Theatre nurses’ understanding of their work
A phenomenographic study at a hospital theatre

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Abstract

Background: The operating theatre is a place where practitioners work together in a multidisciplinary team. It invariably has a very high patient throughput and the use of sophisticated and advanced technology to support anaesthesia and surgery, is common place. Working in an operating theatre has been described as dynamic and challenging. The nurse’s perspective of her/his practice role in the operating theatre department is, however, currently poorly identified. Explicit analysis and definition of the role will help to understand and acknowledge the contribution that the theatre nurse makes to perioperative care within the multidisciplinary team. Aim: The aim of this study was to describe the theatre nurses’ work using a qualitative descriptive design with a phenomenographic approach. A purposeful sample of 15 theatre nurses from two hospitals in Sweden was selected; the subsequent interviews formed the basis of this study. Method: As in several other phenomenographic studies three specific questions guided the data collection: What aspect of your practice do you find the easiest? What aspect of your practice do you find the most challenging? What do you think is the most important aspect of your practice? What and how questions were used to probe the responses from the participants. The interviews were audio-taped and transcribed verbatim. The interviews were read several times, after which an analysis was undertaken. Findings: The analysis revealed the following three understandings of the phenomenon of ‘the work of the theatre nurse’: Firstly, that theatre nurses achieve ‘control of the situation’ by having appropriate equipment prepared in advance of the operation, maintaining the sterile field, controlling patient, instrument, implant and department logistics by advanced planning and being ‘one step ahead’. The second understanding is that the possibility of ‘good teamwork’ is enhanced by being attentive to the spoken and unspoken wishes and needs of the patient as well as all members of the team, especially the surgeon; and thirdly, theatre nurses develop their professional practice ‘through practical experience’. Conclusion: All three understandings that emerged from the study are useful for both the development of competence and quality improvement.
Introduction

According to theatre nurses, their workplace is exciting and 'getting a buzz' is a motivating factor (Bassett & Bassett 1999). Operating theatre nurses have many challenging factors at work that require teamwork using highly developed knowledge and skills and providing care in emergency situations as well as the possibility of experiencing one's practice (Bassett & Bassett 1999). Traditionally, the theatre nurse has been more orientated towards patients than towards the psychological aspects of care-giving (McCarthy & O'Mahony 2006; McGarry et al. 1999), with the main focus of the theatre nurses’ activities being technological in order to ensure safety in the practice environment (Bull & Fitzgerald 2006). Nurses tend to blend 'traditional' care and technological ability into their nursing practice (Furlong & Fitzgerald 2006). In Sweden the theatre nurse has six main responsibilities: being in charge of the medical equipment, instrumentation, hygiene standards, assisting the surgeon during the operation, caring for the patient and ensuring optimal team functioning (National Board of Health and Welfare 1999). Theatre nurses work is situated in the operating theatre with the main focus being to assist the surgeon during surgery. Working in anaesthesia and pre or post operative wards is not part of the theatre nurse’s role. Due to the fact that the healthcare environment is becoming more and more complex, theatre nurses need to start analysing their work, as the nurses' own perspective of their role is currently lacking in the multidisciplinary theatre team. This study was an attempt to outline the role of the theatre nurse. A phenomenographic approach has been selected as the same approach has been used in several studies with a similar aim, that is to describe a person's work from the individual's perspective (Sandberg 2001, Larsson 2004, Lindberg 2006).

Aim

The aim of present study was to describe theatre nurses' work from their own perspective.

Method

Phenomenography

Phenomenography is a qualitative descriptive design with open ended interview questions as the data collection method.

The phenomenographic approach

The word ‘phenomenography’ has its etymological roots in the Greek 'phainomenon' and 'graphein' i.e. 'appearance' and 'description' of those two words is 'phenomenography' - a description of appearances. The phenomenographic approach originated from studies of higher education (Martin 1986). The research objective of phenomenography is to understand the interviewees’ perspective on a specific phenomenon in the world, for example their work. People’s understanding of a phenomenon is revealed in their way of speaking and acting (Sandberg 2001). The researcher searches for different ways of understanding the phenomenon, regardless of whether the differences are between or within individuals (Martin & Booth 1997). One of the differences one might have to discover the structural framework within which various categories of understanding (Marton 1996, Marton & Booth 1997). It is crucial to describe different aspects of the same phenomenon and not to describe different aspects of different phenomena. The research leads to an outcome space (Åkerlind 2005) consisting of several descriptive categories. Although phenomenography shares many similarities with phenomenology - in both the research of human experience and awareness - it differs in purpose. In phenomenology, the search for the most constant meaning of a phenomenon, the essence, is central, while in phenomenography the aim is to find the variation/difference of the world as experienced by a person. The focus of phenomenographic variation makes it fundamentally different from phenomenology where similarities are focused on in order to permit a description of the essence of a phenomenon (Sjöström & Dahlgren 2002). Another difference between the more known method of phenomenology and the lesser known, phenomenography is for the latter there is a pre-reflective understanding of a specific phenomenon (Sandberg 1994). This is the rationale behind the interview technique of asking 'what' and 'how' questions to remain on the pre-reflective level i.e: avoiding 'why' questions, which would immediately promote reflection on the phenomenon (Marton & Booth 1997).

