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## ABSTRACT

### Background

Not much research has been conducted on emergency patients' and family members' experiences of encountering care providers and receiving care in non-conveyance situations. This knowledge is required to develop the quality and safety of emergency care.

### Aim

The aim of the study was to describe patients' and family members' experiences concerning encounters with emergency care providers and the patient's care in non-conveyance situations.

### Methods

The study is a descriptive, cross sectional survey carried out using quantitative methods. Statistical data were analysed using SPSS Statistics for Windows. The responses to an open question were analysed using inductive content analysis.

### Results

Patients and family members found that emergency care providers had acted in a professional and friendly manner. They would have expected more psychological support. Family members were less satisfied with the emergency care than patients, especially as regards psychological support and the amount of time given to the patient.

## Conclusions

Emergency care providers should take the whole family's situation into consideration and seek to promote the family's coping by providing comprehensible counselling and support.

Keywords: emergency care, patient, family member, experience, non-conveyance, quantitative research, encounter, care

## **INTRODUCTION**

Patient assessment and care are governed by law. In Finland, for example the Health Care Act [1] requires that the provision of health care shall be based on evidence and recognised treatment and operational practices. The health care provided shall be of high quality, safe and appropriately organised. The patient's health situation, treatment and potential care options must be explained in clear and comprehensible terms. [2]

## **BACKGROUND**

This article deals with patients' and family members' experiences of such essential elements of emergency care situations as the encounters with care providers and the assessment and care carried out on site of the emergency. There is little research on the topic. A few studies have been conducted from the emergency care provider perspective [3,4,5]. Up until now, the research on patients' and families' experiences has mostly dealt with emergency departments [6,7].

In all emergency care services, the encounters are typically short and fragmented. Still, rapid and efficient treatment is expected, and much more is required than just maintaining vital functions [7]. As regards the emergency care providers' clinical competence or assessment and "technical" skills, many studies have reported on patients' and family members' satisfaction [7,8]. It has, however,

been reported that according to patients, more attention is paid to their physical symptoms than psychological coping [9]. Similarly, there seems to be a tendency for emergency personnel to concentrate on technical competence and medical issues rather than on psychosocial care. According to McCarthy et al. [10], for example, 86% of the care providers' talk in acute situations consists of biomedical topics, with only 14% of psychosocial content.

Patients affected by an acute event often feel that they have abruptly lost control of their situation and are in a position of dependence [11]. Studies have revealed that staff are expected to demonstrate sensitivity to their patients' vulnerability and situation, as well as ability to holistically interpret patients' needs and support them psychosocially [12]. According to research, however, patients have often not felt treated as "whole human beings" [13] or the carers' verbal and non-verbal communication has been found poor, demonstrative of uncaring, instrumental behaviour [11].

Roles experienced by family members were explored in a study on couples' experiences of prehospital emergency care. The spouses described their roles as providers of information, assistants to emergency care staff, quiet observers, pleaders for transport to care and as caretakers of the physical environment at home. The role descriptions demonstrate how multidimensional the situation may appear from a spouse's perspective [14]. Paying attention to family

members' needs makes it possible for them to contribute to helping the patient in an emergency situation [15].

Such and similar experiences of patients and family members can be explained by the short duration of the contact and by the carer providers' focus on providing urgent physical care. Care providers find that they must primarily concentrate on life-threatening changes in the patient's vital functions and there is little time to consider patients' or family members' individual needs. The situation is especially challenging for emergency care providers if they are expected to respond to problems concerning patients' or family members' daily coping, social exclusion, exhaustion, family dynamics or mutual interaction. Emergency care providers point out that specific skills are required to support patients and family members, who suffer from anxiety, depression or delusions. They also find it difficult to identify social emergencies in families. However, despite the urgency of the situation, emergency care providers should at least be able to inform patients and families about the range of psychological support and crisis intervention services available. [16]

