accessible, and themes were proposed and refined iteratively by the authors. Some themes and sub themes had been found but were then reviewed as phase 4 was initiated. Themes were separated, merged, refined and discarded. In Phase 5, carefully examined themes were defined and named. By carefully overseeing the themes and sub-themes in these phases the authors could control if the level of internal homogeneity and external heterogeneity were high enough. Internal homogeneity was controlled on a manifest level so that similar words were spoken about were coherent within the themes, but also in a more abstract way where the meaning of the data extractions shared the same meaning within a theme. In the other way this process was made with the

intention that themes, sub-themes and specific data extracts would have a high external heterogeneity. Phase 6 contained producing the results from themes and sub themes. In this phase the themes were once again renamed as the authors discovered better ways to illustrate the shared meanings in the different themes. By conducting the analysis both individually and collaboratively, the authors were able to reduce bias at multiple stages.

Table 2. Example from the analysis process.

Data extractions	Codes	Sub-themes	Theme
"We had examined the patients. Actually it should be first. Examine. Then, so we had to categorize the patients according to their critical stage like ABC like that. Then where to prepare the patient for operations immediately."	Categorize patients according to their critical stage.	Working methods	Hands-on Disaster Response
"...we have to identify the needs to the problem. And so we have to look out for them. So that are much care we are giving ... they have needs, from the physical needs and for the mental needs so we have to work with them. So actually, so we are having, a moral in caring them as nurses."	Nurses identifying patient's needs (mentally and physically).		
"We learned to prepare to prepare for the disaster, for expecting a disaster so. So thereafter. So nowadays we can see that they are having a staff that stock and other things of a stock. Likewise they are having some stocks for the disaster. Mostly the during the season that cyclone and flood at the times, so they are having that stock and they having some preparedness."	Hospital stacking in case of disaster.	Preparations	
"And so periodically, we are doing the capacity building program, then workshops are going on then, so they will manage the system and also the. Yeah it's not a big issue because. So from there training period, till now, so they are working in a such kind of environment and situation so they are reliable to that situation."	Disaster nursing training		

Ethical considerations

A fundamental factor for research is to have good research practice to maintain the quality and usefulness for the society (Vetenskapsrådet, 2024, p. 4-11). Good research practises work like a framework with guidelines and advice for researchers and other people affected. Therefore the "European Code of Conduct for Research Integrity" was conducted by the European Federation of Academies of Sciences and Humanities [ALLEA], also called the ALLEA-code (All European Academies, 2023). The principle contains four points; reliability, honesty, respect and accountability. Reliability is about "ensuring the quality of research, reflected in the design, methodology, analysis, and use of resources". To make sure the study is reliable, well known and well proven design, method and analysis like semi-structured interviews and thematic analysis explained by Braun and Clark were used. To

ensure honesty the authors have made sure that they have been working with full transparency during the project without any interest to angle the results in any direction. Information that the authors were nursing students from the Swedish Red Cross University and necessary information regarding the study were presented to the participants. Respect for both included humans and for the society and environment during the study was ensured, by for example reassuring the participants that they could choose to end the interviews at any point without having any questions asked or any consequences followed. All the information regarding participating in the study was explained in the informed consent which was provided to the participants before the study began. They were carefully informed that data from the interview would be treated with full confidentiality, so that no individual or individual information about any participant could be identified. However, Polit & Beck (2021, p.138) explain how written information should never replace any verbal questions. To ensure information about participating had been fully understood, the participants were asked if they had any doubts or questions before they signed the informed consent. The authors take full accountability for the study since it is a finishing part of their nursing exam. It is believed that the result from the study could contribute to the development of nursing in disaster-stricken areas.

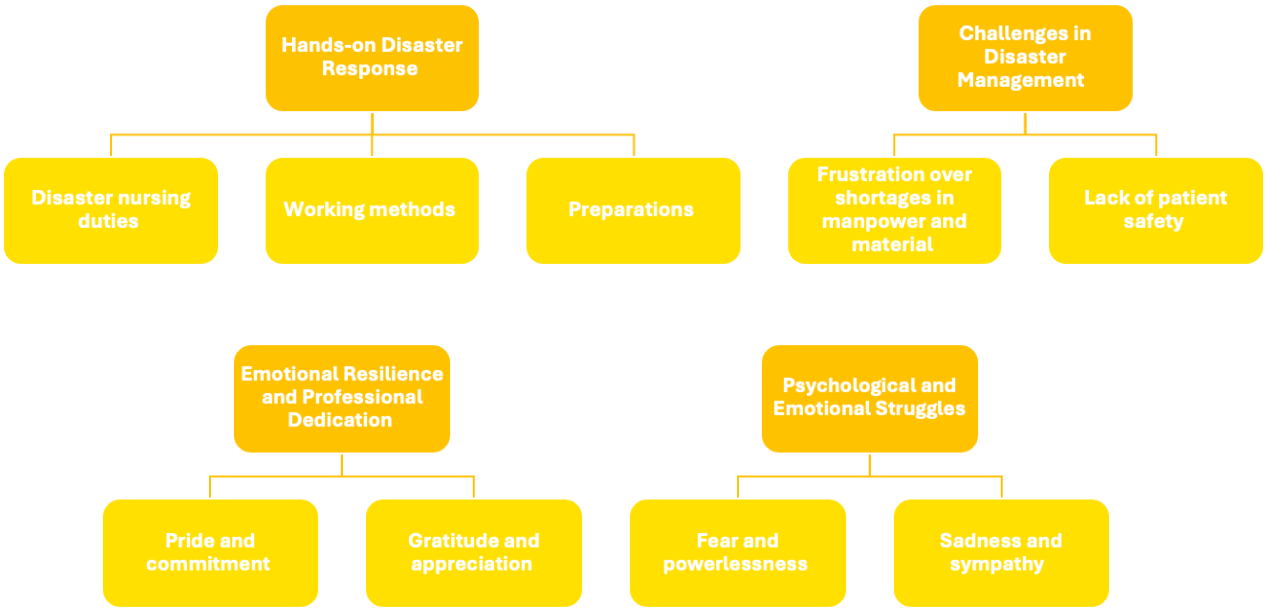
The form with guidelines for ethical considerations when writing an empirical bachelor's thesis at the Swedish Red Cross University was approved where a risk assessment was included. While doing research including human beings' ethics always comes first (Polit & Beck, 2021, p.131). These demands may be tough sometimes because they conflict with reaching the goal and producing evidence. The authors know having to ask questions about a former disaster may be distressing, but hopefully the benefits from the results will be bigger. Studies that are carried out to create increased understanding and knowledge may need to use humans as objects of study (Sandman & Kjellström, 2024, p. 371-372). There is always a risk when people participate in studies, as they might not fully understand the study's purpose and aim by not having all the information needed beforehand. That is one of the reasons the participants were set to be provided with the interview guide in advance.

