ORIGINAL ARTICLE

An intraoperative caring model – the 'awake' patient's need for a genuine caring encounter

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Abstract

Anaesthesia nursing care during regional anaesthesia is characterized by the encounter between the 'awake' patient's own lifeworld and the nurse anaesthetist's knowledge in theory and in practice. This study aims to present an intraoperative caring model from the patient's perspective that will facilitate nurse anaesthetists' (NA) practice to enhance and support the 'awake' patient's intraoperative well-being during surgery under regional anaesthesia. The model is underpinned by a synthesis based on interviews with patients, a philosophical reflection using Merleau-Ponty's philosophy, and video recordings from orthopaedic surgeries under regional anaesthesia. The model can be used as a tool to encounter awake patients' existential needs in the intraoperative situation and to further enlighten NAs about the possible impact of their proximity, interaction and communication behaviour in the delivery of intraoperative nursing care. The model can help NAs to access, understand and learn through lived experiences, thereby deepening their professional caring skills. The model is a way to get research knowledge ready for use by NAs to reflect on what gaps need to be filled between what nurses know (research) and do (practice).

Key words

Anaesthesia care, Caring science, Intraoperative caring model, Regional anaesthesia

1 Introduction

Nurses are expected to provide care based on the latest research findings [1], because use of research in practice is said to increase effective and efficient care [2], as well as optimize patient outcomes and nursing care quality [3, 4]. This premise is supported in nursing literature, since inappropriate care has an impact on patient outcomes and ultimately, the quality of life [5]. In nursing, knowledge utilization has gained increasing importance, with the goal of improved health outcomes by translating findings from clinical studies into everyday clinical practice [6], whether the knowledge is used at the bedside, in clinical teaching or in direct patient care [7]. It has been suggested that to enhance the quality of care, nursing research should be both patient- and theory-oriented [8].

To improve patient care, the ethical code for nurses state that they should be actively involved in the development of nursing care and thereby use nursing research in practice [9]. In Sweden, as in other countries, authorities require the implementation of research findings [10]. Nurses in practice should make clinical decisions based on their unique clinical expertise, and individualize care for each patient using the best available evidence from research findings, basic science and clinical knowledge, and expert opinion [11]. However, there are hindrances to increasing the use of research and incorporating research findings in clinical practice, such as lack of time [12]; problems in interpreting and using research products when viewed as too complex, academic or statistical; or some nurses' belief that research findings lack clinical credibility [13]. Therefore, researchers need to consider whether research findings can be translated into practice and advice for nurses in their clinical practice [14], and into the nurses' immediate context in which the findings will be used [15]. Moreover, the World Health Organization (WHO) has stated that emphasis should be placed on translating knowledge into action to bridge the gap between what is known and what is actually done in caring practice [16].

With this study, we, as researchers, want to take responsibility for our previous patient- and theory-based research findings from an anaesthesia context by synthesizing and translating them into an intraoperative caring model. The model can be disseminated and implemented in caring for the 'awake' patient during surgery in regional anaesthesia, thereby making the research findings ready to be reflected on and used in clinical practice. In line with WHO's recommendations [16], the proposed intraoperative caring model can help close the gap between current knowledge about the awake patients' intraoperative needs and experiences, and how nurse anaesthetists (NAs) can meet those needs in what we present as a genuine caring encounter.

Anaesthesia context

The number of feasible surgical procedures is increasing [17, 18], as well as those possible using regional anaesthesia [19-21]. During surgery under regional anaesthesia, the patient is sedated but conscious all or most of the time, compared to surgical procedures under general anaesthesia, where the patient is unconscious [17]. With the decline in the number of patients having general anaesthesia, the care of awake patients has been predicted to become a prominent feature in nursing practice. With the increase in regional anaesthesia, support for conscious patients will become a major responsibility for nurses [23], especially since conscious patients are aware of the carers' communication and the surrounding environment during surgery [24].

As in the case of all patients undergoing surgery, awake patients should receive professional care from NAs based on caring science, but no previous nursing research has been found that explicitly describes intraoperative support for the enhanced well-being of patients who are awake and aware of their care environment and surgical treatment under regional anaesthesia. According to Lindwall [25] some nursing studies examine what awake patients remember and experience from the intraoperative period, but available nursing research has primarily been from the nurses' perspective on how to support patients, show respect, alleviate suffering and promote health.