In recent literature, successful patient-staff encounters and communication are considered essential in providing safe care, whether in emergency departments or non-clinical settings [17, 18, 19, 20]. According to a study, care providers should aim at patient-centred communication, which is

concordant with the patient's values, needs and preferences and encourages patients' active participation in decisions regarding their health and care [18]. The interaction between the patient and care provider has been seen to have the important tasks of conveying information about the care and examinations, identifying and strengthening the patient's resources and supporting the patient's self-care by comprehensible home care instructions [9]. It has also been suggested that caring behaviour, or establishing an engaged relationship with attentiveness and committal can support the patients' health processes for example by reducing the patient's feeling of becoming objectified [12]. In addition, a phenomenological study revealed that patients may experience the communicative contact as helpful in retaining their identity throughout the unexpected event [21]. Finally, the importance of appreciative encounters with the emergency patient's family members and the provision of emotional, cognitive and social support to them are also stressed in several studies. [22]

As one study put it: Communication problems in health care may arise as a result of healthcare providers focusing on diseases and their management, rather than people, their lives and their health problems [23]. Attention paid to patients' experiences of the care received can help improve and guarantee continued quality of care. It is crucial that staff become aware of how their attitudes and treatment can influence patient well-being [12].

## **METHODS**

### **Aim**

The study seeks to produce new knowledge about out-of-hospital emergency care. The aim is to describe patients' and their family members' experiences concerning encounters with emergency care providers and the patient's care in non-conveyance situations.

### **Sample and data collection**

The study is a descriptive, cross sectional survey carried out using quantitative methods. It is part of a larger research project, in which staff, patient and family member perspectives are incorporated to gain insight into the current state of emergency care provided on site of the event.

Participants were 97 patients and 72 family members. The patients had received emergency care on site and they had not been transported to hospital emergency department. The data were collected in one hospital district serving approximately 200, 000 inhabitants in Finland. The size of the original target group,

deemed adequate by statistics experts, was 378 (N) patients and 376 (N) family members. The response rates were 26% for patients and 19% for family members.

A questionnaire based on earlier literature and interviews of patients and family members was developed for this study specifically [24, 25]. An expert panel of four researchers examined the questionnaire for content, clarity, comprehensibility and response time. The family members' questionnaire was a modified version of the one developed for patients. The instrument contained background questions (6 for patients and 7 for family members), 15 Likert-type items on encountering emergency care staff, 19 Likert items concerning the assessment and care situation and one open question requesting respondents' evaluation of the assessment and care carried out on site. The background questions for patients concerned their age, sex, marital status, education, life situation and the person who had made the emergency call. The Likert scale comprised 7 response options: fully disagree, disagree, somewhat disagree, somewhat agree, agree and fully agree. For analysis, the scale was recoded into three categories by combining fully disagree and disagree; somewhat disagree and somewhat agree; and agree and fully agree. The background questions for family members involved their age, sex, marital status, education, relationship with the patient, living arrangements and potential role as a family care-giver. Respondents were divided into four categories according to age. The statements are presented in tables 2 and 3.

Addresses of patients who had received emergency care on site and had not been transported to hospital were accessed through the hospital's electronic patient registers. The patients received the questionnaire one week following the incident. The questionnaire was accompanied by a cover letter explaining the aim of the study and the voluntary nature of participation. The envelope also contained a questionnaire for a family member, to be defined by patients themselves.

The survey was conducted between September 2015 and February 2016. It was preceded by a pilot study with 21 patients and 19 family members. The results of the pilot study were evaluated by four experts of nursing science. As there was no need to make any amendments in the instrument, the results were included in the data of the actual study.

## Data analysis

The quantitative data from 97 patients and 72 family members were analysed statistically using SPSS Statistics for Windows (version 23). When necessary, statements were reversed for uniform analysis [24, 26]. Frequency distributions, cross tabulation and the chi square test, with statistical significance set at  $p < 0.05$ , were used to analyse data. Due to the limited number of responses, it was not worthwhile to use sum variables. The investigators also felt that a

presentation based on individual questionnaire items better described the content of the results.

