

Caring approach for patients with chest pain – Swedish registered nurses' lived experiences in Emergency Medical Services

Hillewi Carnesten ^a, Margareta Asp^a and Mats Holmberg^{a,b,c}

^aSchool of Health, Care and Social Welfare, Mälardalen University, Eskilstuna, Sweden; ^bDepartment of Ambulance Service, Region of Sörmland, Eskilstuna, Sweden; ^cCentre for Clinical Research Sörmland, Uppsala University, Eskilstuna, Sweden

ABSTRACT

Purpose: Encountering patients with chest pain is common for Registered Nurses (RNs) in Emergency Medical Services (EMS) who are responsible for the patient's medical and nursing care. From a lifeworld perspective, bodily illness is related to existential suffering, requiring knowledge to assess the situation from a holistic perspective. The aim of this study is to describe the caring approach when RNs encounter patients with chest pain.

Methods: A phenomenological methodology to capture RNs' lived experiences was chosen. Seven qualitative in-depth interviews were conducted at three ambulance stations in Sweden.

Results: The essence of the caring approach while encountering patients with chest pain comprises two constituents; "trust based on confidence and competence" and "the collegial striving towards the best possible care". Trust is two-parted; trust in oneself, and striving towards gaining the patient's trust. Competence and experience when combined, develop into confidence especially in stressful situations. The caring approach is nurtured in a well-functioning collegial team.

Conclusions: This study contributes to understanding the caring approach based on the specific patient's lifeworld in holistic EMS care. By trusting oneself, the patient, and one's colleague, RNs in EMS shift focus from medical-orientated care to a holistic lifeworld caring approach. More research is needed on trust as a phenomenon in EMS, both from caregivers' and patients' perspectives.

ARTICLE HISTORY

Accepted 7 March 2021

KEYWORDS

Caring science; lifeworld; prehospital emergency care; phenomenology; nursing science; chest pain; ambulance nurse; confidence; collegial interaction, Emergency Medical Services

Introduction

Emergency Medical Services (EMS) provide emergency care to out-of-hospital patients. Of all EMS assignments, 22% are due to chest pain. Encountering patients experiencing chest pain is thus a regular EMS assignment and a common task for registered nurses (RN's) within EMS (Burman et al., 2011; Rawshani et al., 2017). In Sweden, EMS comprises a system of Advanced Life Support (ALS) units with at least one Registered Nurse in each ALS ambulance, with or without specialist training in prehospital emergency care (Lindström et al., 2015).

In several studies of out-of-hospital patients, strong and persistent chest pain is described as an anxiety-generating and potentially life-threatening situation involving existential and bodily suffering. Chest pain may represent an urgent and life-threatening situation and patients experiencing it are in an urgent and unstable condition (Bremer et al., 2009; Herlitz et al., 2010; Holmberg et al., 2014; Thang et al., 2012).

Caring in EMS entails major challenges in encountering complex situations, with previous unknown

patients. RNs must have the ability to assess and prioritize care for patients who are acutely ill when time is short, information inadequate and resources scarce (Andersson et al., 2017; Elmqvist, 2014; O'Hara et al., 2014; Wireklint Sundström & Ekebergh, 2013). Taking charge of the scene, as well as taking responsibility for the patient's medical and nursing care, lies within the remit of the RN in charge of the patient (Andersson et al., 2017; Campeau, 2008; Poljak et al., 2006). This requires sufficient medical knowledge and adequate equipment in the ambulance to get the patient to the right place and with the right treatment on time. This is described in detail from a medical perspective in treatment guidelines (Wireklint Sundström & Dahlberg, 2011). However, only focusing on medical knowledge is described as insufficient, as taking responsibility for the patient requires RNs having the ability to holistically assess the situation from the patient's perspective in her/his context (Galvin & Todres, 2009; Suserud et al., 2013; Wireklint Sundström & Ekebergh, 2013). This means taking on the task of deeply understanding the patient's lifeworld, and has previously been called loving care in

the EMS (Wahlin et al., 1995). Moral emotions can help RNs to reflect in difficult situations and allow them to promote changes in the care of patients. This can also be the starting point for personal and professional growth and an evolution towards a more person-centred care (Jiménez-Herrera et al., 2020).

From a lifeworld perspective, bodily illness is related to existential suffering; the lived body is disturbed in its rhythm (Galvin & Todres, 2013; Rantala, 2016). Breathing, pulse, and blood pressure are commonly affected often in the presence of nausea (Gao & Zhang, 2013). All in all, the disturbed rhythm of life poses a threat to the lived body, to life. In that sense, needing to call EMS while experiencing chest pain means feelings of uncertainty (Isaksson et al., 2011), being alone and feeling abandoned (Togher et al., 2013). When the patient experiences chest pain and is unable to restore well-being independently, the RN can encounter the patient from a lifeworld perspective and understand how the illness is experienced in the lived body (Toombs, 1992). However, this requires a lifeworld led caring approach in the RN and the ability to holistically respond to patient suffering (Norberg Boysen et al., 2017). This means understanding how the patient would like to be treated regardless of the preferences of the caregiver (Galvin & Todres, 2012). Previous research from a lifeworld perspective shows that patients who experience chest pain are in need of being cared for from a holistic lifeworld led perspective (Togher et al., 2013), demanding an open holistic approach, expecting the unknown and being prepared for change when the situation quickly takes a different turn (Wireklint Sundström & Ekebergh, 2013). This is even more challenging when experiencing communication difficulties due to the lack of mutual language (Alm-Pfrunder et al., 2018). Research also shows the importance of integrating medical and caring knowledge; as an effort towards reflective practice in EMS (Holmberg & Fagerberg, 2010; Wireklint Sundström & Ekebergh, 2013) in order to properly respond to patients needs. However, research in EMS from the caring science perspective perceived by the RN is limited and needs to be expanded (Wireklint Sundström et al., 2019). There is a lack of knowledge of RNs' caring approach when encountering patients with chest pain. Therefore, the aim of this study is to describe the phenomenon of the caring approach while encountering EMS patients with chest pain from RNs' lived experiences.

