



An emotional journey when encountering children in prehospital care: Experiences from ambulance nurses

Mathias Näsström^{a,*}, Lena Junehag^a, Marie Häggström^b, Malin Holmström-Rising^b

^a MidSweden University, Department of Health Sciences, Nursing, 83125 Östersund, Sweden

^b MidSweden University, Department of Health Sciences, Nursing, 85170 Sundsvall, Sweden

ARTICLE INFO

Keywords:

Ambulances

Nursing

Child

Emergency Medical Services

Reflection

Professional Competence

ABSTRACT

Background: Care encounters with children are a challenging and important task, but opportunities for such encounters are rarely available. Therefore, ambulance nurses (ANs) face difficulties in gaining experience in properly handling children, which can lead to stress for the ANs. A deeper understanding of ANs' emotions through the course of the care encounter is needed.

Aim: To describe how ambulance nurses' feel and manage their emotions before, during and after a care encounter with a child.

Methods: A qualitative approach was adopted, with content analysis being performed on seventeen individual interviews.

Findings: Three themes were identified: *Feeling worried and insecure*, *Emotional surge*, and *Mixed feelings of satisfaction and concern*.

Conclusion: The ANs experienced a range of emotions during a care encounter with children as they had little experience with it. More training and education in paediatric care could benefit ANs. The ANs use professionalism during care encounters to create a calm and secure atmosphere for families. Their will to bring about a safe journey for the child and family through the care encounter supersedes their nervousness. Reflection after a care encounter could strengthen their confidence in their professional role and reduce emotional distress in future encounters.

1. Introduction

In ambulance services, care encounters with children are an important yet challenging, task. These encounters are rare; studies indicate that about 10 % of care encounters include children as patients [1–3]. The most common causes of hospital admittance of children brought in by ambulance are accidents and poisoning followed by respiratory conditions [4].

Working in the prehospital field demands broad knowledge and skills to handle the various care encounters that take place in diverse settings [5]. The ambulance team works through the call by first preparing themselves before arriving for the care encounter. They continue the care encounter until the patient is handed over at the hospital [6]. However, ambulance nurses (ANs) experience increased stress when receiving a call regarding a child. Acute calls regarding children lead to a higher level of stress than calls regarding adults, and the ANs respond to

the former more quickly than the latter [2,7]. The ANs considered a child with pre-existing special health care needs, the dosage of medicine for them and the communication with the child and their family especially challenging [8,9].

Research has analysed certain aspects of ANs' emotional challenges that arise from care encounters. Due to the increased emotional effect of care encounters with children, comprehensively researching the emotions experienced by ANs would be advantageous. This is the rationale for this study, which is part of a larger project "Children in ambulances", that aims to assess the care of children in the prehospital field.

1.1. Aim

The study aims to describe how ambulance nurses feel and manage their emotions before, during and after a care encounter with a child.

* Corresponding author.

E-mail addresses: mathias.nasstrom@miun.se (M. Näsström), lena.junehag@miun.se (L. Junehag), marie.haggstrom@miun.se (M. Häggström), malin.holmstrom-rising@miun.se (M. Holmström-Rising).

<https://doi.org/10.1016/j.ienj.2022.101239>

Received 13 May 2022; Received in revised form 16 September 2022; Accepted 10 November 2022

Available online 25 December 2022

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2. Method

2.1. Design

Based on the study's aim, a qualitative method was considered to be best suited to gather information on the different experiences of ANs [10]. Consequently, semi-structured interviews were deemed appropriate because of the combination of structure for the researcher and freedom to elaborate for the participants [10].

2.2. Setting, procedure and participants

Approximately 850,000 calls are handled by the ambulance service in Sweden each year [6]. In Sweden, an ambulance team consists of one AN and one emergency medical technician or a registered nurse. The AN is a registered nurse who has undertaken a specialist nurse course in prehospital emergency care [11]. This study was conducted in a pre-hospital setting in three counties in northern Sweden.

Permission to conduct the study was obtained from the head of each county's ambulance department. Information regarding the study was sent by e-mail to all the ambulance personnel; these emails also contained a short film where the first author introduced himself and the study. All the ambulance personnel in the three counties were invited to participate. Consent was obtained from all participants.

