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Specialist nurses' experiences when caring for preverbal children in pain in the prehospital context in Sweden

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1. Introduction

The United Nations Convention on the Rights of the Child (UNCRC) [33] defines a child as any person below 18 years of age. All children are equal and have the same rights including the right to good health. Prehospital services encounter people in need of all ages and with all kinds of health problems. Pain is a common reason for seeking prehospital care. Crucial to patients in pain is how prehospital emergency nurses (PENs) most effectively alleviate their pain.

1.1. Background

Pain is the body's warning system, a subjective, unpleasant sensory experience associated with tissue damage or impending tissue damage. Mattsson et al. [17] and Pelander et al. [26] define pain as an unpleasant emotional experience associated with threatening tissue damage. Ljusegren et al. [16] and Mattsson et al. [17] describe situation, culture and environment as being other important factors in addition to the physiological cause of the pain. Past experiences, memories, context and ability to understand their pain also affect patients' ongoing experience of pain.

Pain assessment and treatment constitute challenges for PENs since pain is a complex problem. Especially demanding is how to treat preverbal children since the children are unable to say what is wrong. This makes it difficult for PENs to provide pain management and treatment that is as personalised as possible. For this reason, relatives have a central role in the care of all preverbal children. Relatives' commitment, cooperation and communication with caregivers affect these children's health situations [16,26]. The treatment of children's pain requires PENs to understand, interpret and integrate each child's experience with their own nurturing knowledge in nursing, assisted by both the child and relative/s.

Samuel et al. [27] highlight what is important for healthcare professionals to consider from children's perspective. Children want nurses to be supportive, patient, considerate, and positive, and to communicate openly to reduce the stress entailed by the care situation. Healthcare providers' biggest challenge according to children is for nurses to create good care relationships by participating in play. This is a challenge since treatment time is limited, the environment is usually unfamiliar and children's medical conditions may be critical. Playfulness cannot always be a priority.

2. The study

2.1. Aim

Pain assessment and treatment for children are generally difficult, and particularly so with preverbal children. The aim of this study has been to examine PENs' experiences of pain management during prehospital care of preverbal children, based on PENs' given mission to alleviate patients' suffering.

2.2. Methodology

2.2.1. Study design

This study is based on qualitative care science principles. These principles and approach involve PENs focusing on their patients with the general aim of providing care that strengthens and supports health [5]. They must recognise patients' suffering as the motivation for care [20]. The caring science approach prescribes that care must be based on a comprehensive understanding of human life. Consequently, patients are the foremost experts on themselves, their suffering and wellbeing and their lives [7] and therefore healthcare professionals must have an open and flexible response to patients' experiences, in this case the preverbal children's need for help and care. Data was collected using semi-structured interviews that were then analysed inductively using content analysis as described by Elo and Kyngas [8].

2.2.2. Setting and sample

Informants included were PENs with at least three years' working experience in prehospital care. These criteria ensured that they were sufficiently experienced and had met an adequate sample of children in

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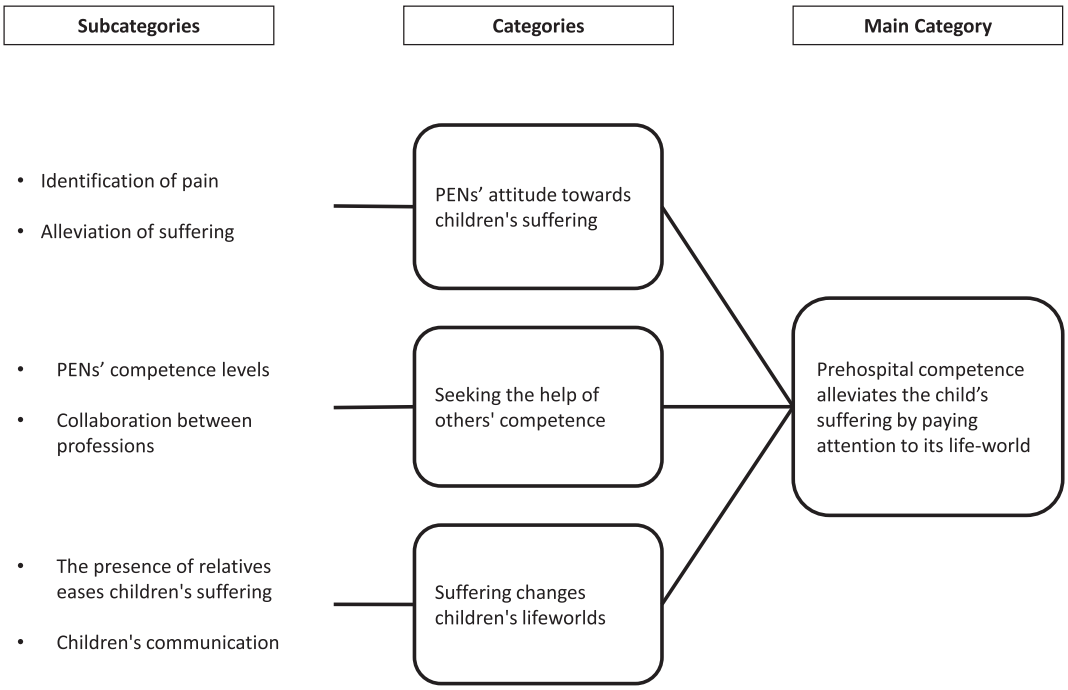