A risk/benefit assessment was made before the interviews were held to ensure that the benefit ratio is higher than the risk of participating. The risk/benefit assessment includes financial, physical, emotional and social risks/benefits from participating (Polit & Beck, 2021, p. 136). Starting point on the study design should be in the interest of the participants' wellbeing and profits from participating. If not, it should at least have value to the society and science within the subject, which the authors believe it will (Sandman & Kjellström, 2024, p. 367). The risks identified were that raising the subject about disasters may be stressful for those being interviewed and have own real life experiences. Polit & Beck (2021, p. 511) explain that collecting qualitative data can be a very intensive and difficult experience, especially when the topic being researched concerns diseases or other stressful events. To avoid this risk, the authors were particularly careful with informing the participant that the interviews could be stopped whenever they wanted, without any consequences at all. Another risk identified was that the participants may feel forced to participate because the request came from their boss as the authors needed to pick the sample through a middleman. To ensure that the participants took part in the interviews voluntarily the authors ensured that the participants had understood the informed consent and asked if there were any further questions before the interviews started. The benefits identified were that the participant had a chance to express and reflect their feelings over disasters that may never have been discussed. Another benefit was seen as more general where that participating and sharing one's experience can bring the feeling of joy and make one sense of contributing to social benefits (Polit & Beck, 2021, p.136).

RESULTS

The aim of the study was to explore nurses' experience of caring for people in disaster-stricken areas in Sri Lanka. Three transcribed interviews were analysed by thematic analysis and four themes were developed with a total of nine sub-themes. The theme "Hands-on Disaster Response" has three sub-themes; "Disaster nursing duties", "Working methods" and "Preparations". The theme "Challenges in Disaster Management" has two sub-themes; "Frustration over shortages in manpower and material" and "Lack of patient safety". The theme "Emotional Resilience and Professional Dedication" has two sub-themes; "Pride and commitment" and "Thankfulness and appreciation". The theme "Psychological and Emotional Struggles" has two sub-themes; "Fear and powerlessness" and "Sadness and sympathy".

Table 3. Themes and sub-themes



Hands-on Disaster Response

The authors developed the theme 'Hands-on Disaster Response' after analysing that various moments and stages during disasters are all crucial when providing care to people in disaster-stricken areas. The nurses talked about their on-field work, how they are supposed to work and how they can prepare for a disaster. This resulted in the sub-themes; "Disaster nursing duties", "Working methods" and "Preparation".

Disaster nursing duties

Providing care during a disaster differs a lot from providing care in a nurse's everyday work. Nursing during a disaster was described as care giving in completely new situations and having to deal with patients suffering from various types of injuries, both physically and mentally. When a disaster occurs the number of patients coming to the hospital quickly changes and the conditions of caregiving become limited. The nurses interviewed described how it was impossible to care for these high numbers of injured patients all at once. The patients were taken care of as quickly as possible, but only the most acute injuries, which most often were physical injuries. The mental illnesses that were present could not

be prioritized and were therefore forced to come second. When reflecting on the disasters, several nurses could now see how this contributed to mental illnesses such as PTSD for the patients that were treated. This was exemplified by nurse (Z).

> "...we could be able to cared them as maximum with our potential. We were able care them but the most of the problem is that they are mostly affected mentally, and physically... we have calmed down them and as much as possible, we gave our best care to them, both physically and mentally... You work very quickly, but that like the post traumatic stress disorders like some syndromes may be followed there." (Interviewee Z)

The nurses described that their work during the civil war involved meeting both patients and patients' relatives, who were both affected mentally. One of the nursing duties was to check if there was a psychological issue as a consequence of the war. If so, they had to guide them to the non-governmental organizations that could support the patients, which is exemplified by the quote below.

> "...so we have to look up there psychological issues and we have to reassure them. And so we have to guide them for the NGOs. So they can support them." (Interviewee Y)

In this sub-theme it was understood that the nurses wanted to highlight mental issues during disasters as it was something extremely big that affected anyone, but unfortunately couldn't be prioritized with the resources they had. Their work was then about guiding people to other instances so they could get help.

Working methods

Different methods were used to provide care for people in disaster-stricken areas. When receiving a big group of injured who was beyond the hospital's ability to care for them all at once, the nurses described how an elaborate system for prioritizing the patients had to be followed. A patient with a critical condition could easily be missed and resulting in devastating consequences. To avoid this from happen, nurse (Y) described how they prioritized the patients through triage during a disaster.

> "We had examined the patients. Actually it should be first. Examine. Then, so we had to categorize the patients according to their critical stage like A-E like that. Then where to prepare the patient for operations immediately." (Interviewee Y)

When prioritizing patients' needs, a close and good interprofessional collaboration work was required between the different professions involved. Everyone needed to be aware of their roles, duties and responsibilities to obtain effective and safe care for the patients. Nurses were one of the professions that spent a lot of time with patients during disasters. This meant nurses were the ones that had a lot of insight into what care the patient might need. Nurse (Z) described the interprofessional collaboration and the nursing responsibilities.