The sample

A purposeful sample from two Swedish hospitals was used to select the 15 theatre nurses to be interviewed: 5 out of a total of 20 theatre nurses from one of the hospitals, and 10 out of 20 theatre nurses from the other hospital. Both hospital operation theatres were considered a general theatre, including neurosurgery or thorax surgery. The interviews covered the basis of present study. Of the interviewees, 12 were women and 3 were men. Professional experience as theatre nurses ranged from 3 – 38 years, with a mean of 15 years. One of the theatre nurses had been trained outside Sweden and all were employed at the hospital where the interview took place. No exclusion criteria were applied.

Procedure

Permission to conduct the study was given by the chiefs of the surgical departments. The theatre nurses at the selected hospitals were given information about the study verbally and in writing. The theatre nurses willing to participate in the study completed a written agreement. On the days selected for interviews, those who agreed to participate were given time to do so while on duty. The interviews took place in a room next to the operating theatre. The time of the interviews varied between 15 – 30 minutes with a mean of 35 minutes.

Data collection

Three questions, most often used in phenomenographic studies, guided the data collection: What aspect of your practice do you find the easiest? What aspect of your practice do you find the most challenging? What part of your practice do you think is the most important part of your job? These open-ended questions were used to probe responses during interviews.

Data analysis

The interviews were audio-taped and transcribed verbatim. The extracted statements were colour-coded in order to allow them to be traced back to the original interview. The interviews were read several times, before the phenomenographic technique was used to analyse them. The answers to the three open-ended questions were copied and entered into a new document in the form of condensed text. In the first analysis, the 'what' categories were condensed to represent 'what' the theatre nurses said when answering the three questions. In the second analysis, the 'how' categories were condensed to answer the question ‘how’ the theatre nurses described the ‘what’ (Åkerlind 2005).

Ethical aspects

Submission of this research project to the hospital ethics committee was not necessary because the study did not involve patients. The study was however approved by the chiefs of the surgical departments. The informants were assured of confidentiality. Only the interviewer had access to the individual interview protocols.

Results

The results are based on fifteen interviews as outlined in the Method section and presented by text, quotations and summarised tables. Three different ways of understanding the three categories were identified: 'what', 'how' and 'why' questions. The consequences can be terrible if the theatre nurse forgets something important. We work in the sterile store; we are supposed to wash up, pick the instruments and render them sterile. Every nurse could do these things.

The three categories

1. 'Control of the situation’ referred to having appropriate equipment prepared in advance of the operation, and triggering factors such as machines failing or needles might be forgotten and left inside the patient. The need to be in control of the situation’ was expressed in 14 of the interviews (n=15). The sub-categories were ‘responsibility’ and ‘related work’, as exemplified by following quotations:

'I foresee and plan the operation in my mind, how the patient is laying on the operating table, how to skin prep, this makes me feel at ease when we are about to start the operation.

When I assist the surgeon I have to think ahead.

The most important thing for a nurse is to be prepared for the operation.

When I read the operation programme for a specific operation I know where the incision will be made, where on the body I am supposed to skin prep and what instruments to use.

The consequences can be terrible if the theatre nurse forgets anything inside the patient, we live with that fear.'

We work in the sterile store; we are supposed to wash up, pick the instruments and render them sterile. Every nurse could do these things.

2. 'Teamwork’ (mentioned in 14 interviews), sub category: lack of respect for the theatre nurse’s work

All but one of the theatre nurses spoke about the necessity of well functioning teamwork in the operating theatre, that included all staff and sometimes even the patient. Good teamwork consists of trust in and acceptance of each other as well as good communication. Six of the theatre nurses spoke about the lack of respect for their practice that they sometimes experienced from colleagues in other disciplines and which had a negative impact on teamwork. Four of the theatre nurses described the influence of well functioning teamwork or lack of teamwork on departmental logistics. This is illustrated by the following quotations:

It is only when I know the surgeon, as I know all about his/hers act and can prepare everything the way he/she wants, I can do that little bit extra that I know he/she wants.

If we are able to accept that people do their job in their own special way, that there are different ways of achieving the same goal, then we can trust one another.

I have to be able to see how they (the patients) are feeling in general, if they are on curvature, if they are in pain, if they are scared, I have to be aware of that too.

It is great when we have good communication in the operating theatre.'
The ‘how’ categories were based on the ‘what’ categories. For example, how do theatre nurses achieve control of the situation, as well as facilitate teamwork and professional development?

The ‘what’ categories were built by sorting and analysing each statement. When forming the ‘how’ categories, the ‘how’ categories are raised to a more abstract level. It is ‘how’ that establishes the understanding of the specific phenomenon. The question ‘How do theatre nurses achieve control of the situation?’ led to the answer ‘Theatre nurses achieve control of the situation by advance planning and being ‘one step ahead’.