The criteria for inclusion were work experience in the ambulance service for a minimum of one year and experience in care encounters with children (ages 0–17 y) as patients in the ambulance. A total of 17 (10 male and 7 female) nurses were interviewed. None had taken a specialist nurse course in paediatrics, but two had taken shorter courses in emergency paediatrics. One had experience in paediatric care. 16 of the nurses had taken one or two specialist nurse courses in ambulance, anaesthesia, or public health. The nurses' experience in ambulance service ranged from 5 to 26 years. Further on, the term ambulance nurse (AN) will be used for all participants.

2.3. Data collection

The semi-structured interviews were conducted between May and June 2021 [12]. They began with the open-ended question "Can you describe how you react when a call regarding a child comes in?", and developing questions such as "How did that make you feel?" and "Could you describe more?" were asked subsequently. The interview guide as well as the technique were tested in two pilot interviews (not included in this study), which led to no major adjustments. The interviews, lasting between 21 and 65 min, were recorded digitally and transcribed verbatim. During the analysis, the findings were translated into English. All interviews were conducted by the first author.

2.4. Data analysis

The interviews were analysed using qualitative content analysis described by Graneheim and Lundman [13]. The analysis started with reading the interviews to create a sense of the content. Then, the material was divided into three content areas: before, during and while ending the care encounter. Next, the text was categorised into meaning units, which were units of words or sentences that have something in common in their content and were relevant to the aim of the study. The meaning units were later condensed to find the core of the content. These condensed meaning units were viewed and abstracted to codes. With further abstraction, the codes were divided into themes and sub-themes based on their similarities, differences and connection to the aim. Throughout the analysis, the researchers moved back and forth to ensure that the themes and sub-themes represented the interviews [13]. All members of the research team were involved in the analysis and discussed the findings until a consensus was reached.

2.5. Ethical considerations

This study has been approved by the ethics committee in Umeå (no. 2017/222-31) and was performed according to ethical standards and the Helsinki declaration [14]. All participants received verbal and written information about the study before they consented to the study. They were informed that their participation was voluntary, that they could withdraw their consent at any time and that their answers would be treated as confidential. Although the participants were active ANs, there could arise troublesome emotions during the interview. The authors were therefore prepared to assist any participant if needed.

3. Findings

The findings resulted in three themes, *Feeling worried and insecure*, *Emotional surge* and *Mixed feelings of satisfaction and concern* with their respective subthemes presented in content areas in the following sections.

3.1. Before the care encounter

3.1.1. Feeling worried and insecure

The participants expressed insecurity regarding having a child as a patient because of their lack of experience. When the call came, their insecurity would increase, and they would have to seek confidence from their team members. This theme consisted of three subthemes: *Troubled beforehand*, *En route with feelings on edge*, and *Doubting and seeking strength together*.

3.1.1.1. Troubled Beforehand. The participants revealed insecurity regarding care encounters with children. They stated that the term child covers individuals from 0 to 17 years of age; the different levels of development posed a challenge. The insecurity was due to a lack of experience with having children as patients, few encounters with children, and the consequent difficulty in gaining experience. Some participants argued that children are not supposed to become ill or get hurt. They felt that it was hard to respond to these calls, compared to calls regarding adults. They felt an increased sense of responsibility to ensure nothing was overlooked when caring for a child, and these feelings were considered stressful.

"..now we are going to sharpen up and not miss anything." (no.10)

Insecurity was highlighted by some ANs without any type of experience with children, either as a parent or through previous work with children. At the same time, some who were parents felt prepared and calm, but were also more emotional before the care encounter.

"I don't have kids of my own, and I think that plays into the factor that I feel a little uncomfortable..." (No.8)

3.1.1.2. En Route with Feelings on Edge. The participants described the insecurity they felt during the journey to their patient, which felt as if it was their first time. They felt tense, with their senses more sensitive and on edge, and experienced an underlying feeling that nothing should go wrong and they had to step up their work. A few participants regarded children as being more interesting and challenging and that encounters with children made them feel excited.

"So, just when you get that it's a critical child, then you can feel like, damn, it's a child, like that feeling, that it's not as obvious as going on an adult sort of." (No.17)

Their reactions differed when they received additional information on the cause of the care encounter and the reported status of the child. Children with minor injuries did not create the same level of stress but, rather, feelings of relief. Information that the child was seriously ill or

not breathing brought on a surge of stress with acute fear.

“...met by a parent who comes with the child in, in his/her arms and the.. who is not alive sort of, is lifeless, that, it feels like a nightmare scenario...”(No.12)

3.1.1.3. Doubting and Seeking Strength Together. The ANs felt concerned about what and whom they were going to meet. Their task was primarily to care for not only the child but also the parents, which led to feelings of worry. They worried if the parents would trust them and in what state the parents would be in. They had thoughts about whether the parents would be calm and trusting or in an emotional state; the latter would increase stress. These thoughts gave rise to doubts and concerns about being able to perform to their best and create a calm situation.