Method

Design

The study had a descriptive design with a reflective lifeworld research approach (Dahlberg et al., 2008)

based on phenomenological philosophy of Merleau-Ponty (1962) to reach a deeper understanding of the phenomenon of the caring approach experienced by RNs in EMS. Reflective lifeworld research is an approach in which everyday experience is a means of describing a phenomenon. A phenomenon may be understood as an object, a matter, a "thing" or a "part" of the world as experienced by a subject. Following this, a reflective lifeworld research approach intends to, by openness describe a phenomenon as characterized in the informants' lived experiences. A lifeworld perspective means that the research persons' horizon of understanding of the phenomenon is subjective and that the researcher is open, compliant and has a sensitivity to what the research person communicates (Dahlberg et al., 2008). Seven interviews were conducted with an inductive approach in line with the descriptive phenomenological philosophy of Merleau-Ponty (Dahlberg et al., 2016; Merleau-Ponty, 1962).

Setting and participants

The study's setting was an ambulance department covering three ambulance stations in both rural and urban areas in a region in central Sweden. In consultation with the ambulance stations' operating managers, a convenient sample of RNs (Brinkmann, 2015), who were considered as rich sources of variations of lived experiences of being an RN, was used (Dahlberg et al., 2008). To be eligible for inclusion, RNs were required to have five or more years of experience from EMS. This, together with their subjective lived experiences, was judged to provide a sufficient variation necessary for the chosen method. In total, seven RNs were included in the study, five men and two women. Five were specialist-trained RNs in prehospital emergency care and one additionally in anaesthetic care. Two were not specialist trained. All informants were experienced RNs within the age range of 33 to 45 years and with 8–20 years of practice in EMS in both rural and urban areas. Besides the demographic variation, the informants they carry their own unique lifeworld. The range of professional experience is wide, which opens up for different experiences of the phenomenon. The gender variation could be more even but mirror that ambulance care is a male-dominated workplace, even if there is a development towards a more even gender distribution.

Data collection

Data were collected with individual in-depth interviews in Swedish by the first author. Each interview varied from 40 to 60 minutes and was oriented to the phenomenon caring approach. The interview started

with an open question where the informant was asked to describe an encounter with a patient with chest pain. To maintain focus on the phenomenon during the interview, informants were asked to further describe their lived experiences in various details of their caring approach. Follow-up questions were posed such as “What did you think?” “How did you feel?” “How did you act?” To obtain openness to the informants’ descriptions of the phenomenon throughout the whole interview, the interviewer consistently made no comment that would disturb or add own values or points of view (Dahlberg et al., 2008). The data were characterized by rich descriptions of the phenomenon.

Data analysis

The recorded interviews were carefully transcribed verbatim in Swedish into text by the first author and read through as a whole. The analysis was undertaken manually without data-processing software support. Meaning units of the phenomenon were extracted and ordered into clusters (Dahlberg et al., 2008). A cluster was formed out of a group of meaning units that express the same aspects of the phenomenon. The clusters were analysed regarding the meanings they had in common and formed a pattern that described the essence of the phenomenon. While writing the essence, variations emerged in the descriptions. Those variations were brought together in meaning constituents. The analysis process was characterized by a movement between the whole and the parts, until the essence and variations of the essence emerged (Dahlberg et al., 2008). The analysis was undertaken in Swedish and subsequently translated to English. The trustworthiness of the results was constantly validated by an ongoing critical discussion about different possible translations in relation to interview-data, involving all authors. Finally, a professional language review was performed and followed by the same critical authors’ discussions and amendments.

Ethical considerations

This study was conducted in accordance with the Declaration of Helsinki (2013). In line with Swedish law (SFS 2003:460), ethical permission is not required for this kind of study as it does not handle sensitive personal data. However, the study underwent an ethical review in advance at the university. Prior to the interviews, the RNs were informed about the study both verbally and in writing and informed consent was signed. Each interview started with verbal information about the aim of the study and the interview’s

procedure, pointing out that participation was voluntary. The informants were informed of the possibility to withdraw from the study at any point without stating a reason. However, there were no dropouts at any time. The study material was handled confidentially at all points. During the analysis, interview-data was coded and kept by the first author in a security-locker. Only the first author had access to the code-key. Informants were interviewed at a location chosen by them to make them feel at ease during the interview. Different locations were chosen, mostly in a home environment. Only the first author had access to the participants’ personal information. During the analysis, unidentified quotes were used. Possible risks with participation were considered regarding benefits to the study. At the same time, the risks of participating in the study were assessed as small. On project completion, interview data were stored in line with The Swedish Archives Act (SFS 1990:782).