Thus, this study aims to disseminate our qualitative patient- and theory-oriented research findings, synthesized and presented as an intraoperative caring model from the awake patient's perspective in relation to his/her existential situation and needs. This model intends to facilitate NAs' practice to reflect on, enhance and support the awake patient's intraoperative well-being during surgery under regional anaesthesia.

2 Method

2.1 Data underpinning the model

The theoretical model, *An intraoperative caring model – the awake patient's need for a genuine caring encounter* (hereafter referred to as the "model"), presented in this study is based on a synthesis of three separate patient-focused

lifeworld studies with different aspects of the same phenomenon regarding awake patients during surgery under regional anaesthesia [26-28].

The first study uncovered the meaning of being awake during surgery under regional anaesthesia. Nine interviews with patients undergoing knee or hip replacement comprised the data. The phenomenological analysis revealed that being awake during surgery can be compared with walking a tightrope due to ambiguous feelings. The patients' experiences were elucidated as follows: balancing between proximity and distance in the operating theatre, balancing between having control and being left out, the partly inaccessible body being handled by others, and NA's significant role. It was shown how the patient's body is at risk of becoming an object during surgery, when regional anaesthesia breaks the contact with parts of the body. It was revealed how a patient entrusts to the carer, especially to the NA, the responsibility of the body over which he/she no longer has control or recognize in a familiar way. Therefore, NAs need to pay attention to the patient's lived experiences and individual needs for intraoperative support [26].

The second study offered reflections on the first study's findings in relation to the French phenomenological philosopher Maurice Merleau-Ponty's works concerning the patient's being in a new situation, perception of the partly anaesthetized body, and quest for proximity to the NA. What became obvious was an understanding of the temporary disruption between the patient's partly anaesthetized body and the surrounding world, when the patient is exposed to new experiences in an unfamiliar situation. The need for an 'intraoperative caring space' where the patient and the NA can interact became evident, as well as the importance of the NA's proximity to the patient. In this 'intraoperative caring space', the NA can act as the patient's bodily extension to bridge any gaps between the patient's experiences and the situation per se. Therefore, the NA needs to reflect on the awake patient's intraoperative experiences as lived through, experiences that are only disclosed to the NA [27].

The third study interpreted and described the patient-NA interaction during surgery under regional anaesthesia, based on video recordings, where three of the nine patients from the first study participated. The data comprised 6 hours and 48 minutes of recorded material from the three patient's intraoperative situation, divided into 144 episodes related to interactions between the patients and the NAs. A hermeneutic analysis of the episodes revealed how the patient's body is the focal point for interaction and how the NA plays a major role in the patient-NA interaction, However, the patient was not always in the centre of the NA's direct attention, and the NA took ambiguous approaches, varying from attention and care to distance and inattentiveness towards the awake patient. It became obvious how the NA's professional actions at times dominated the patient's existential being in the intraoperative situation and how the NA was in either 'present' presence or "absent" presence in the patient's visual field during surgery. The findings shed light on the patient-NA interaction that could expand NAs' understanding and internal processing of their own practice [28].

2.2 Theoretical foundation and framework

The model has its theoretical foundation in lifeworld theory, with its starting point in the patient's lifeworld. The concept 'lifeworld' refers to Husserl's philosophy and theory which emphasizes the individual's experiences [29-30]. The lifeworld relates to the natural attitude, which involves a type of approach to our everyday activities [31]. The natural attitude characterizes the activity or the being of the moment. For example, in everyday activities, humans do not consciously analyze what they are experiencing, but presuppose what they are absorbed in as existing in the way they perceive it. Consequently, a person's natural attitude is basically unreflective. The lifeworld can be examined and conceptualized through reflection, and through reflection, phenomena of the world will be brought to awareness and made available for analysis, instead of being taken for granted [32-33].

The lifeworld theory is also an epistemological foundation for caring science, since it emphasizes the individual's experiences. The holistic view in caring science regards the patient as the main expert on himself/herself and is always to be seen and understood in his/her total situation. The patient's perspective is a priority in caring science that needs to be transformed into practice. The aim of caring science is to develop knowledge in order to gain a better understanding of the

patient and his/her situation, and from that point, develop an optimal care [34]. Consequently, anaesthesia nursing care is to be understood in relation to the individual awake patient and his/her experiences related to the intraoperative situation.