“I reflect more about meeting the parents. Sometimes I find it difficult and that you feel a certain worry about it as well.”(No. 8)

Cooperation within the team was important for care encounters with children. How the participants handled their worries on the way to the patient depended on who their colleague was. Having experienced colleagues whom they knew personally led to feelings of comfort and trust and greater confidence in the team's ability to succeed in the care encounter. They relied on their colleague to step up if they themselves could not. Less experienced colleagues made them feel singularly responsible, lonely, and uncertain.

“...it is extra sensitive what you have around you. We are only two, and if I then feel insecure, I would like my colleague to step up and be my security also in some way.”(No.1)

3.2. During the care encounter

3.2.1. Emotional surge

The participants described how their impressions of the scene could impact their emotions and how they handled these emotions. This theme consists of two subthemes: *Managing the emotions and situation* and *Dealing with powerlessness and frustration*.

3.2.1.1. Managing the Emotions and Situation. The participants described undergoing an emotional change after arriving on the scene but before they could see the child. If they heard the child crying or screaming, they felt at ease; at least the child had the strength to protest, which was considered a good sign. They felt fear and stress that the child was seriously ill if they did not hear the child. Once they got the overall picture of the situation, they stepped into their professional role. They felt calm and confident during the care encounter and trusted their abilities. They felt relief that despite their previous worry, they could do what was expected of them.

“...once I have gone in and seen what I have to do, that, to work with, I usually, you go into some, yes, work role and then that stress disappears, for me in any case, so you become focused on what to do.”(No.12)

Some participants stated that if doubt and fear emerged, they had to be able to perform the task. They managed the situation by pretending, that is, putting up a front, that they had control of the situation despite feeling insecure.

“..but it's a bit like I'm, I'm, I shield ... I probably take away my own feelings. I cannot think that this is anyone's child who is very ill.” (No.5)

Participants who were parents expressed feelings of security and confidence in examining the child. Their experience with their own children made them feel at ease handling the child patient physically. At the same time, if the child was of the same age as their own, they could be more emotional and sensitive to the care encounter because they related the child patient to their own child. Likewise, they could relate to

the parents' worries and concerns.

“...It could have been my child or something. You may be more emotional in your care...”(No.7)

3.2.1.2. Dealing with Powerlessness and Frustration. Establishing a relationship with the child was important to the participants and could demand a great deal of creativity in trying to find the right approach for the child. The participants described how hindrances affected their emotions and made them feel powerless and frustrated. When the participants had to examine the child, but the child did not let them near or let them touch, they felt powerless and stressed. They could not break through to the child although their mission was to help.

“They scream and are in pain and are afraid, and so you want to help and go forward, and then it just gets worse, scared, more scared and screaming.” (No.9)

Parents eagerly answering questions posed to their children was perceived as disturbing, and the participants would experience feelings of irritation towards the parents.

“...a parent who interrupts and goes on and – and – and – somewhere disrupts this interaction...” (No.15)

For children with verbal limitations related to their young age, more communication with their parents was required. The participants felt distant from the child and as if they were tending more to the parents. Older children made them feel calmer because they could speak to them. They felt a closer relationship with the child, and subsequently, an easier care encounter would follow.

“The smaller ones are probably more difficult so, then it's almost more the parents that you ... feel like you – you care for them...” (No.2)

If the family spoke another native language, some participants could feel distant from both the child and parents. Retrieving information and the care encounter itself would be more challenging in those cases, and they experienced feelings of struggle.

“Parents may not understand what I'm saying. It is usually children who interpret for their parents...” (No.3)

3.3. Ending the care encounter

3.3.1. Mixed feelings of satisfaction and concern

When handing over the child at the emergency room (ER), the participants sometimes experienced ambiguous feelings but also feelings of responsibility towards the child. After the handover, they reflected and could experience both positive and negative emotions. This theme consists of two subthemes: *Handover, sometimes a challenge* and *Reflections and emotions after the care encounter*.

3.3.1.1. Handover, Sometimes a Challenge. The care of the child ends with the handover to the ER staff, which could be an emotional challenge. The participants described feeling responsible for and protective of the child; they would take extra care and make sure that the child and the family had a good transition to the ER. Some participants revealed that if the ER staff did not pay attention to the information given or did something the participants considered unnecessary, they would feel disappointed and frustrated.