Results

The essence of the caring approach while encountering patients with chest pain consists of a two-part trust, trust in oneself and striving towards gaining the patient’s trust. This means being responsive and present, and is based on competence and experience that are strongly associated with the ability to foresee and avoid potential complications. Competence and experience combined, develop into confidence especially in stressful situations. This leads to being open and able to rapidly perceive changes in the patient’s bodily conditions and mood. The impact of the caring approach in the patient’s bodily conditions is stressed and targeted. The caring approach is nurtured when being part of a well-functioning collegial team. In situations where the patient’s chest pain is treated successfully and the situation is perceived to be stable, the caring approach means being prepared for the situation to change. However, confidence varies, and is influenced by mood and fatigue. The essence comprises two constituents: “Trust based on confidence and competence” and “The collegial striving towards the best possible care”.

Trust based on confidence and competence

The caring approach is how trust is established between the RN and the patient. Trust is achieved by the RN’s confidence and competence, being the one responsible for the care. The caring approach provides security, partly to the patient, partly to the RN, meaning the RN feels secure while having a sense of control and predictability in the situation. Over the

years in EMS, an inner confidence grows by gaining competence developed while relying on gut feelings.

I feel calm and secure in my professional role I don't feel stressed even though the patient is very ill//I think it shows as confidence to the patient and the related others, maybe even to my colleagues//We have the situation under control. (RN no 5)

The caring approach is the foundation of the relationship between the RN and the patient who experiences chest pain. When striving towards gaining the patient's trust the RN is responsive and present. In this, the expression of the caring approach is the communication which can be both verbal and non-verbal. Communication provides a community in which the lost context can be captured. Being genuinely interested in the patient's lifeworld opens up for various care actions by the RN aiming to obtain a movement towards increased health and well-being in the patient experiencing chest pain. However, patients with chest pain are not always capable of verbal communication. To sit near each other facilitates interpretation of more subtle, non-verbal communication and gives a good overview of the patient in the small space of the ambulance. Eye contact is important and is facilitated by the small and confined space in the ambulance vehicle. Eye contact is indicated by the eyes described as revealing anxiety. However, eye contact can also show confidence and capability.

...to have eye contact and the patient can feel and see that I know what to do. That is important to me, that the patient knows that I can be trusted. (RN no 4)

However, there is a movement between being confident and unconfident. This is related to the assessed bodily condition of the patient. When a patient's chest pain is recognized as severe or life-threatening, lack of control dominates which means a lack of inner confidence within the RN. In these situations, the caring approach is maintained, and an individual internal emergency plan emerges.

...now I understand these impressions more than before, when I was new//I got the same impressions before but I didn't understand why, so it became more of an anxiety within me, when I saw a patient affected by chest pain. (RN no 3)

In such situations, the caring approach involves acting calmly in front of the patient to give the impression that everything will be fine. Having a calm approach while encountering patients with chest pain is experienced as a prerequisite in obtaining the patient's trust. Acting in front of the patient then has one overall purpose: to bestow comfort. This requires having the ability to prepare an individual internal emergency plan. This is conducted by communicating with

the patient as well as the colleague. In these situations, the verbal and non-verbal communication with the patient and the colleague enhances. The limited and confined space in an ambulance vehicle then constitutes an advantage for non-verbal communication.

Being experienced also favours and enhances the chances of handling the complications of activating an internal emergency plan for the unwanted. Being supple and present enhances the chances of coping with complications when they occur. However, fatigue is an obstacle in maintaining the caring approach over time and can be caused by long, emotionally exhaustive missions as well as many missions to patients assessed as having non-urgent medical conditions.

When the patient only called to have someone to talk to and I see that the medical need does not exist ... I do not get as involved and I feel that it is an unnecessary mission when others need our help better ... //On a few occasions when we have had emotionally difficult assignments such as major accidents or child deaths and we have not been taken out of service afterwards, I have sometimes questioned why the next patient has called an ambulance for a less serious illness. Then I have had problems maintaining the caring approach and professional attitude ... (RN no 3)

The collegial striving towards the best possible care

The caring approach is nurtured by being part of a collegial team. A trustful relationship to colleagues is a good way of finding support striving towards the best possible care. Knowing each other well and being coherent are favourable. Caring for patients with chest pain then proceeds smoothly, often without verbal communication; the two colleagues are united and glance quickly at each other when both confirm the gravity of the situation.

you don't really have to talk to each other, you only look at each other, that look, then the other knows exactly what ... now it's serious and we need to handle this fast//you work faster then and talk less to get the things done. (RN no 1)

If the collegial team does not work smoothly and the patient's chest pain is assessed as severe from a medical perspective, nonverbal communication only to inform the colleague about the situation is used.

...but then I just stare at the person whom I'm working with ... and then you take on the discussion later ... (RN no 1)

Discussing future improvements is important but is done later, and not in front of the patient. The caring approach encountering patients with chest pain also includes being sensitive to how the colleague feels and what might affect his/her ability to provide good care.