2.3 Synthesizing data underpinning the model

Synthesizing is the process of combining separate studies on different aspects of the same phenomenon into a more comprehensive and in-depth total [35-36] of qualitative findings in order to create a new understanding [37]. One kind of synthesis involves the integration of findings within a research programme conducted by the same investigator [38].

Synthesizing the data underpinning the model in this study was inspired by Gadamer's [39] thoughts on hermeneutic understanding and the hermeneutic circle. When using a hermeneutic approach, it is important to be aware of one's own knowledge and experiences, and according to Gadamer, it is only through one's pre-understanding that understanding is possible. One has to be aware of this pre-understanding when interpreting data so it does not take over and lead the researcher away from the data material. It is also essential to be flexible in the approach to the data and to be open to the possibility of incorporating one's own experiences and knowledge, but as stated by Dahlberg and Dahlberg [40], not to make definite what is indefinite (ibid.). In this study, all authors' pre-understandings from the three previous studies were continuously discussed to encourage an attitude as open as possible towards the data in order to challenge and reflect on our understandings.

According to Gadamer [39], pre-understanding must work together with the data material to create a deeper understanding. He writes about a fusion of horizons, where data can be seen as one horizon and the researcher's pre-understanding as another horizon. In this study, one horizon consisted of the findings from the three previous studies, and the other horizon was the authors' pre-understanding. The synthesis was also inspired by Gadamer's hermeneutic circle, where the researcher moves back and forth between the parts and the whole, enabling the fusion of horizons to create a deeper insight. Gadamer states that "we must understand the whole in terms of the detail and the detail in terms of the whole… It is a circular relationship… Our task is to expand the unity of the understood meaning centrifugally" [39].

Inspired by the hermeneutic circle, the synthesis was performed through a "dialogue" with the texts from the previous research findings and carried out in a dynamic and iterative dialectic process, moving back and forth between the texts. It was a time-consuming process of reflecting on each study's findings, as well as on all findings together, while considering the authors' pre-understanding in order not to make definite what is indefinite. Slowly, *proximity, communication* and *interaction* aggregated and became obvious as three core concepts. These core concepts are closely intertwined and overlapping, in line with the model's theoretical framework and Merleau-Ponty's [41] concept of reversibility, meaning that the contents of the concepts are constantly influenced by each other and cannot be clearly defined; they exist at the same time. The core concepts were then integrated and transformed into a more comprehensive yet abstracted whole as an intraoperative caring model to be used in the immediate clinical context by NAs caring for awake patients during surgery under regional anaesthesia.

3 Results

3.1 An intraoperative caring model – the awake patient's need for a genuine caring encounter

The model, *An intraoperative caring model – the awake patient's need for a genuine caring encounter*, is graphically presented as a jigsaw puzzle (see Figure 1) showing each piece's content. The left piece symbolizes the patient's perspective of his/her intraoperative needs and experiences in relation to the core concepts of proximity, communication and interaction. The right piece signifies how the NA can meet the aforementioned core concepts from the patient's

perspective. The centre piece presents the requirements for a genuine caring encounter to occur intraoperatively between the awake patient and the NA. All three pieces are equally needed to create a whole.

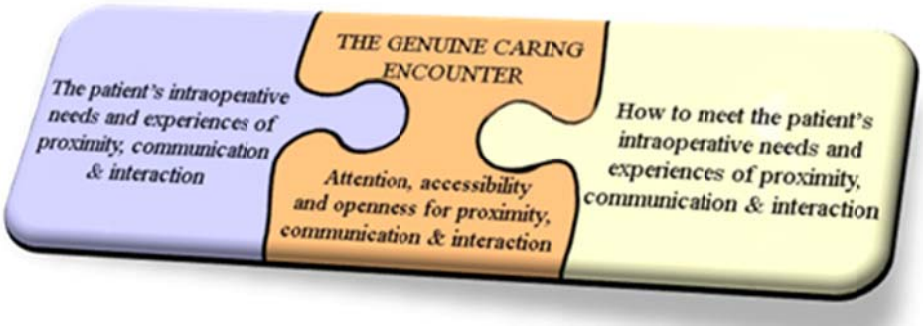

Figure 1. An intraoperative caring model – the awake patient's need for a genuine caring encounter

The patient's intraoperative needs and experiences of proximity reveal that the patient needs to know where the NA is in the operating room (OR) in order to sense that the NA is really there for the sake of the patient as a person and not as a thing. The patient needs to be able to glance at and get some response from the NA without having any special reason for doing so. At the same time, the patient's experience of the NA's proximity should be handled cautiously to avoid interfering with the NA's concentration on the work being performed on and around the patient. The patient needs to be the centre of attention without the sense of hindering the NA's work. The patient who chooses to take an unobtrusive and invisible role still has a need to be confirmed and seen by the NA.