The question ‘How do theatre nurses increase the chances of good teamwork?’ led to the answer ‘The possibility of good teamwork is enhanced by being attentive to the spoken and unspoken wishes and needs of the patient and all members of the team, especially the surgeon. The unspoken wishes and needs could, for example, be expressed by team members or patients’ body language. The question ‘How do theatre nurses develop professionally?’ led to the answer ‘Theatre nurses develop professionally through practical experience’.

The outcome space

The outcome space (Akerlind 2005) consists of a synthesis of the ‘what’ and ‘how’. It is ‘how’ somebody acts when carrying out a ‘what’ that describes the understanding of the specific phenomenon. Thus it is both what a person does and how they do it that forms the expressed way of understanding. The outcome space is

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Nine out of fifteen interviews held all three ‘what’ categories

Table 1 Outcome space of the ‘what’ categories

Table 2 The relationship between ‘what’ and ‘how’ categories, the outcome space.
Teamwork development ought to increase the wellbeing of staff members and lead to better patient care as well as more effective departmental logistics.

**Professional development**

Theatres nurses develop professionally through practical experience, and the theatre nurses in this study described their professional development. In the opinion of several of the informants, parts of the theatre nurses’ job is very complicated and can only be learnt by ‘doing’. One theatre nurse in this study mentioned five-year’s experience as a minimum for working as the only nurse on call. According to Gillespie & Kermode (2003), theatre nurses with the least general theatre experience exhibited the highest negative impact of stress. This agrees with some of the informants in the present study who reported suffering from negative stress when placed in charge (scrub duties) of large operations before they had the necessary experience.

Learning by ‘doing’ perhaps has an historical explanation; the theatre nurse’s role has evolved from the late 1900s. Initially the role needed to develop as a speciality area of nursing in response to the early development of surgery. It has since encountered great technical advances (McGarr & Chambers 2005). According to Bull and FitzGerald (2006), theatre nurses blend ‘traditional’ care (in terms of interpersonal contact with their patients) and technological ability in their nursing practice. It is clear that the main focus of their activities is technological and the highest status is attributed to nurses who have technical rather than interpersonal competence (Bull & FitzGerald 2006). This technical skill is developed by practising. A theoretical approach to deepening the understanding of work could be revealed by more sophisticated ways of understanding work in accordance with phenomenographic theory and method. This could probably change many of the difficult working conditions held by the operating theatre nurse. Reflection on one’s work in a group is one way to broaden understanding as well as increase work satisfaction (Lindberg 2007).

**Method discussion**

The project supervisor had the task of carrying out an enquiry audit to establish the trustworthiness and credibility of the study (Lincoln & Guba 1985). There were fifteen participants in the study; five from one hospital and ten from another hospital, which increased dependability. Saturation was achieved in the analysis of the fifteen interviews. Agreement was reached between the author and the tutor on the subject of conformity in terms of saturation and the ‘what’ and ‘how’ categories. The following discussion is presented (Poll & Beck 2005) in order to allow the reader the possibility of evaluating the trustworthiness and confirmability of the results.

In an interview study there is always a risk of the interviewees not describing the same phenomenon and the risk increases if the phenomenon is of a general character (Theman 1983). In this study the same phenomenon should have been described, as the group (theatre nurses) was homogenous and the interviews dealt with a well-known phenomenon, their work.

The more common the phenomenon studied, for example, political power (Theman 1983), the more variation there is in understanding. However, the work of the theatre nurse is generally well established and therefore less variation in opinion can be expected. In a phenomenographic interview, the focus is on practical actions in everyday work. In this study theatre nurses described their job on the basis of practical situations. This technique reduces the general problem of informants describing their own expectations of what they think the researcher wants to hear instead of talking about their true experience.

The interview was deepened by the use of ‘what’ and ‘how’ questions. It can also be questioned whether the theatre nurses who agreed to be interviewed were the most interested and positive, or those who wanted to air their problems, something that was not investigated in this study. Most authors have a pre-understanding of the subject, as otherwise they would probably have little interest in it. The author of this study is a theatre nurse whose pre-understanding is considerable, which can have positive or negative consequences. A negative consequence is the risk of subjectivity, which can be minimised by an accurate description of the method and results. A positive consequence is that without pre-understanding, the driving force to conduct the study would be lacking (Larsson 2004).

The weaknesses and limitations of the study are as follows: the two hospitals were about the same size and the operating theatres did not include specialties such as neurosurgery or thoraic surgery. This could influence the result, as well as the cultural differences between countries according to the role of the theatre nurse.

**Summary**

In qualitative research there is always the possibility of finding new information during the analysis process. The findings in this study indicate that all three categories that emerged from the study are useful for competence development as well as quality improvement. But probably the most important issue is to find ways of improving teamwork and communication in the operating theatre in order to increase personal wellbeing, understanding of one another and enable patient care. Improved teamwork and communication will hopefully stimulate discussion about how to reduce the perceived lack of respect for the theatre nurse’s work.

The author intends to continue developing this discussion.

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Professional development

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