> "...we have to identify the needs to the problem. And so we have to look out for them. So that are much care we are giving ... they have needs, from the physical needs and for the mental needs so we have to work with them. So actually, so we are having a moral in caring them as nurses." (Interviewee Z)

Furthermore nurse (Y) highlighted another experience from interprofessional collaboration, where it did not seem to work. Doctors working alone while nurses had to suffer from it, but mostly it was the care of the patients that was affected negatively. There was no teamwork. The nurse said that every profession

must develop so that good interprofessional development could be possible, which would only increase the care being applied during disasters. Interprofessional collaboration as a working method strengthened patient centered care, which is exemplified by the quote below.

> "What I learned from these type of incident is so we have to develop ourselves. The continues professional development or we had to interprofessional development ... they (doctors) are talking as they are talking about teamwork, teamwork, teamwork like that. Actually in reality it's not there. Actually I learned, so we have to work as a team for the betterment of the patients. We have to think about the patient, so its patient centered care." (Interviewee Y)

Working methods were very much needed for a good and safe disaster response. However, it seems as there were still situations that needed development.

Preparations

Disaster preparedness was identified as a critical factor in a hospital's ability to respond effectively. It relied on both resources and knowledge, which needed to be dependable. As disasters often are unpredictable, required resources, such as personnel, space, or materials, often varied. The nurses emphasized the importance of pre-disaster stockpiling, particularly during seasons prone to cyclones and floods. Resources and knowledge must cooperate while facing a disaster, so both need to be prepared. Along with hospital stacking resources, theoretical and practical knowledge was given. Training periods focused on putting nurses in environments and situations resembling a disaster, so they could create preparedness. This was something that had a positive effect and created reliable care for patients during a disaster, which is told by one nurse.

> "We learned to prepare, to prepare for the disaster, for expecting a disaster. So nowadays we can see that they are having a staff that stock and other things of a stock... And so periodically, we are doing the capacity building program, then workshops are going on...so they are working in a such kind of environment and situation, so they are reliable to that situation." (Interviewee Y)

To care for patients in situations they had never experienced was described as a stressful and challenging experience, especially if the nurses were not prepared. Mental and physical preparation had a positive impact on the care that was provided during disasters. With help of stocking, workshops and capacity building programmes the preparedness among the nurses has increased, and it provided a feeling of safety. This was exemplified by the quote below.

> "So actually yeah, it gives us the sense of, safety, safety. Yeah, safety. We are able to, save more lives and. And also, we can save from many injuries also. So we can save once we learn about these things, then we can get preparedness to face that. And once it occurs, we are able to save more lives. And we can help them, once they're having the injuries." (Interviewee Z)

Throughout this sub-theme it is shown that preparedness was not only something that made the nurses feel safe, but it also showed that it contributed to saving more lives and treating more injuries.

Challenges in Disaster Management

The structure in the hospital changes and the normal flow of patients is being disturbed during a disaster. Two main challenges in disaster management were told by the nurses. The theme challenges in disaster management present the lack related to both material and human which is causing a work environment that is neither safe for the patient nor the nurses. The findings from the data resulted in the sub-themes "Frustration over shortages in manpower and material" and "Lack of patient safety".

Frustration over shortages in manpower and material

Frustration related to shortages was an experience that could be seen among all nurses. Manpower and material were the main two areas where the shortages were greatest. The frustration was based on the difficulties in maintaining fundamental nursing care. All nurses explained how the manpower that was needed in the disaster could not be provided. The problem were that the same nurses had to stay at the hospital for up to 24 hours. Something one nurse called a violation of human rights.

> "So we received massive casualty at a time, so maybe 30, 40 like that. So we face to manage those people because we had major issues, shortage of nurses. So those days so we had only four nursing officers, 3 or 4 nursing officers for a shift.... so sometime if there is any mass casualty or if there is anyone absent, then we have to go for 24 hours. So it's a violation of the human rights." (Interviewee Y)

The increasing casualty also resulted in the need for more material, which was not available. The nurses gave examples on how they only could provide the basic nursing with the material they had. There were not enough number of beds for all patients, which the authors could see frustrated one nurse.

> "Yeah, the shortage of beds. Sometimes we put the clients on the floor. No, most of the time on the floor. Beds were not available..." (Interviewee X)

This of course had a big impact on patient care. The nurses told us that it was neither a sophisticated workspace nor good care for the patient. Their only choice was to give the most necessary care with the best quality they could, for example distribute medicine or dress the wounds.

> "In a shift, we had to manage maybe 40 patients like that. So there are a lot of shortcomings, so we can't go for holistic care." (Interviewee Y)

The frustration about not being able to provide holistic care because of shortages was evident among the nurses. The nurses were always thinking about the patients in the first place and always wanted to do the best out of the situation. But the nurses are not machines and these challenges in managing disasters had a negative impact on both patients and nurses as nurse (Y) explains.

Lack of patient safety

The analysis showed that nurses expressed there was a lack of patient safety. Even though the nurses did everything they could to keep the patient safety, there were shortcomings and situations too big to handle during the disasters. Some are closely related to the shortages already presented, where other shortages create a danger to the patient's safety on a deeper level. For example, nurse (Y) presents that the shortage of material also meant shortages in pp (personal protective), which itself presents a risk during disasters. But the problem with no pp when taking care of a large number of casualties is that there is a risk of cross infection through the nurses.