During surgery, the patient experiences the need to hand himself/herself into the hands of the NA with trust, wanting to be close to, and observed, monitored and touched by the NA. If and when the patient can neither see, hear nor come into contact with the NA, the patient experiences a sense of vulnerability, and the feeling of being left out puts trust at risk. The patient does not want to receive the NA's attention through technical equipment, but through the NA's physical proximity, spontaneous communication, physical contact or eye contact. The patient needs to feel nearness through direct contact, for example, by touching, which provides a sense of security and allows the patient the experience that not everything is monitored by devices. The patient needs to be seen in his/her entirety by the NA, and not to be interpreted and viewed as an object on the monitor.

The patient's intraoperative needs and experiences of communication and interaction show that being awake gives the patient the opportunity to communicate with the carers in the OR during surgery. However, the possibility is narrowed down at the same moment as the green surgical drape is placed in front of the patient as a part of the surgical preparations. Figuratively speaking, the drape becomes a wall, limiting the patient's visual field and affecting the awareness of who is in the OR or what is actually being enacted. The drape in front of the patient's face can be interpreted as a curtain going down at the theatre, separating the spectator (the patient) from the actors (the carers) on the scene (the OR), cutting off their possibility for spontaneous interplay. The spectator waits for the curtain to go up and the play (surgery) to begin. Since the curtain remains down, the patient as a spectator is left out and put on hold, not knowing what will happen next without access to the manuscript, thinking that perhaps something has gone wrong.

The patient's position behind the surgical drape also limits the horizon, affecting the perceptual experiences and interaction with the carers in the OR. The patient expresses his/her needs to interact and communicate in order to share intraoperative experiences with the NA. The patient wants the NA to receive, listen and respond to whatever the patient needs to convey during the intraoperative period. The communication and interaction are perceived as hindered if the NA is not in the patient's visual field or if the NA, despite physical closeness to the patient, is not directed towards the latter but

occupied with professional tasks. If the contact is missing, the patient feels the alternative is to speak out loudly in the OR, without being sure of who will respond.

3.2 How to meet the patient's intraoperative need for proximity

The patient's need for proximity can be met in a face-to-face encounter with the NA. Also, the patient's lack of spatial overview can be compensated for by having a close proximity to and eye contact with the NA in order to feel confirmed and safe in the exposed position. The patient's feeling of proximity can be balanced by the NA, who possesses the power to make eye contact or not with the patient. The act of balance is also achieved when the NA gives voice and meaning to the patient's experiences during surgery, in close proximity to the patient. The absence or presence of a confirmatory look can affect the patient either way and is an issue to be reflected on by the NA. The closer the NA is to the patient, the more the patient feels strengthened and supported in the feeling that he/she is able to regain self-esteem. The feeling of safety is strengthened when the NA is in the patient's proximity, but the patient also wants to be assured of the NA's presence, knowing that the NA is close and where the NA is.

If the NA is not in the patient's visual field, for example, behind the patient's head, a bodily exertion is perhaps needed to be assured of the NA's presence. The inability to see the NA reinforces the patient's feeling of not knowing where the NA is, but again, a mere eye contact assures the patient that the NA is close by. However, the NA is free to move around in the OR. Consequently, the NA cannot always be in the patient's proximity and therefore needs to inform the patient where he/she is in the OR, whenever leaving the patient's visual field. The patient's feeling of being left out or obstructed from view is avoided when the NA is visible. When the NA leaves the patient's visual field, the distance from the patient increases, and the monitoring equipment, figuratively speaking, steps in and communicates on the patient's behalf. However, the patient does not want to be interpreted and viewed as an object on the monitor, but wants to be seen in his or her entirety by the NA.