After the handover, they felt the need for closure with the child because of their time together. They felt responsible for ensuring that the child understood that their mutual journey was over and that someone else would care for them. Before leaving the ER, they would make sure to say goodbye to the family and that the family had no more questions.

".. with children then I feel that then, I kind of want to go all the way to say, now we have, this is like the end.. the final station right now and so I'm done with my part." (No.14)

When closure was not possible, for example, if ER staff swarmed around the patient, the participants would feel left out.

".. feels a little strange sometimes like that, here you have gotten, created some relationship maybe and so, and then it just becomes like ... I have ... rabble a lot of parameters and say how it is and then, have a good one, bye then..." (No.4)

3.3.1.2. Reflections and Emotions After the Care Encounter. Afterward, the participants would reflect on the care encounter. They described having mixed feelings when the child did not comply with the treatment, even though they had accomplished the care encounter successfully and felt good about treating the child's condition. At the same time, they felt doubt when they performed a treatment on a child against their will. This created feelings of both relief and doubt.

"it can ... for the moment be what we had to do, but you do not feel good about it. You would have wished it had been different..." (No.16)

Likewise, the participants felt mixed emotions in cases where the outcome was not positive. Pride and satisfaction over their own efforts in a challenging situation were mixed with sadness and sympathy for the patient and the family. Both feelings were important to discuss within the team and, in more severe cases, with outside help.

"And sometimes perhaps be filled with a very strange feeling of feeling satisfied with the care even though it was a disaster for the patient and the parents." (No.9)

The participants felt that they had failed if they had not formed a connection with the parents, that is, if they could not reach through with the information and create trust. Conversely, the participants felt satisfied and proud when they left the ER with the patient's family happy.

"It is something that feels very, very good in the heart, that you could do something very good for the child and you notice in the parents that they are happy as well." (No.8)

4. Discussion

4.1. Methodological considerations

A qualitative design, which is considered suitable for describing experiences, was chosen due to the aim [10]. Although the findings from this study cannot be generalized [10], as ambulance services may differ internationally, recontextualisation of these findings is possible. A purposive sample was used to achieve trustworthiness [13]. In a short time, 17 participants signed up, which indicates that the topic is important in the prehospital field. The collected material was deemed sufficient to meet the study's aim [13,15]. The variations in terms of the participants' age, years of experience, gender, and the amount of material strengthen the study's credibility by increasing the diversity of experiences [13,16].

Reflexivity, the awareness of the researchers' own experience and education and how they can affect the research, was considered throughout the analysis [12]. The researchers have experience in emergency care and paediatric care. These different competencies and contextual experiences generated a sound discussion, which helped the researchers keep their preconceptions in place. These discussions also helped boost reflexivity and avoid prejudice in the study, and thus, should be considered a strength.

To improve trustworthiness, all interviews were conducted by the first author and transcribed verbatim. Before data collection commenced, pilot interviews were performed to strengthen credibility.

During the analysis, the researchers moved back and forth through the material until consensus was achieved, thus enhancing trustworthiness. The researchers also strived for credibility by presenting quotes related to the findings from the participants [13]. However, limitations were present too. The shortest interview lasted 21 min but was rich in content. A different sample could have led to different findings. If the sample would have included ANs with fewer years of experience, the findings could have been different.

4.2. Discussion of the findings

This study aimed to describe how ANs feel and manage their emotions before, during, and after a care encounter with a child. The results indicate that ANs feel a range of emotions throughout the care encounter. Certain feelings might reoccur, being awoken for different reasons.

4.2.1. Need for additional training

ANs experience stress and anxiety when they get called to a child, earlier shown by Jeruzal et al. [2], and our result suggests that these emotions are present even before they get the call. The rarity of care encounters and the uncertainty with children is highlighted in the interview responses. The ANs felt like beginners every time they encountered children. This feeling of uncertainty should be noticed by employers who are responsible for the ANs' work environment. The stress of caring for a child combined with the lack of experience could lead to long-term stress and ill-health amongst the ANs, and it could also impact the quality of given care. Thus, more frequent training in paediatric emergency care in ambulance service could be beneficial. The ambulance service is evolving and more patients are being assessed and treated at home with no need for transport to hospital, therefore the ANs' paediatric knowledge ought to be evolved as well. Nordén et al. [17] also concluded that there is a need for extended training, for example, through scenario training. By using scenario training, both the physical care and the interaction with the child and the parents can be taught in an environment dedicated to learning and reflecting. However, the need for more education and training seems to have been unfulfilled over the years.