> "... and the personal protective equipment also they are not providing adequately. So once we need to do a dressing then PP (personal protective) equipment should be there now. So somethings we are doing the things with minimum pp. So there are chances of crossing patients once their patient get cross infection then it is our fault now." (Interviewee Y)

Despite the challenges posed by disaster situations, nurses consistently prioritized patient safety. While material shortages were one issue, the more significant challenge involved human interactions. Communication often changed under pressure, some individuals refused to listen, while others sought access to sensitive information. Maintaining patient confidentiality was essential. However, Nurse X recalled that during the war, they were forced to disclosing patient information to unauthorized individuals, as refusal could pose a threat to their own safety.

> "So the safety issue was there because you know as nurses we can't convey any messages for unauthorised people, so just we can give you to the doctors or we can use it for the medical purpose. ...we had to communicate with the armed forces, maybe the police like that, that is often so unethical." (Interviewee Y)

As the nurse says, all these decisions form ethical hard situations where the nurses' only wish is the safety of the patients. Unfortunately, there are thing bigger thing than the nurses that put this at risk during a disaster.

Emotional Resilience and Professional Dedication

The theme Emotional Resilience and Professional Dedication were developed as a result where the authors found that disaster nursing contained not only a dark and tough side. The nurses expressed a sense of pride and commitment to their profession and were found satisfaction from the attributes. The gratitude and appreciation from both patients and superiors were valuable for finding strength to continue.

Pride and commitment

The nurses' work was and will always be about nursing and caring for people. It is in the foundation of the nursing profession. Pride and commitment to the nursing profession proved to be stronger than ever while nursing in disaster-stricken areas. The pride and commitment from nursing eventually ended up in the feeling of personal pride and satisfaction. Nurse Y says that the experience nurses share with people while caring for them is unlike anything else in the world, nobody else gets those types of opportunities.

> "So nursing you know it's a caring profession. I enjoy the nursing care, it's not like other profession. So we can see the improvement and the satisfaction of the patients then and there. So we can get the satisfaction from that." (Interview Y)

Another nurse also explained that the commitment for the work and profession sometimes took the best out of them. There was no work-life balance which left the nurses with more stress at first, while they now have adapted to the situation in fact.

> "Because the nurses they are working very committedly. So once they are not getting the replacement, they are continuing their duty... so nobody is thinking about this stress of

> the nurses, but our nurses, nurses, they had to fulfil their basic needs, including hygienic needs or diet. Maybe they need some relax, but we don't have a chance to get all those things" (Interviewee Z)

This pride and commitment within the nurses were shown to be both helpful and an obstacle, and their personal life might even deteriorate. The nursing profession was a job, which the nurses showed up to every single day. But most important is that they turned up for the patients every single day. That was the thing that motivated the nurses. The pride and the commitment were based on the will to care for other people.

Gratitude and appreciation

Despite the difficulties regarding disasters, the authors could analyze that there were experiences of happy feelings as well. These happy feelings were based on gratitude and appreciation. It was told by one nurse from a patient perspective that they would never forget the nursing care they got, and because of the nurses they could go home in such good condition. The results were seen as personal satisfaction within the nurse and functioned as a reward for putting in hard and dedicated work.

> "Actually, it's a personal satisfaction. You know, once we give the care and the patient get out from the disease, that's a rewarding. Say it's a natural rewarding, So the rewarding is our personal satisfaction." (Interviewee Y)

This sub-theme, gratitude and appreciation were two strong concepts which mattered a lot to people regardless their role, even in the hardest situations where everything happens at a high tempo such as disasters.

Psychological and Emotional Struggles

Being psychological and emotionally affected by caring for people in disasters were feelings all interviewed nurses expressed. The nurses described feelings of being vulnerable and the possibility of getting hurt themself. They also expressed their feelings from meeting so many injured and disaster-stricken people. These feelings are described in two sub-themes; "fear and powerlessness" and "sadness and sympathy".

Fear and powerlessness

All the participating nurses had been active in their nursing profession during the Sri Lankan civil war. This was described by the nurses as mentally taxing, especially considering the many years the war lasted. The hospital was displaced several times and oppressed by the army. During one attack, many healthcare workers and patients were killed by shelling and shooting. The nurses described how they had to provide nursing care in an unsafe environment and how it contributed to a constant feeling of fear. Fear of the hospital being attacked but also fear of not knowing if family and close ones were safe at home, work or in school. Healthcare staff who challenged the army's rules or attempted to highlight injustice to humanitarian organizations were punished, either directly or through retaliation against their families. Except for fear, this resulted in a feeling of being powerless when having to do tasks not wanting to or being unable to do things that were required. Optimal care for the patients was not possible due to this oppression.

> "So it is highly impact negatively. Because, so they can talk anything because they are the people at power. So actually we are officers in this hospital, but we do not have anything. So we had to think about our own lives, our family lives. So we get conflict. So we are unable to talk on behalf of the patient. Yeah. So it makes us unhappy now." (Interviewee Y)

The sub-theme shows that control over situations regardless of bigger situations like being scared from civil war or not having the control to provide care, can have a negative impact on patient care.

Sadness and sympathy

Caring for patients in these types of disasters was described as a unique situation, not like anything else. The nurses expressed difficulty describing these types of scenes and feelings of sadness to someone who has not experienced a disaster by themselves. Meeting so many patients with serious injuries was something the nurses will never forget. All nurses had experience from working during the civil war period and when the tsunami 2004 struck. During that time, the nurses saw and heard many tragic stories of people getting injured or losing relatives due to these disasters. When caring for these patients, the nurses expressed a feeling of sadness when meeting so many people in grief. They felt sympathy for the patients when thinking about how they would have felt in the same situation. This is exemplified in the quote from nurse (Z).

> "...Nearly that sadness because of their sadness. Because of that stories I have already told you, regarding the stories. When we hear the stories. We heard that the sorrow and other things, the sadness. So because as a human being we are having those things now. So at the time we were affected mentally... So with their stories and with their sufferings. So it may affect us also." (Interview Z)

One of the nurses had the experience of losing a relative due to the tsunami of 2004 which also had a big impact on how the nurse felt when meeting patients in the same situation. This was a tragedy that the nurse was still highly affected by today.