3.3 How to meet the patient's need for communication and interaction

Communication and interaction in an intraoperative situation are crucial for the awake patient; they also offer an opportunity for the NA to gain direct access to the patient's lived experiences from what the patient communicates verbally or nonverbally. When communicating and interacting, the NA and the patient allow each other as subjects to find expressions in each other's situation. This active encounter enables an explicit access to each other, where a mutual ground, an "intraoperative caring space", is created between the patient and the NA. In this caring space, words are called forth as both parties are drawn into a shared situation where their perspectives can fuse together.

Communication and interaction can be hindered when the NA's direct focus is away from the patient, despite the physical proximity and being within each other's visual field. Not communicating and interacting with the patient can be understood as the NA letting the patient interpret what is happening. This circumstance is exemplified when sounds from a drill, a saw or a hammer during surgery are heard, and the NA remains out of the patient's visual field. This situation can be taken for granted by the NA as part of the daily working milieu, and not actively reflected on from the patient's perspective. Such a case can be seen as an asymmetric interaction, when the patient is unreflectively relegated to the background or the periphery, without being invited to take part in the course of events. The NA is the one who has the option to step out of his/her viewpoint and with openness, reflect on the fact that for the awake patient, the intraoperative experiences are not taken for granted, but are lived through at the moment.

3.4 Requirements for a genuine caring encounter

The centre piece of the model (see Figure 1) consists of the requirements for a genuine caring encounter to enhance and support the awake patient's intraoperative well-being. Its content originates from the other two pieces of the model, concerning the patient's needs and experiences, as well as how the NA can meet the patient's need for proximity, communication and interaction during the intraoperative period. In the model, all three pieces are needed to create a whole.

No matter what piece is missing, the jigsaw puzzle will be affected, causing an imbalance in the encounter and support for the awake patient.

The proximity to, and communication and interaction with the patient enables the NA to be aware of and address the patient's needs and experiences through attention, accessibility and openness towards the patient. To be at the side of the awake patient, asking questions or listening to the patient, enables the patient to share his/her experiences about the partly anaesthetized body or the intraoperative situation. As the patient's bodily extension, the NA can serve as a bridge-builder and close any potential gap between the patient's lived experience and the situation per se. This is a way for the NA to broaden the patient's limited visual field during surgery by acting as a mediator for the patient's intraoperative experiences. Sharing experiences helps the patient maintain the sense of self as a subject, since he/she needs acceptance and validation of the experiences. Attention, accessibility and openness enable the NA to share his/her knowledge with the patient to help the latter understand and find meaning in the situation. For example, the NA can sympathize with, confirm and explain the patient's sensation of not having access to some parts of the body in a natural way due to the regional anaesthesia. It is important for the NA to actively reflect on this concern, since the NA has both knowledge and power over the patient's body as a subject and an object for treatment. Meeting the requirements of a genuine encounter calls for the NA to be in the patient's proximity and visual field during surgery.

The above-mentioned requirements for a genuine caring encounter between the NA and the awake patient can be connected to each other in the intraoperative caring space; i.e., in the non-physical room where the NA and the patient can be intertwined with each other. The caring space enables the dialogue to take place when the NA sits close enough to the patient for a face-to-face communication, embracing the characteristics of a caring relationship. In other words, the carer's professional engagement and reflective attitude bring about an openness to what takes place in caring and in the patient's intraoperative lifeworld. This caring space is a mutual ground where they can interact to let meaning unfold, but then again, this requires the NA to practise attention, accessibility and openness in the patient's proximity and field of vision. This point is essential, since the NA is the one who can freely move around in the OR and voluntarily either step out of or remain with the patient in the caring space. When the NA is not present in the caring space or if no room is given for the patient's perspective, the patient might feel left out, vulnerable and exposed, maybe even objectified. This situation in turn calls for the NA's genuine presence, meaning that the NA puts everything aside that is not vital for the moment and attentively focuses on the patient's individual needs as a unique being.

A way for the NA to acknowledge each patient's unique experiences is to provide empathy, comfort and reassurance, while ensuring quality care. Therefore, intraoperative care is not to be performed mechanically on a routine basis, but with an actively engaged approach and thoughtful reflection on a patient's individual circumstances. It is the NA's responsibility to create contact, establish connection and develop an intraoperative caring space in order to facilitate the patient's intraoperative well-being.

4 Discussion

4.1 Of method

The importance of research in clinical practice has been stressed, which would optimize the dissemination and implementation of research findings among nurses [3]. A number of terms are used in the nursing literature for the process of transferring knowledge into practice, including knowledge translation that highlights the need for synthesizing research outcomes before application [42]. In this study, qualitative research findings were synthesized and transformed into an intraoperative caring model in response to the request to apply nursing research in clinical practice.