Fig. 1. Subcategories and categories describing the main category based on PEN interviews.

pain that they could later describe.

Regulations require ambulances in Stockholm to be manned by at least one PEN and one Emergency Medical Technician (EMT) [29]. PENs have a specialist ambulance nurse education, involving courses totalling 60 credits including at least 30 credits for in-depth studies in Care Sciences. The criterion for entering this programme is a Bachelor of Science Degree in Care Sciences/Nursing [24]. EMTs have undergone 40 weeks of supplementary education in prehospital emergency care, after having qualified as Assistant Nurses [3,31].

All EMS personnel follow national medical guidelines [9] containing protocols for procedures and treatments for specific symptoms and groups of diagnoses. The symptoms and diagnoses are categorised into a specific list of predetermined conditions. Today the current medical guidelines show little understanding for the differences between the assessment and management of pain in children compared to adults. Pain scales specifically adapted to children of different ages are also missing. Additionally, there is no specific training and education on children's prehospital care.

2.2.3. Data collection

Data collection, from year 2016, began with written consent from the head of one of the three ambulance contractors active in the Stockholm area. Information about the study and a repeated request for participation were sent out via E-mail to all 130 PENs. Signed consent was obtained from eight participants.

The interviews took place in peaceful environments chosen by each participant. They were all tape-recorded. They started with a short presentation of the study's aim then the researcher first asked the main question: *"Can you tell me about your experiences when taking care of preverbal children in pain in the prehospital setting?"* This was supplemented by follow-up questions such as "*What did you think about that?*", and "*Can you explain that a bit more?"* These follow-up questions led the dialogue more deeply into the PENs' experiences and were dependent upon the informants' answers, with the intention of penetrating to the essence of the phenomena discussed. Finally, the answers were summed up and the participants were asked if they wanted to contribute any additional information or comments [13].

2.2.4. Data analysis

The tape-recorded interviews were anonymised and transcribed in their entirety. Data analysis was carried out in three phases according to the content analysis method described by Elo and Kyngas [8]. This is a process of understanding moving between different abstract levels of meaning. The first, preparation phase of the analysis started with a reading of the entire transcript, to acquire an initial understanding. All the transcribed data was carefully read several times until the researchers knew the material well. After the initial reading, the transcript was slowly re-read and divided into meaningful units. The second, organisation phase, involved clustering the meaningful units into codes to uncover similarities and discrepancies in the data. By relating the codes to each other, a pattern of meanings emerged that generated a meaningful structure – the essence of the phenomenon and its constituents. When describing these constituents, the aim was to be truthful to the complexity of data. Consequently the meanings may overlap slightly. In the final, reporting phase, the essence of the phenomenon was categorised into subcategories, categories and a main category, all described here under "Findings". Descriptions of the meaningful constituents follow, to clarify the meaning further by demonstrating variations on the essence. Quotations from the informants are included as explicit examples. A certified English translator has edited the quotations to ensure that nothing of importance has been omitted or misinterpreted.

2.2.5. Ethical considerations

The study's design fulfilled the ethical principles for research prescribed by the International Council of Nurses [14]. Ethical approval was obtained from the Regional Ethics Committee at Karolinska Institutet, Stockholm [10], (No. 2016/727-31/5). All participants received written and oral information before the interviews about the purpose of the study and the confidentiality of information given in the interviews. They had the right to withdraw at any time without prejudicing their cases.

2.3. Findings

The main category *"Prehospital competence alleviates the child's*