If the collegial team functions, then development and maintenance of the caring approach towards the patient is facilitated.

...There are only two of us and it is important that both understand the seriousness ... if not, I will be a little bit cross, but I do not show it. I have just as high expectations for my colleague as for myself. In case of emergency, it must work smoothly ...
(RN no 2)

To maintain trust in situations when collegial interaction works less favorable, the colleague is excluded, and the team becomes the RN and the patient. The RN then takes over and reduces the influence of the colleague by directing all attention to the patient.

Discussion

Result discussion

According to our findings, the essence of the caring approach when encountering patients with chest pain consists of a two-part trust, trust in oneself and striving towards gaining the patient's trust. Developing the caring approach requires RNs being responsive and present. This corresponds to Todres et al. (2014) who describe this as a capacity to understand the insiderness of another based on both open-heartedness and open-mindedness, as well as a capacity to act on this in caring ways. The capacity to care may develop as a result. The caring approach as shown in the RNs' lived experiences has its origin in the patient's lifeworld (Dahlberg et al., 2009; Galvin & Todres, 2013). As the caregiver in a situation outside a hospital, the RN is in a power position handled by showing interest in the patient's lifeworld through a caring approach. Previous studies have shown that the patient hands over, giving his or her power of attorney to the RN when the patient reaches loss of control over the lived body and their own coping strategies do not restore health and well-being. Hence, a lifeworld led care is not only holistic but also directional, meaning moving towards the patient's well-being (Dahlberg et al., 2009). This corresponds to the present results as the caring approach also meets patients' vital bodily needs. This can be understood in the theory of the lived body, a fusion of body and soul (Merleau-Ponty, 1962), being simultaneously both subjective and objective. In the present results, patients with chest pain were considered potentially bodily unstable. This kept the RN in their

caring approach, alert and prepared for the unwanted. Supporting the health processes in a potentially life-threatening situation has great benefits (Nordgren et al., 2008). Aware of this, RNs strive towards securing the patient in this insecure situation (Togher et al., 2013). In order for this to be possible, solid caring science expertise is needed as well as the patient experiencing that his/her lifeworld is being made understandable to the RN (Galvin & Todres, 2013). Thus, this is associated with the RN's ability to foresee any potential physical and existential complications caused by chest pain. However, as also shown in the present results, bodily and existential needs are not to be divided when encountering patients with chest pain. They should rather be intertwined into a whole and the caring approach might influence the vital bodily conditions and needs (Abelsson & Lindwall, 2017).

Being confident, meaning having trust in oneself is, according to our findings, strongly connected to the perception of own competence and experience. However, competence, experience and knowledge have been previously found in EMS to cover a complex variety of areas (Wihlborg et al., 2014). In the present results, the competence of a caring approach is described as requiring confidence within the RNs. This indicates that the learning process would benefit from RNs being able to reflect on their own experience while developing a caring approach. During education, the caring approach can be seen as the foundation and motivation for further learning and development (Hörberg et al., 2011; Sandvik et al., 2014). In this scholarly process, openness to otherness and difference is accommodated (Galvin & Todres, 2009). However, the relationship between the caring approach and confidence needs to be further studied to make conclusions of specific needs by, for example, using simulation as a pedagogical method.

Aside from own competence and experience, the RNs in this study emphasize the importance of being part of a well-functioning collegial team as a foundation for the caring approach in stressful situations while encountering patients with chest pain. The importance of a well-functional team was stressed while providing care in EMS (Holmberg et al., 2020; Patterson et al., 2011). A dysfunctional and confidence-lacking collegial team is described as a cause of worry in RNs, thus having a negative impact on caring (Svensson & Fridlund, 2008). This is confirmed in a recent study by Holmberg et al. (2020) stressing the importance of reflections as a part of daily practice to develop both nursing care and to strengthen the dyadic team in EMS. The importance of communication relates to our findings of how RNs regain confidence in the situation using verbal and

nonverbal communication with colleagues as well as patients. Speaking openly in the room about which treatment needs to be carried out is a way of convincing oneself, the colleague, and the patient that the situation is under control. This can be seen as an act of togetherness, involving the RNs, the colleague, and the patient (Holopainen et al., 2014). Hence, only the individual can know the inward sense of the situation, this act of togetherness depends on the RN's caring approach based on the patient's lifeworld perspective obtaining the patient moving from being alone to being cared for, albeit temporarily (Holmberg et al., 2014; Togher et al., 2013). These findings relate to earlier studies pointing out communication with patients and significant others as important in gaining confidence in the situation and creating a good relationship with the patient (Ahl & Nyström, 2011).

Striving towards a subject–subject relation shows the intention from a caregiver's perspective to move away from the medical model when the patient is passively receiving care (Holmberg et al., 2014; Galvin & Todres, 2009). In this regard, our findings show the confined space in the ambulance vehicle as favourable. To sit near each other facilitates interpretation of more subtle, non-verbal communication and gives a good overview of the patient in the small space of an ambulance. However, the caring approach is not static and keeping the caring approach over time is not self-evident.