To communicate our research results easily, the model's content is written in the language of the target readers, based on Sandelowski and Leeman's [43] suggestions. Writing in the jargon of the nurse audience is an approach to enhance the

model's accessibility and usability, which can then be translated into the language of intervention and implementation. According to Moreno, Duràn and Hernandez [44], the choice of presenting a theoretical model can be a way to develop knowledge in nursing and guide its practice, providing a particular approach to the care of individuals or groups (ibid.). The synthesized research findings in the model strive to convey direct knowledge transformation into the hands of NAs.

4.2 Of study limitations and strengths

It can be criticized that the data underpinning the presented model consists of merely three study findings with a small number (n=9) of informants. Nonetheless, qualitative research involving a large number of participants is not the expectation of this study; rather, its purpose is to offer an in-depth insight into a phenomenon. We argue that the number of qualitative studies in an intraoperative context is anticipated to increase in the future; our model is a step towards synthesizing findings from qualitative studies regarding awake patients' circumstances and needs.

Another limitation could be that the model is not based on data from the carers' perspective, as compared to the model of 'perioperative dialogue' developed in Sweden [45]. Recognized as the ideal work model by the National Association for Anaesthesia and Intensive Care in Sweden [46], it describes the caring process as comprising three parts (the pre-, intra- and postoperative dialogue), which fulfill all the patients' needs and recommend a good relationship between the nurse and the patient. The similarity between the perioperative dialogue and our model is the importance of intersubjectivity between the nurse and the patient. On the other hand, the difference is that our model has its primary and explicit focus on the awake patient's experiences and situation during the intraoperative period, which is not clearly described in the other model. Moreover, our model is grounded on data derived from the patient's perspective and experiences. It reveals how the NA, as the patient's advocate, can act as the patient's bodily extension to bridge the gap between the patient's experiences and the intraoperative situation during surgery under regional anaesthesia.

The aim of the synthesis is not to increase certainty in cause-and-effect conclusions in the intraoperative context. Instead, its intent is to be more hermeneutic, seeking to understand and explain how to care for awake patients during surgery under regional anaesthesia. Gadamer [39] emphasizes that researchers need to be open and see "the otherness", that is, to recognize something not previously understood and be open to what is not immediately given. All authors of this study were therefore aware of and suppressed pre-understandings from the previous studies' findings [26-28] by discussing the possible effects of predetermined notions about the subject matter.

Our model's strength is that data is derived from the awake patient's perspective during surgery under regional anaesthesia [27] and analyzed through a philosophical lens [26], from which the NA-patient interaction is interpreted [28]. Concerning credibility, Finfgeld [47] points out that synthesized data rooted in original data is credible, because it represents findings on the basis of true descriptions of human experiences (ibid.). Another strength is that the synthesized studies are based on phenomenological theory [29-30], making it possible to compare the findings on a theoretical level and to avoid epistemological contradictions when performing a synthesis.

Furthermore, synthesizing our findings increases the level of abstraction, which in turn leads to a greater generalizability. This means that the model can be implemented in other surgical situations using regional anaesthesia or even in other care settings and contexts. An example is a high technological environment, such as a radiology unit or intensive care unit, where it is equally essential for the patient to have proximity to the carers and the possibility to communicate and interact with them.

4.3 Of results

4.3.1 Conceptual use of the intraoperative caring model

The nursing profession has long recognized the importance of research as an essential basis for its development [3, 48] and has concerned itself with research utilization since the mid 1980s [49]. Research utilization is defined as the use of research

to guide clinical practice [50], and as the transfer of specific research-based knowledge into practice, whether it is used at the bedside, in clinical teaching [7], or while providing direct patient care, as intended with the intraoperative caring model. The patient- and theory-based content of our model comprises research findings which will be used to provide individualized care to each patient in everyday intraoperative practice.

In nursing research, utilization has been classified as instrumental, conceptual and symbolic. The conceptual form refers to the cognitive application of research knowledge in a way that can change how a person understands or thinks about a situation or information [51]. The proposed model could be viewed as conceptual; in line with Kearny's [51] argument, it enables nurses to understand patient experiences, provide empathy, and attain insight into contextual issues. Both Kearney [51] and Sandelowski [52] argue that in the process of gaining new insights, approaches that are beneficial to nursing care will be developed (ibid.).