> (Responder are getting emotionally affected and stay quiet for a while). "We also lost our relatives. They lost their organs and some hands, legs and died. We lost our life also, their life also lost." (Interviewee X)

During the sub-theme it is presented that nurses were affected mentally, but were still able to show sympathy to the patients.

DISCUSSION

Discussion of methods

The aim of the study was to explore nurses' experience of caring for people in disaster-stricken areas in Sri Lanka. A qualitative approach was chosen with semi-structured interviews as the way to collect data. Qualitative research design is a flexible approach which can give the study a holistic and more understanding view of the whole (Polit & Beck, 2021, p. 471). As the aim was to explore experiences among the nurses, a qualitative approach seemed to fit well as the nurses' holistic view and wholeness perspective could be explored. Qualitative approach made sure to collect subjective experiences from the nurses (McGrath, 2019). To evaluate the trustworthiness of the study, Lincon and Guba's framework was used. The framework includes credibility, dependability, confirmability, transferability and authenticity (Lincon & Guba, 1994, cited in Polit & Beck, 2021, p. 569).

Firstly, the authors wish to address their potential biases in relation to the present study. Bias can influence and threaten the trustworthiness of a study (Polit & Beck, 2021, p. 154). It is therefore important to be aware of own investigator bias that may occur during the study. Although the authors possessed prior knowledge of the subject, which may have influenced the data collection and analysis processes, efforts were made to reduce subjectivity. Subjectivity was minimized through ongoing critical dialogue between the authors, as well as with study peers and academic supervisors, thereby enhancing the credibility and trustworthiness of the study.

The authors critically examined the sample size and its relationship to the findings, discussing it within the framework of the concept of "information power". Information power serves as a guiding principle for evaluating whether the sample in a qualitative study is sufficiently large (Malterud et al., 2015). According to Malterud et al. (2015), five key factors influence information power. A sample may either possess high information power, requiring fewer participants, or low information power, indicating the need for a larger sample.

The first factor concerns whether the aim of the study is narrow or broad (Malterud et al., 2015). The second addresses the specificity of the sample, whether it is dense (i.e., participants closely match the study aim) or sparse. Third, the use of an established theory can enhance information power. The fourth factor involves the strength of the dialogue, in this case, the interviews. Finally, the fifth factor relates to whether the analysis strategy is case-based or cross-case. Applying these criteria to the present study, a narrow aim contributes to strong information power. The sample specificity is also high, as the participants share characteristics highly relevant to the research question. However, no well-established methodological framework (e.g., phenomenology or grounded theory) was applied, which may suggest the need for a larger sample size. The dialogue may be considered relatively weak, given that the authors conducted interviews for the first time. Although a test interview was conducted, it cannot fully replicate the dynamics of a real interview, suggesting that a larger sample may have strengthened the study. There was also discussion regarding whether the analysis was case-based or cross-case. While thematic analysis is typically associated with cross-case comparison, identifying shared patterns of meaning, the small sample size and the depth of the interviews allowed for a case-oriented exploration of each nurse's individual experience (Malterud et al., 2015).

In conclusion, while three participants are a relatively low number, and a larger sample might have enhanced the quality of the present study, some factors do indicate that the sample held strong information power.

When it comes to transferability, the authors are aware that it is limited with only three participants as it is a small sample. A small sample can however be an advantage for students with limited time for the study since it is more time-efficient and data becomes more manageable (Kvale & Brinkmann, 2021, p.156-157). Despite the low number of participants in the study, higher transferability could be maintained by describing the participants carefully and thoroughly, for example through the demographic table (Polit & Beck, 2021, p. 570). The study's authors were forced to describe the participants less clearly as a group to maintain confidentiality, due to the hospital's location and small number of teachers and employees. This could decrease the study's transferability.

It can be hard to transfer the results regarding working methods and resources as it highly relates to the type of infrastructure you work in. However, when it comes to nursing-specific psychological tools and knowledge, the authors believe they can be applied to almost any other context, as they are grounded in scientific nursing research. The nurses in the present simply describe how they utilize them. The sub-theme "Lack of patient safety" could unfortunately only provide good data from one nurse, but it is believed by the authors that it is so important it can't be left out.

Since the respondents were selected as a purposive sample and not randomly, the authors could make sure the participants in the interviews had knowledge about the subject and had the will to discuss it (Polit & Beck, 2021, p. 498). This is confirmed since the interviews ended up long and rich in content within the subject. The respondents were selected from the same hospital. This could result in selection bias and limitations of the study's transferability to nurses in other hospitals or areas. To create higher transferability, more time to arrange and implement further interviews with nurses in other hospitals and areas is required. One reason for only choosing three nurses for the interview is grounding in ethical considerations. Interviewers should value one's time and only include as many as necessary to answer the aim of the study (McGrath et al., 2019).

Semi structured interviews were chosen since the structure enables the respondents to answer questions freely and at the same time it makes sure that the aim of the study was answered (Polit & Beck, 2021, p. 514). Unstructured interviews could maybe have worked as it is a method which lets the respondents express their experience of feeling and emotions in line with the study's aim (Polit & Beck, 2021, p. 513). This is a method used when researchers are highly unaware of what the interviews could present. Since research was made about disasters in Sri Lanka before the study started, the authors had some knowledge about the subject and could predict what the responders might talk about. Therefore, an unstructured method was chosen not to be used.