4.2.2. Professional reflection

The participants expressed mixed emotions when reflecting on their effort after a care encounter with a child. To share the range of emotions with someone, from feeling proud of the effort put into the encounter, to feeling sad because of the consequences for the patient could be beneficial for the ANs, described by Brink et al. [18]. Expressing one's emotions and thoughts in a clinical or group supervision within the team might ease or defuse negative emotions as identified by Bohström et al. [19]. Reflecting on the shared experience during such supervision could strengthen the team and oneself, and increase awareness of various experiences among the colleagues. If one experienced a certain situation, it does not necessarily mean that their colleague experienced the same thing. Reflecting together might strengthen the professional role by reducing fears and worries for the next care encounter and create a learning process [18,19]. It could be vital for the employers to establish a regular routine for supervised discussion to reflect together after each care encounter with a child, and not only when there has been a critical incident which demands a professional debriefing. The reflective discussion amongst colleagues could be extremely important in the long term. Vicente et al. [20] described that defusing conversations between colleagues were the beginning of a healing process and reflecting amongst colleagues might be a part of this process.

4.2.3. Make it or break it with the team

The present findings show that trust in one's colleague could make a difference in the way insecurity is handled. The ANs expressed the importance of mutual trust and having a colleague who can take the lead

if one cannot. One might argue that this trust, or the lack of it, could affect the care encounter with the child. If a team's members have no trust in each other's capability, the care encounter can be affected negatively and result in a higher level of stress for the ANs. A trustful relationship within the team could also be vital for reflection amongst colleagues. Vicente et al. [20] found that a sense of responsibility for taking care of each other could be found within the teams. Hörberg et al. [21] found that the belonging of a good team was of great significance to personnel new to the ambulance service. The present study shows that a well-functioning team is important not only when a colleague is new but also when a challenging task needs to be performed.

4.2.4. Different Ways, same goal

The participants maintained professionalism and, in some cases, put up a front where they tried to appear calm and in control. The results suggest two different ways of handling professionalism. Firstly, there were the ones who felt calm and secure when they entered the professional role. They felt confident in their abilities and that they could handle the situation. Secondly, there were the ones who said that they had to pretend to be calm but were actually insecure about handling the situation. However, they too did what they were supposed to, but with suppressed anxiety. Vicente et al. [20] found that such emotional distancing created a sense of control. One might argue that upholding a calm front also falls under acting professional in one's efforts to create a calm encounter for the child and the family, as reasoned by Svensson et al. [22] and Waldow [23].

5. Conclusions

In the present study, a range of emotions that ambulance personnel experience throughout a care encounter with a child has been explored. Care encounters with children still seem to make ambulance personnel nervous and there is a demand for more training and education, beyond the yearly resuscitation training. A change can be made by using the knowledge and experience within the organisation. By having group supervision, knowledge and experience can be shared. It can also establish an environment where the ANs become more comfortable with sharing their perceived strengths and weaknesses, thereby relieving troublesome thoughts and emotions and consequently strengthening the team. Inviting paediatric nurses to a group supervision might be useful, as they will be able to play down concerns that might be on the ANs' minds. Ambulance service personnel must be able to handle challenging situations despite internal insecurity.

The participants use different ways of professionalism, both leading to creating a calm and secure encounter for the child and the family. It is important to explain to the ANs that both ways are equally professional and that their will to create a safe journey through the care encounter for child and family supersedes their nervousness. After the care encounter, they reflected on their emotions in an informal way. These reflective conversations are equally as important as any supervision and ought to be encouraged by employers as well as senior ANs. These reflective discussions can prove to be an important part of the learning process as they strengthen the professional role of ANs by proactively addressing their troublesome emotions before their next care encounter with a child.

Ethical Statement

This study was approved by the Regional Ethical Review Board, Umeå, Sweden (no. 2017/222-31).

Funding Source

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CRedit authorship contribution statement

Mathias Näsström: Conceptualization, Investigation, Formal analysis, Writing – original draft, Writing – review & editing. **Lena Junehag:** Conceptualization, Formal analysis, Writing – review & editing, Supervision. **Marie Häggström:** Conceptualization, Formal analysis, Writing – review & editing, Supervision. **Malin Holmström-Rising:** Conceptualization, Formal analysis, Writing – review & editing, Supervision.

Declaration of Competing Interest

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

Acknowledgment

To the nurses who openhearted and generously shared their experiences.

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