Methodological considerations

To assess the trustworthiness of this study, the concept's credibility, dependability, and transferability will be used (Dahlberg et al., 2008). From a phenomenological perspective, access to the world is obtained through one's subjective experience. To obtain credible findings, the selection of participants is important as their experiences constitute the data. In this study, purposive, maximum variation sampling was used. One limitation of this study may be the low number of participants. However, in line with the aim of the study, the number of interviews was assessed as sufficient as Guest et al. (2006) describe six interviews as sufficient for in-depth data in qualitative studies. We believe the number of participants was sufficient for obtaining saturation as the findings in the interviews were concordant, which strengthens the credibility and dependability (Patton, 2015). However, the findings cannot be regarded as general because they may not represent the conceptions of all RNs in EMS. However, the understanding achieved may have resonance internationally and the transferability of the findings may after consideration be possible.

The use of qualitative methods in small connected communities as in this study can expect both gains and losses. The interviews were conducted by the first author who was working as an RN at the time within the same organization as the informants. This may be understood as both a strength and a weakness regarding credibility. On one hand, the interviewer may not have to explain the field or the specifics of chest pain which is beneficial when it comes to mutual understanding between the interviewer and the informant. It may also be an advantage that the interviewer knew the informants in advance in terms of feeling secure in the interview situation. On the other hand, there is also a risk that important parts are not said if they were perceived to be self-evident. When designing a study engaging a small connected community in which informants could possibly be recognized despite the use of a code protecting, participants' confidentiality is complicated (Damianakis & Woodford, 2012). However, by being open-minded and responsive to the informants, efforts were made to prevent information being shrouded in obscurity and increase the trustworthiness of the data collection.

To make the interview take the form of a natural conversation, it was beneficial to ask the informants to describe a situation when they encountered a patient with chest pain as it facilitated an authentic picture of RNs' lifeworld in this context. A side note was that RNs working in the rural areas had richer and deeper descriptions of the phenomenon.

Dependability has been considered throughout the process, keeping in mind that preunderstandings may affect the research and attempts to bridle it have been made continuously (Dahlberg et al., 2008). For example, the interviewer was careful not to make own assumptions based on own experiences but instead pose follow-up questions to make the informant explain the phenomenon in his/her own words. In the analysis process, the interviewer's own perception has been tempered by definition and by letting the material speak for itself. This was not an attempt at objectivity but an attempt to capture the phenomenon of RNs' experiences of the caring approach. The interviewer started the research process by self-reflection and connecting to the phenomenon through awareness about own experiences and knowledge. In that way, the research process started with connection rather than detachment (Van Wijngaarden et al., 2017).

The analysis process was followed by an ongoing discussion with all authors, bridling different interpretations and pre-understandings to let the essence of the phenomenon emerge (Dahlberg et al., 2008).

The assessment of the results' transferability is to be performed by the reader. Hence, the ambition has been to provide a detailed description of the study's

context and participants' demographics. The results may be transferred to other EMS settings outside Sweden, considering the unique role that RNs have in Swedish EMS.

Conclusion

This study contributes to understanding the caring approach in holistic prehospital emergency care. Thus, the results of this study may be of importance for the future development of EMS, to understand the meaning of providing holistic lifeworld-led prehospital emergency care. Based on this study, EMS was found to cover a complex understanding of the RNs' caring approach for patients with chest pain. Even though the care of patients with chest pain, in earlier research, is mainly understood from a medical perspective, a holistic caring approach is found to be of importance. Thus, the EMS has to shift focus from a medical-oriented care to a holistic lifeworld caring approach based on the specific patient's lifeworld and uniqueness. In this, enhancing trust in oneself, the patients and colleagues are found in this study as a key aspect. Different approaches may serve this, such as strategies for development of RNs' self-wisdom, collegial supervision, team training, and/or ethical rounds. In addition, there is a need of generating theories and practical models for RNs in the EMS, to promote a lifeworld led caring approach, together with advanced medical care and treatment. Worldwide, prehospital emergency care is provided by a variety of different professionals such as EMS nurses, paramedics and/or emergency medical technicians. Hence, even though this study was undertaken on RNs in EMS, the results may be relevant to other EMS professionals as well.

Implications and further research

In recent years, research in prehospital emergency care in Sweden has focused on caring science. However, several dimensions in the RN-patient relationship still need to be explored. EMS is faceted and special considerations must be made to value the conflicts that emerge in this context (Wireklint Sundström et al., 2019). In this study, the RNs expressed that trust; striving towards and being trusted by the patient meant maintaining a caring approach when times were stressful. More research is needed on trust as a phenomenon in prehospital emergency care, both from caregivers' and especially patients' perspectives.

This study indicates that the learning process would benefit from RNs gaining confidence by reflecting on their own experience with the aim of developing a caring approach. However, the relationship

between the caring approach and confidence needs to be further studied to make conclusions of specific needs. In recent years, simulation is a method of learning specific situations and reflecting upon integrated skills. More knowledge is needed to assess whether simulation as a method can also help to develop a caring approach.