An interview guide was prepared before the data collection to make sure the participants talked about the subject. Most of the questions were open ended so that participants could talk freely (Polit & Beck, 2021, p. 514). The test interview that was made helped the authors to discover shortcomings that might occur during the data collection. (McGrath, 2019). The test interview and its corrections strengthen the dependability of the data collection. The participants were supposed to receive the interview guide beforehand to make themselves familiar with the subject and have some time to reflect over which experience they wanted to talk about. However, this was not the case since participants got selected by the snowball sample on site and had little time to prepare. This may have led to that the answers were not fully thought out. On the other hand, by asking the questions to non-prepared participants could have made them rethink and go back to the situations and experiences that had biggest impact. This can have resulted in unbeautified descriptions of the nurses' experiences as close to the truth as possible. The credibility was strengthened as the authors were transparent by presenting the whole

interview guide and gave examples of sub-questions or probes that were asked. Since the participants worked as teachers for most of the time as we understood when the interviews took place, some questions were rephrased into a retrospective form. For example, “How often are you taking care of disaster-stricken patients” to “How often were you taking care of disaster-stricken patients”. The interviews were recorded which made it possible for the interviewers to keep full focus on the participants and what was told (Kvale & Brinkmann, 2021, p. 218-219). By doing so, the interviewers could register the participants’ body language or other important happenings that could have a meaning for the study's analysis and further results. The transcription of the interviews was initiated on the same day as the interviews were held. This strengthens the confirmability as the authors remember body language and tone which represents the participants true expression. If the transcriptions were made later there is a risk of forgetting this important information. One thing that made the participants feel that their anonymity would be kept is that the authors did not record their names or professional title and are only referred to as a teacher or nurse in the study.

Reflexive thematic analysis was read through constantly and used phase by phase during the data analysis. The credibility is strengthened by using a well-proven method and by describing the phases in detail. Since the authors were unfamiliar with the implementation of thematic analysis, the process was experienced as unusual and hard initially. During the analysis the codes and sub-themes often incorrectly ended up in “bucket themes” by talking about the same subject without having any shared meaning as they are supposed to (Braun et al., 2019). These earlier sub-themes did not answer the study's aim which could have reduced the study's credibility. By redoing stage three on the analysis where the “bucket themes” were found, the terms “internal homogeneity” and "external heterogeneity” helped creating new sub-themes. Based on the analysis, themes and sub-themes were developed. An example of the process when creating sub-themes and themes from codes is shown in the method to support the study's credibility. The sub-themes are presented with help of quotes from the participants. The quotes were untouched as much as possible to keep the confirmability while still providing important information related to the sub-theme. Words and emotional findings within the participants from data collection have been saved and presented in the results to keep the realistic sense and strengthen the authenticity. The authors divided the interviews between themselves while carrying through the transcriptions. To sustain credibility and avoid carelessness, the transcriptions were switched and gone through by the other author to search for mistakes that could have been made. The remaining phases of the analysis were completed by the authors together. By discussing and reflecting during each step the authors increased the study's credibility.

Dependability was strengthened as the authors made themselves familiar with both the study’s subject early in the process and the area where the interviews were conducted. Research was done about the civil war and different ethnic groups.

There is an ethical risk by participating in studies (Sandman & Kjellström, p. 372). The reason is that the participants might not have all the information and not fully understand the purpose of the study. That is why the authors’ intention was to provide the participants with the interview guide, including the aim beforehand. Since the participants were not pre-selected, this was not possible. When the participants were asked to participate in the study, the authors decided to carry on with the interviews the same day. A more ethical way would be to let the participants be more familiar with the information about the study and the interview guide and then hold the interviews the next day.

Discussion of results

The aim of the study was to explore nurses' experiences of caring for people in disaster-stricken areas in Sri Lanka. The authors wondered if and thus in which way the disaster had an impact, both physically and mentally on the nurses. Another question was how management looked based on knowledge and if nursing care in any way had to change or get affected because of disasters. The aim got answered through four different themes which were developed from Braun and Clarks thematic analysis. The results will be discussed and problematized with concepts as for example HOPE, Interprofessional collaboration, Vulnerability, Compassion, ICN and Ethics.

The first letter (H) in the Hope-model stands for Holistic health assessment and promotion (Hugelius & Adolfsson, 2019). This describes the disaster nursing role with conditions that look different from everyday nursing, which includes providing the best care possible with limited resources. The results of the study showed that the nurses' goal was to be able to provide holistic care during disasters, but that it could be challenging. The nurses worked as best as possible regarding the situation's circumstances. They described how the physical injuries were often taken care of first, and that the mental health issues most of the time often came as second. This result is consistent with the letter H in the Hope-model, since the nurses provided the best care possible. The holistic part is forgotten when only the physical injuries were able to be cared for and not the mental part, which should have been included to maintain the holistic part of the nursing care.

The results of the study presented the need for well-developed working methods when receiving big casualties and nursing in disasters. Methods such as triage and A-E were used for prioritizing patients' needs when receiving a big casualty. The nurses described the examination of patients, what care each patient needed and how they were able to provide this care with limited resources. This can be related to Step H in the HOPE model. The result from the present study also shows that disaster nursing when caring for psychological issues is about cooperation with NGOs, as the nurses had to guide both patients and patient's relatives to the NGOs. This can be seen in the definition of Step O "Organization and management of immediate response" as the disaster nursing role includes collaboration with other actors and organisations (Hugelius & Adolfsson, 2019).

The study's results highlighted how preparations and knowledge about disaster management was a big supporting factor, both regarding the outcome of caring as well as for the nurse's mental preparedness to handle the situation. An interaction between experience, knowledge and resources seems to be the key to be prepared for a disaster. The results showed how hospitals stacking materials and implementation of workshops and training for possible disasters were successful working methods when dealing with disasters. These results are seen to be similar to the working methods described by Xue-E et al. (2023). Xue-E et al. describe how knowledge regarding disaster situations and competence to practise disaster nursing care improves the quality of the care given during these situations. This is also in line with what Hugelius & Adolfsson (2019) declares in Step O from the HOPE model. In the article it is stated that nurses must have prepared knowledge and use the available resources in an adequate way during the disaster response, which will lead to better well-being and higher survival rates for the patients. The results from the preparation sub-theme can also be connected to Labrague and Hammad (2024) who explains that quality and flexibility of providing care during disasters is increased parallelly with the amount of training and knowledge about situations that might occur. This is something that was seen in the study's results, when nurses experienced an increased feeling of safety when having the right preparations for a disaster.