A total of 53 patients and 26 family members responded to the open question. The number of original expressions was 90 for patients and 89 for family members. Using the font size 11 and spacing 1.5, the material amounted to 8 pages. The responses to the question (How would you evaluate the assessment and care situation?) were analysed using qualitative inductive content analysis, which is a systematic method of describing a phenomenon in a conceptual form [26]. The analysis was conducted by one of the investigators, but all authors contributed by commenting on the results. A part of a sentence or a thought or idea was selected as a unit of analysis. The data was first read through several times. Units that seemed to answer the research question were picked out into a separate Word file and converted into simplified expressions, which retained the original ideas. Expressions with similar contents were grouped together and assigned names descriptive of these categories. Following this, the categories were grouped under higher order headings, which are reported in the results. The investigator returned to the original data several times during the analysis to ensure that the interpretation remained consistent. An effort was made to describe the results as clearly as possible with help of examples. [27]

## **ETHICS**

The Finnish Advisory Board on Research Integrity guidelines on responsible conduct of research [28] were observed throughout the study process. The relevant research approvals as well as the assent of the South Ostrobothnia Hospital District's ethical committee to conduct the study were obtained. The study was guided by the Medical Research Act. The topic was ethically justified, because the knowledge produced can be used to develop the care of large numbers of patients. Participation in the study was voluntary and individual responses could not be identified in the statistical printouts or analysis. Neither can respondents be identified based on the results reported [29]. The study participants had an opportunity to communicate with researchers throughout the study, if necessary.

## **RESULTS**

In both groups, a slight majority of the respondents were women (Table 1). The patients' age varied between 20 and 86 years and their mean age was 62. In family members, the youngest respondent was 18 and the oldest 86. The mean age of family members was 60.5 years. More than half (59%) of the family members lived in the same household with the patient.

## Encounters with emergency care providers as rated by patients and family members

The majority of the respondents, or 75% of the patients and 79 % of the family members, agreed that emergency care providers had arrived fast (Table 2).

An even greater majority, 85% of the patients and 90% of the family members, reported having felt a relief at the arrival of the ambulance. The feeling had been more common in women (90%) than in men (80%). All family members and almost all patients (92%) stated that they had been treated in a friendly manner.

The emergency care providers had introduced themselves according to 60% of the patients and almost 80% of the family members. Older patients reported more often than young patients that the care providers had introduced themselves ( $p=0.020$ ). The respective results were over 80% for the over 70-year-old patients and 40-60% for the younger age groups. In all patients, 18% disagreed or disagreed fully with the statement that the care providers had introduced themselves.

Most patients (87 %) and family members (91 %) agreed that the care providers had taken into consideration the patient's individual needs. Similarly, the majority of the respondents, 83 % of the patients and over 90% of the family members, were of the opinion that the care providers had taken into consideration the care environment. Almost all participants or 96 % of the patients and 97% of

the family members agreed that the care providers' behaviour had been appropriate. In female patients, the result was 100%.

The assessment and care situation as rated by patients and family members

Almost all patients and family members were of the opinion that the emergency care providers had been professional (Table 3). The great majority, 90 % of the patients and 87 % of the family members also agreed that the emergency care had been of high quality and carried out in an unhurried, calm atmosphere. Slightly less than 80% of all respondents reported that the care providers had identified the patient's problem fast. Almost 80% of the respondents in both groups agreed that the care providers had taken into consideration the patient's holistic wellbeing. Only approximately 10 % of both patients and family members felt that their opinion had not been taken into consideration when deciding about the patient's care.

The opinions of the two groups of respondents were different as regards time given to the patient, pain alleviation, information and psychological support. Over 90% of the patients but only 66% of the family members felt that the time given to the patient had been sufficient. Nearly 90% of the patients thought that the pain alleviation had been sufficient, whereas in family members, 77% agreed with

this statement. A larger share of patients (85%) compared to family members (70%) also agreed or fully agreed with the statement that they had received adequate information about the progress of the assessment and care situation. Moreover, 68% of the patients reported having received psychological support from the care providers, while less than 50% of the family members shared this experience.

Participants were also requested to evaluate the assessment and care carried out in their own words. The content analysis of the responses to this open question produced the same four categories for both groups of respondents: Professional action of the emergency care providers; appropriate and calm assessment and care; homecare instructions and seeking care later. According to the respondents, the care providers had been professional, acting with confidence and determination. They had proceeded with great composure and their behaviour in the assessment and care situation was described as appropriate and polite.

“The paramedics acted very appropriately” (patient)

“The paramedics were calm” (family member)

The majority of the respondents stated that the homecare instructions had been clear and the patient had been informed of what to do if the situation changed later. Part of the patients had sought further treatment later according to the care providers' instructions. A few patients and family members, however,

reported that they had not received any homecare instructions. A few patients would have preferred to be transported to hospital emergency department. Similarly, some family members were of the opinion that the patient should have been transported to hospital.