The RNs highlight the importance of being part of a functioning collegial team to stay confident and maintain a caring approach. Thus, team-development is the responsibility of both the universities educating RNs and for EMS organizations. However, more knowledge is needed on the importance of the collegial team and its impact on the caring approach in an EMS context. One question to be asked is how a lop-sided collegial team affects the caring approach? Our study also shows that fatigue is an obstacle in maintaining the caring approach over time due to long, emotionally exhaustive missions, as well as having many missions to patients who were assessed as not in need of EMS. This study does not answer how the caring approach is affected by these, but it does indicate the need for further research. Further research is also required on why RNs in sparsely populated and rural areas far away from hospital were the richest sources in describing their lived experiences when encountering patients with chest pain. This could be an indicator that time as a factor in the patient-caregiver's relationship affects the RN's ability to reflect upon their caring approach. However, this needs to be further studied.

Acknowledgments

The authors thank all the nurses participating in the study for their cooperation.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The authors received no financial support for this research or authorship. Open Access funding provided by Mälardalen University.

Notes on contributors

Hillewi Carnesten is RN, PEN and doctoral student in caring science at Mälardalen University in the project: Stress and coping in newly graduated nurses in emergency departments during the Covid-19 pandemic. She is also lecturer in medical science in the nursing program. E-mail: hillewi.carnesten@mdh.se

Margareta Asp is RN and professor in caring science at Mälardalen University. Her main research interests are

concept development in nursing, recovery, nursing education and lifeworld research. She is a research leader of a research group studying Care, Recovery and Health. E-mail: margareta.asp@mdh.se

Mats Holmberg is RN, PEN and associate professor in caring science at Linnaeus University and R&D-director at Department of Ambulance Service, Region Sörmland. His research interest is interpersonal and ethical aspects of ambulance care from a caring science perspective. He is a member of the executive board of the 'Centre of Interprofessional Collaboration within Emergency care' (CICE), Linnaeus University, E-mail: mats.holmberg@region-sormland.se

ORCID

Hillewi Carnesten  <http://orcid.org/0000-0002-6512-849X>

References

- Abelsson, A., & Lindwall, L. (2017). What is dignity in pre-hospital emergency care? *Nursing Ethics*, 24(3), 268–278. <https://doi.org/10.1177/0969733015595544>
- Ahl, C., & Nyström, M. (2011). To handle the unexpected – The meaning of caring in pre-hospital emergency care. *International Emergency Nursing*, 20(1), 33–41. <https://doi.org/10.1016/j.ienj.2011.03.001>
- Alm-Pfrunder, A. B., Falk, A. C., Falk, A. C., & Lindström, V. (2018). Prehospital emergency care nurses' strategies while caring for patients with limited Swedish–English proficiency. *Journal of Clinical Nursing (John Wiley & Sons, Inc.)*, 27(19–20), 3699–3705. <https://doi.org/10.1111/jocn.14484>
- Andersson, H., Ullgren, A., Holmberg, M., Karlsson, T., Herlitz, J., & Wireklint Sundström, B. (2017). Acute coronary syndrome in relation to the occurrence of associated symptoms: A quantitative study in prehospital emergency care. *International Emergency Nursing*, 7(33), 43–47. <https://doi.org/10.1016/j.ienj.2016.12.001>
- Bremer, A., Dahlberg, K., & Sandman, L. (2009). To survive out-of-hospital cardiac arrest: A search for meaning and coherence. *Qualitative Health Research*, 19(3), 323–338. <https://doi.org/10.1177/1049732309331866>
- Brinkmann, S. (2015). *InterViews: Learning the craft of qualitative research interviewing*. Sage Publications.
- Burman, R. A., Zakariassen, E., & Hunskaar, S. (2011). Acute chest pain – A prospective population based study of contacts to Norwegian emergency medical communication centres. *BMC Emergency Medicine*, 11(1), 9. <https://doi.org/10.1186/1471-227X-11-9>