The results from the study presented experiences of nursing during the Sri Lankan civil war, when the Indian Ocean tsunami hit in 2004 and during more common disasters such as flooding and cyclones. Nursing during these types of complex humanitarian emergencies as well as natural disasters was described as complex and challenging situations. Shortages of both nurses and materials were a usual consequence due to disasters. Receiving large numbers of casualties at the same time, not having enough nurses on sight and therefore working very long shifts, along with shortage of material were three main problems described. These results can be seen in Abeysinghe et al. (2017), who describe how shortage of fundamental materials during a disaster were rationed to last as long as possible. The article also describes situations when care was no longer able to be provided due to shortage of materials. When receiving a big casualty, Feizolahzadeh et al. (2019) highlights different difficulties. For example, lack of intra-organizational coordination, not managing volunteers available along with lack of using other available capacities and resources, are causing an experience of shortcomings and a harder environment to provide care in. This is seen in results of the study when the nurses during these disasters experienced resembling difficulties in providing care. For instance, one nurse described the lack of teamwork between the professions and how the nurses' ability to provide care was negatively affected. The nurses in the study explained how they used to have limited knowledge about handling a big casualty and preparedness in general. The experience of shortage during these situations could be explained with a possible former inexperienced workforce, that now have been improved.

Ethics during nursing is a nurse's highest professional accountability and responsibility (ICN, 2021). The result from the study showed that ethics related to patient safety was something especially hard during disasters. The result shows how tough decision making situations occurred, where the only thing the nurses thought about was to do the ethical right thing which they were prevented from due to the circumstances. The nurses knew that communication with armed forces was unethical since sharing confidential information was not allowed, but the nurses had no other choice. Same goes for attending patients when personal protection is not provided, which could spread cross infections. These findings can be discussed against the findings in Aliakbari et al. (2014). The results in their study also concluded that patients' rights, privacy and confidentiality are something to take care of in everyday work however, it becomes highly problematic to keep during disasters. An interesting take is that nurses in that study seemed to agree that the ethical principle decision making must be fulfilled during disaster, despite the unsustainable situation. It is worth to discuss where the line goes between making the most ethical decisions and hopefully the best thing for the patient, and which situations count as too dangerous where nurses must handle confidential information about patients to protect themselves.

The result of the study showed that psychological and emotional struggle was an experience all nurses carried with them. The feeling of fear, powerlessness, and sadness all had an impact on the care given. These emotions can easily be connected to the term vulnerability which seemed to be the cause in many situations. Sellman (2005) is also talking about humans' own vulnerability, a vulnerability that comes from the inside of us. The result from the present study explains how one nurse's family member got killed during the tsunami, which induced the feeling of sadness, but is rooted in the fear and vulnerability humans have because they can lose things or people they care for. Sellman (2005) describes the second type of risk for vulnerability where individuals need to rely on others to avoid harm. This was something the patients needed according to the results from the study. The third type of vulnerable risk Sellman (2005) presents that humans who have no resources for protection could be extra vulnerable. This can be seen in the result from the present study which presents how the army came to the hospital and killed both personnel and patients. It shows that they were powerless to protect themselves.

The nurses explained how they used attributes of compassion described by Gilbert (2009) without knowing. The result showed how nurses used attributes as sympathy when paying attention and feeling the sadness because of the patient's sadness. They showed distress tolerance as they kept working through every mentally and physically tough situation. They showed sensitivity when meeting people that had lost almost everything. They showed care for well-being as they calmed people down who were very highly mentally affected by the disaster. But most of all they are meet people with warmth.

The results from the study showed that nurses work as much and as hard as they can for the benefit of the patients. They are always focusing on the patient and keeping the compassion related concept "intentionality" towards the patient. The pride and commitment in these nurses seemed to be incredibly strong during the disasters. As the results show, pride and commitment can be a helpful tool but also an obstacle. Similarities can be seen in the study by Scrymgeour et al. (2020) where the commitment was strong. Nurses wouldn't leave the patient even if their life was at stake. However, the nurses in that study explained that the feeling of pride for the work they put in was worth it. There is no doubt that the stress from these situations will have consequences. The result from the present study presented that the nurses had to work long hours without changes to fulfil personal needs which is not an uncommon phenomenon. In Yildiz and Metin's (2024) qualitative study about a disaster similar results were found. Nurses had been working for 3-days straight with limited rest. They had no opportunity to fulfill hygiene needs and hot food and water was not a sure thing. When both results are reflected in what ICNs formula in core competencies in disaster nursing says, there is no doubt these personal challenges will have an impact on the patient's care. It is also declared that health care will only have a rapid and successful disaster response if the essential prerequisite is there (ICN, 2019, p. 3).

Interprofessional collaboration was presented in the results. Different perspectives were presented, as one nurse said that everyone had clear roles and were aware of them. The nurse explained that nurses spend a lot of time with the patients and can identify needs which can be important to all different professions. However, a second nurse explained that the message might not even reach the doctor for example because there is no teamwork in the practical work. Interprofessional collaboration is crucial to enhance the effectiveness of the disaster response (Al Thobaity, 2024). A second result the nurses told in the present study was that interprofessional collaboration would enhance the patient care. According to Labrague et al. (2022) there are multiple factors which will improve from a good interprofessional collaboration, for example the patient safety and the nurses' working environment. Patient safety was something the result from the present study showed as a challenge, which a good interprofessional collaboration could help to solve. This would also improve the nurses' job situation and possibilities of providing good disaster nursing care.