“..and nothing was left unclear, and they told us to see a doctor if necessary.” (patient)

“No homecare instructions from the paramedics” (family member)

“.. the paramedics left me home. I had been lying on the floor, calling for help, for one and a half days. I ordered a new ambulance myself...The following time I fell backwards onto the kitchen floor, I had a safety phone then.” (patient)

## **DISCUSSION**

The results, based on patients' and family members' ratings, indicate that out-of-hospital emergency care providers mostly provide high quality professional care, although there is still room for improvement. As in earlier studies [7,13], it seems that care providers concentrated on treating physical symptoms, paying less attention to supporting patients and families psychologically. The needs

of both patients and their family members, however, were generally taken into consideration individually. Patients and family members experienced relief at the fast arrival of the emergency care providers. Earlier studies have also confirmed that the presence of emergency care providers increases the feeling of safety [10, 30, 31].

Family members were less satisfied with the emergency care than patients. More than half of them felt that they had not received adequate psychological support. One third of the family members were not satisfied with the amount of time given to the patients and more than one fifth were not happy with the pain alleviation or the amount of information regarding the progress of care. These aspects of emergency care still seem to require further development. Other studies have also revealed that to be able to promote the patient's coping at home, family members would often require more information and support [6, 22].

Individualised, family-centred home care counselling becomes especially important in non-conveyance situations. Family members commonly worry about the acute illness and may experience fear staying at home with the patient. In Finland, law [32] requires that patients must be given sufficient instructions on how to observe their symptoms, when to contact professional health services and where the follow-up care is arranged. Patients who have received comprehensible

counselling are less likely to get to risk situations than patients, whose counselling has been lacking [33, 34].

As the topic has not been studied in this context before, it can be internationally interesting. Out-of-hospital emergency care is being provided across the world, irrespective of the system of providing services, so development undertakings are called for in prehospital settings.

#### Limitations of the study

The external validity of the study is decreased by the low response rate. The low return may be due to restructuring of the emergency care services at the time of the survey. Part of the staff had just been recruited, so the more experienced colleagues may have been busy supporting and mentoring the new employees. Although the low response rate decreases the generalizability of the results, they can still be seen as indicative of certain aspects of prehospital emergency care and the sample can be regarded as representative of the population.

The reliability of the quantitative part of the study was evaluated from two perspectives, which related to the measurement and data collection and to the reliability of the results. Both the reliability and validity of the quantitative items

were examined. The instrument can be considered logical and clear and thus reliable in producing consistent results. The questionnaire had been pretested and evaluated by four experts, two of whom had a long work history in acute nursing and all of whom had a PhD in health sciences. This expert panel examined the questionnaire for content, clarity, comprehensibility and response time. The study can be considered internally valid, as it proceeded according to the research design, and no intervening factors could be identified. No purposive sampling was used, but all emergency patients not transported to hospital and their family members were equally eligible to participate in the study. Finally, the confirmability of the results was increased by careful analysis and reporting. Illustrative tables depicting the process of analysis and the results were included in the report to further increase the credibility and confirmability of the study [35].

Although the scope of this study is limited and does not allow complex analysis, the study provides important perspectives on prehospital emergency care in Nordic countries and worldwide. Given the lack of prior research, there is a distinct need to focus on this aspect of emergency care. This research produces new information that can be used to construct a theory on encountering patients and families in out-of-hospital emergency care.

## CONCLUSIONS

High quality encounters with patients and family members are individual and family-centred. Emergency care providers should take the whole family's situation into consideration and seek to promote the family's coping by providing comprehensible counselling and adequate time and support. This study provides insight into a phenomenon that internationally has not been studied adequately. The results have bearing on the development of nursing scientific theory and practice of encountering and counselling out-of-hospital emergency patients and family members. The results can be used when developing patient care and encounters with patients and their families in prehospital emergency care. For example, they can be useful when planning and implementing training to update care providers' skills in supporting and counselling acutely ill patients not transported to hospital. This kind of training is essential also to support family members, who have a role in monitoring the situation and ensuring the continuity of care at home.

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