- Campeau A, G.. (2008). The space-control theory of paramedic scene-management. *Symbolic Interaction*, 31(3), 285–302. <https://doi.org/10.1525/si.2008.31.3.285>
- Dahlberg, H., Ranheim, A., & Dahlberg, K. (2016). Ecological caring – Revisiting the original ideas of caring science. *International Journal of Qualitative Studies on Health and Well-being*, 11(1), 333–344. <https://doi.org/10.3402/qhw.v11.33344>
- Dahlberg, K., Dahlberg, H., & Nyström, M. (2008). *Reflective lifeworld research*. Studentlitteratur.
- Dahlberg, K., Todres, L., & Galvin, K. (2009). Lifeworld-led healthcare is more than patient-led care: An existential view of well-being. *Medicine, Health Care, and Philosophy*, 12(3), 265–271. <https://doi.org/10.1007/s11019-008-9174-7>
- Damianakis, T., & Woodford, M. R. (2012). Qualitative research with small connected communities: Generating new knowledge while upholding research ethics. *Qualitative Health Research*, 22(5), 708–718. <https://doi.org/10.1177/1049732311431444>
- Elmqvist, C. (2014). Emergency care in the encounter between patients, next of kin and different professionals at the scene of an accident and at the emergency department. *International Emergency Nursing*, 22(4), 273–273.
- Galvin, K., & Todres, L. (2012). Phenomenology as embodied knowing and sharing: Kindling audience participation. *Indo-Pacific Journal of Phenomenology*, 12(2), 1–9. <https://doi.org/10.2989/IPJP.2012.12.1.9.1122>
- Galvin, K., & Todres, L. (2013). *Caring and well-being: A lifeworld approach*. Routledge.
- Galvin, K. T., & Todres, L. (2009). Embodying nursing open-heartedness: An existential perspective. *Journal of Holistic Nursing*, 27(2), 141–149. <https://doi.org/10.1177/0898010108323303>
- Gao, Y., & Zhang, H.-J. (2013). The effect of symptoms on prehospital delay time in patients with acute myocardial infarction. *Journal of International Medical Research*, 41(5), 1724–1731. <https://doi.org/10.1177/0300060513488511>
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods*, 18(1), 59–82. <https://doi.org/10.1177/1525822X05279903>
- Herlitz, J., Wireklint Sundström, B., Bang, A., Berglund, A., Svensson, L., & Blomstrand, C. (2010). Early identification and delay to treatment in myocardial infarction and stroke: Differences and similarities. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 18(1), 48. <https://doi.org/10.1186/1757-7241-18-48>
- Holmberg, M., Forslund, K., Wahlberg, A. C., & Fagerberg, I. (2014). To surrender in dependence of another: The relationship with the ambulance clinicians as experienced by patients. *Scandinavian Journal of Caring Sciences*, 28(3), 544–551. <https://doi.org/10.1111/scs.12079>
- Holmberg, M., Nørgaard, J., Eriksson, M., & Svensson, A. (2020). Dyadic teams and nursing care: A critical incident study of nurses in the emergency medical service. *Journal of Clinical Nursing*, 29(19–20), 3743–3753. <https://doi.org/10.1111/jocn.15404>
- Holmberg, R. N. M. M., & Fagerberg, I. (2010). The encounter with the unknown: Nurses lived experiences of their responsibility for the care of the patient in the Swedish ambulance service. *International Journal of Qualitative Studies on Health and Well-being*, 5(2), 5098–5099. <https://doi.org/10.3402/qhw.v5i2.5098>
- Holopainen, G., Kasén, A., & Nyström, L. (2014). The space of togetherness – A caring encounter. *Scandinavian Journal of Caring Sciences*, 28(1), 186–192. <https://doi.org/10.1111/j.1471-6712.2012.01090.x>
- Hörberg, U., Ozolins, L. L., & Ekebergh, M. (2011). Intertwining caring science, caring practice and caring education from a lifeworld perspective – Two contextual examples. *International Journal of Qualitative Studies on Health and Well-being*, 6(4), 10363. <https://doi.org/10.3402/qhw.v6i4.10363>
- Isaksson, R. M., Brulin, C., Eliasson, M., Näslund, U., & Zingmark, K. (2011). Prehospital experiences of older men with a first myocardial infarction: A qualitative analysis within the Northern Sweden MONICA Study. *Scandinavian Journal of Caring Sciences*, 25(4), 787–797. <https://doi.org/10.1111/j.1471-6712.2011.00896.x>
- Jiménez-Herrera, M. F., Llauradó-Serra, M., Acebedo-Urdiales, S., Bazo-Hernández, L., Font-Jiménez, I., & Axelsson, C. (2020). Emotions and feelings in critical and emergency