CONCLUSION

The aim of the study was to explore nurses' experience of caring for people in disaster-stricken areas in Sri Lanka. The findings in the present study presented both positive and negative experiences in practical, theoretical and emotional aspects from disaster nursing. Former experiences had led to important preparations and development of working methods specific for disaster situations. These working methods enabled the care of patients to the best extent possible, given the complexity of the situations that was present. The nurses worked with commitment when caring for people despite emotional struggles and an unsafe environment. Further challenges were discovered regarding shortages and difficulties to maintain patient safety. Despite these circumstances, experiences such as pride and gratitude could be found when nursing in disaster-stricken areas. These results produce societal relevance, as nurses may be one of the most essential health care professions during crises in vulnerable areas.

Despite well-developed strategies and knowledge, the result of the study shows that disaster nursing comes with a variety of different challenges. Disasters are globally increasing which results in a future where increased knowledge regarding disaster nursing is required. Strategies for providing care in these situations must be developed to create a sustainable working environment for nurses as well as a safe health facility environment for the patients. Further research regarding working strategies such as the importance of preparation and facing a variety of shortage is proposed. Further research regarding how caring during disaster situations impact the nurse's well-being and commitment for the nursing profession is proposed as well. This future research could contribute to development of already existing working strategies and help identifying new methods for managing disasters. This could enable improvement of the quality of care given during disasters and increase the effectiveness of nursing interventions. It would also develop a better understanding regarding the nurses' wellbeing during disasters and consequently their ability to provide quality care, as well as maintain patient's safety.

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Attachment I:1 - Request letter

Enquiry regarding the conduction of a study

To the manager at Teaching Hospital - Jaffna, Sri Lanka

We, David Burgren and Clara Knautz are currently studying the Nursing program at the Swedish Red Cross University in Stockholm, Sweden. In our program, a bachelors' thesis within nursing care is included. The essay will be 15 credits. We intend to conduct our study within the course of our bachelor's thesis. The preliminary title for our study/essay is: *"Nursing staff's experience of caring for people in disaster-stricken area - A qualitative interview study"*.

The study's overall research question is: *Nursing staff's experience of caring for people affected by living in a disaster-stricken area.*

The data will be collected by interviewing three to four nursing staff at Teaching Hospital - Jaffna, Sri Lanka.
Timeframe: the data collection will be carried out from the 3rd of February 2025 and completed the 7th of February 2025.

Our supervisor is:
(Name), (Telephone number), (E-mail)

We commit to inform any concerned staff both verbally and in writing about our study. Furthermore, we commit to treat all collected data confidentially. All staff who will be contacted will retrieve an informed consent (please see attached informed consent form). All data from the study will be presented confidentially. The results from the study will be presented to anyone related to the study. After the study is accepted by the Swedish Red Cross University, it will be published in https://www.diva-portal.org/smash/search.jsf?dswid=1538 .

Attachment I:2 - Request letter

We hereby request to carry out the study as stated above at Teaching Hospital - Jaffna, Sri Lanka
Permission to carry out the data collection given by the manager:

Location and date	Signature
	Print name

Swedish Red Cross University

Box 1059

141 21 Huddinge, Sweden Tel. (+46)8-587 516 00

Attachment II:1 - Information for participant and consent form

We are nursing students at the Swedish Red Cross University in Stockholm. As a part of our education, we are conducting a bachelor's thesis in nursing.

We intend to conduct a qualitative study within the framework of our thesis course. The preliminary aim of the study is to explore: "*Nurses' experience of caring for people in disaster-stricken areas in Sri Lanka*".

Therefore, we are requesting if you want to participate in an interview regarding your experiences of caring for people in disaster-stricken area.
The interview will take approximately 30-45 minutes.

The data from the interview will be treated confidentially and presented in a form where no individual participants can be identified.

Participation is voluntary and you can discontinue the participation at any time without explanation. If you choose to not participate or if you decide to discontinue it will not affect you in any way.

The results of this study will bring increased knowledge to the area which can contribute to improved quality of care for people living in a disaster-stricken area.

If you want more information regarding this study, you can contact us by the information below.

David Burgren
(e-mail)
(Phone number)

Clara Knautz
(e-mail)
(Phone number)

Supervisor:
Petter Tinghög
(e-mail)

Swedish Red Cross University

Box 1059

141 21 Huddinge

(+46)8-587 516 00

Attachment II:2 - Information for participant and consent form

Study preliminary title: *"Nurses' experience of caring for people in disaster-stricken areas in Sri Lanka. - A qualitative interview study"*.
I have had verbal and/or written information about the study and had the possibility to ask questions. I can keep the written information.

Location and date	Signature
	Print name
- I consent to participate	

Attachment III: - Interview guide for "Nurses' experience of caring for people in disaster-stricken areas in Sri Lanka"

Opening questions

-For how long have you been a registered nurse and in what ward are you working?

-Could you describe what your everyday work looks like in the hospital?

Disasters in the current area

-Are there any kinds of disasters that are more frequent to occur in this area of Sri Lanka?

-How do these disasters affect society generally?

-Have you experienced any type of disasters while working as a nurse?

Healthcare in a disaster situation

-How is healthcare generally affected by these disaster situations?

Experiences of nursing care during a catastrophe

-How often are you taking care of patients affected by a disaster?

-Tell us about your nursing care for a disaster-stricken patient.

-What is the most challenging part while providing nursing care during a disaster?

Feelings

-Have the nursing care of patients in disasters had an impact on you emotionally? If yes, in what way?

-Could you describe a situation that had a major impact on you in your nursing role?

-What felt most rewarding while providing nursing care during a disaster?

Lesson learned

-What kind of lessons have these experiences contributed to?

Final thoughts

-Would you like to add anything to this interview?

Swedish Red Cross University

P.O. Box 1059 | SE-141 21 Huddinge, Sweden
Visiting adress: Hälsovägen 11
Telephone: +46-8 587 516 00 | www.rkh.se