- caring situations: A qualitative study. *BMC Nursing*, 19(1), 1–10. <https://doi.org/10.1186/s12912-020-00438-6>
- Lindström, V., Bohm, K., & Kurland, L. (2015). Prehospital care in Sweden; From a transport organization to advanced healthcare/Praktische Versorgung in Schweden; Von einer Transportorganisation zu hochentwickelter medizinischer Versorgung. *Notfall & Rettungsmedizin*, 18(2), 107. <https://doi.org/10.1007/s10049-015-1989-1>
- Merleau-Ponty, M. (1962). *Phenomenology of perception*. Routledge.
- Norberg Boysen, G., Nyström, M., Christensson, L., Herlitz, J., & Wireklint Sundström, B. (2017). Trust in the early chain of healthcare: Lifeworld hermeneutics from the patient's perspective. *International Journal of Qualitative Studies on Health and Well-being*, 12(1), 1356674. <https://doi.org/10.1080/17482631.2017.1356674>
- Nordgren, L., Asp, M., & Fagerberg, I. (2008). Support as experienced by men living with heart failure in middle age: A phenomenological study. *International Journal of Nursing Studies*, 45(9), 1344–1354. <https://doi.org/10.1016/j.ijnurstu.2007.10.005>
- O'Hara, R., Johnson, M., Hirst, E., Weyman, A., Shaw, D., Mortimer, P., Newman, C., Storey, M., Turner, J., Mason, S., Quinn, T., Shewan, J., & Siriwardena, A. N. (2014). A qualitative study of decision-making and safety in ambulance service transitions. *Health Services and Delivery Research*, 2(56), 1–138. <https://doi.org/10.3310/hsdr02560>
- Patterson, P. D., Arnold, R. M., Abebe, K., Lave, J. R., Krackhardt, D., Carr, M., Weaver, M. D., & Yealy, D. M. (2011). Variation in emergency medical technician partner familiarity. *Health Services Research*, 46(4), 1319–1331. <https://doi.org/10.1111/j.1475-6773.2011.01241.x>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice: The definitive text of qualitative inquiry frameworks and options*. SAGE Publications, Inc.
- Poljak, A., Tveith, J., & Ragneskog, H. (2006). Nursing in the prehospital emergency care – First link in the chain of caring. *Nordic Journal of Nursing Research & Clinical Studies/Vård i Norden*, 26(1), 48–51. <https://doi.org/10.1177/010740830602600110>
- Rantala, E. (2016). The meaning of being triaged to non-emergency ambulance care as experienced by patients. *International Emergency Nursing*, 25(3), 65–70. <https://doi.org/10.1016/j.ienj.2015.08.001>
- Rawshani, A., Rawshani, N., Gelang, C., Andersson, J. O., Larsson, A., Bang, A., Herlitz, J., & Gellerstedt, M. (2017). Emergency medical dispatch priority in chest pain patients due to life threatening conditions: A cohort study examining circadian variations and impact of the education. *International Journal of Cardiology*, 236, 43–48. <https://doi.org/10.1016/j.ijcard.2017.02.047>
- Sandvik, A. H., Eriksson, K., & Hilli, Y. (2014). Becoming a caring nurse – A Nordic study on students' learning and development in clinical education. *Nurse Education in Practice*, 14(3), 286–292. <https://doi.org/10.1016/j.nepr.2013.11.001>
- SFS 1990:782. *The Swedish Archives Act*. Kulturdepartementet.
- SFS 2003:460. *The Act concerning the ethical review of research involving humans*. Utbildningsdepartementet.
- Suserud, B. O., Jonsson, A., Johansson, A., & Petzall, K. (2013). Caring for patients at high speed. *Emergency Nurse*, 21(7), 14–18. <https://doi.org/10.7748/en2013.11.21.7.14.e1213>
- Svensson, A., & Fridlund, B. (2008). Experiences of and actions towards worries among ambulance nurses in their professional life: A critical incident study. *International Emergency Nursing*, 16(1), 35–42. <https://doi.org/10.1016/j.ienj.2007.10.002>
- Thang, N. D., Karlson, B. W., Bergman, B., Santos, M., Karlsson, T., Bengtson, A., Johanson, P., Rawshani, A., & Herlitz, J. (2012). Characteristics of and outcome for patients with chest pain in relation to transport by the emergency medical services in a 20-year perspective. *American Journal of Emergency Medicine*, 30(9), 1788–1795. <https://doi.org/10.1016/j.ajem.2012.02.014>
- Todres, L., Galvin, K. T., & Dahlberg, K. (2014). "Caring for insiderness": Phenomenologically informed insights that can guide practice. *International Journal of Qualitative Studies on Health and Well-being*, 9(1), 21421. <https://doi.org/10.3402/qhw.v9.21421>
- Togher, F. J., Davy, Z., & Siriwardena, A. N. (2013). Patients' and ambulance service clinicians' experiences of prehospital care for acute myocardial infarction and stroke: A qualitative study. *Emergency Medicine Journal*, 30(11), 942. <https://doi.org/10.1136/emered-2012-201507>
- Toombs, K. (1992). The meaning of illness – A phenomenological account of the different perspectives of physician and patient. In *Philosophy and medicine* (Vol. 42), p.31-49. Kluwer Academic Publishers, Series Editors: Holm, S, Rasmussen, L M.
- Van Wijngaarden, E., Meide, H. V. D., & Dahlberg, K. (2017). Researching health care as a meaningful practice: Toward a nondualistic view on evidence for qualitative research. *Qualitative Health Research*, 27(11), 1738–1747. <https://doi.org/10.1177/1049732317711133>
- Wahlin, U., Wieslander, I., & Fridlund, B. (1995). Loving care in the ambulance service. *Intensive & Critical Care Nursing*, 11(6), 306–313. [https://doi.org/10.1016/S0964-3397\(95\)80308-4](https://doi.org/10.1016/S0964-3397(95)80308-4)
- Wihlborg, J., Edgren, G., Johansson, A., & Sivberg, B. (2014). The desired competence of the Swedish ambulance nurse according to the professionals - a Delphi study. *International Emergency Nursing*, 22(3), 127–133. <https://doi.org/10.1016/j.ienj.2013.10.004>
- Wireklint Sundström, B., Bremer, A., Lindström, V., & Vicente, V. (2019). Caring science research in the ambulance services: An integrative systematic review. *Scandinavian Journal of Caring Sciences*, 33(1), 3–33. <https://doi.org/10.1111/scs.12607>
- Wireklint Sundström, B., & Dahlberg, K. (2011). Caring assessment in the Swedish ambulance services relieves suffering and enables safe decisions. *International Emergency Nursing*, 19(3), 113–119. <https://doi.org/10.1016/j.ienj.2010.07.005>
- Wireklint Sundström, B., & Ekebergh, M. (2013). How caring assessment is learnt – Reflective writing on the examination of Specialist Ambulance Nurses in Sweden. *Reflective Practice*, 14(2), 271–287. <https://doi.org/10.1080/14623943.2012.732944>
- World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. (2013). *Jama*, 310(20), 2191–2194. <https://doi.org/10.1001/jama.2013.281053>