Anaesthesia nursing care for patients during surgery is characterized by the encounter between the patient's lifeworld and the NA's scientific knowledge in theory and practice [25], but no previous research has shown how to actually encounter the awake patient intraoperatively from the patient's perspective. von Post [45] states that the NA's responsibility includes taking care of the patient's body in a dignified manner (ibid.), which is especially important, as the patient more or less surrenders himself/herself and his/her body to other persons who are often unknown to the patient. The NA has the overall responsibility for patient safety, and the NA's aim is to perform anaesthesiological care perioperatively, based on the individual patient's resources and needs [46]. Whether a patient is conscious or unconscious during surgery, the NA should attentively tend to the patient's needs. Therefore, the starting point for the intraoperative caring model is the awake patient's lifeworld, which presupposes the intersubjective relationship between the patient and the NA.

4.3.2 Clinical use of the model

The model is intended as a tool to encounter the patient in his/her existential intraoperative situation and to illustrate for NAs the possible impact of interaction and communication on the delivery of intraoperative nursing care. The model aids to intertwine the NAs' theoretical scientific knowledge with the awake patient's experiences. This implies that when caring for the awake patient, the NA should focus on the patient's lifeworld, i.e., how things are for each patient based on his/her individual and subjective world. When lifeworld is acknowledged as a base and an approach for caring, the patient's experiences are emphasized and considered by the NAs, where the caring situations recognize the world as the patient does [cf. 53]. The model accentuates how NAs can understand and reflect on the awake patient's lived experiences during surgery, and thereby guide and support the patient in adjusting to the situation and enhance the patient's intraoperative well-being through a genuine caring encounter. The knowledge emerging from the model could be used clinically as a basis for the development of preoperative patient information from the patient's perspective, since this information is not currently available.

The model enables NAs to reflect on anaesthesia caring actions in the intraoperative context, where routines and behaviours may be deeply anchored in the anaesthesia caring tradition and taken for granted by the NAs. What is taken for granted may function as a screen which restricts the NAs from gaining new knowledge and a fresh perspective. The model can be of use to align the patient's experiences with the NA's practice through a reflective approach. Ekebergh [54] emphasizes that reflection can help a person, in this case the NA, integrate knowledge and gain a novel and deeper understanding from the core concepts of proximity, communication and interaction. Therefore, the model can form a structure for group reflections among NAs on patient situations, as a form of collegial sharing and guidance.

4.3.3 Educational use of the model

Nurses need to see the link between findings and implications for practice [55], and one strategy to increase research-based practice is education. It has been suggested that nurse teachers should consider their role in how research findings are transmitted in learning and implemented in practice [56]. Clinical nurse specialists (CNS) are in a position to serve as links between research findings and practice [57], since they are recognized as practice nurses with advanced educational

preparation and expertise in a clinical speciality [58]. The CNS can help nurses bridge the gap between what is common clinical practice and the state of current science through translation of research into action [59].

The presented model translates research into action and can be used for educational purposes to reflect on the possible impact of the NAs' proximity, interaction and communication skills on the delivery of intraoperative nursing care. Postgraduate training should develop skills that deepen NAs' understanding of the awake patient undergoing surgery with regional anaesthesia in order to provide quality care and boost the patient's well-being. The NAs use medical science paired with caring science, but the latter knowledge with its patient perspective is fundamental, because caring should focus on improving a person's health and well-being [cf. 34, 60]. While medical knowledge is dedicated to the patient's recovery, it should be on caring science terms, i.e., what is required to understand the patient in a specific healthcare context and to tend to the patient's needs. The knowledge constituting the model is figuratively similar to a map and a compass in a lifeworld-based care for the awake patient in the anaesthesia context.

For educational purposes, the model can preferably be combined with video recordings. Students specializing in anaesthesia care can record invented patient encounters and by means of reflection, develop patient interaction and communication skills under supervision. Video recording provides an opportunity to instruct students about the interactional significance of healthcare in everyday working environments. It also enables access to the fine details of nursing care and the ways in which such work is accomplished through, and embedded within, proximity, interaction and communication. Therefore, the model and video recordings can provide a structure for the content and organization of education as a tool to help students develop awareness of their interaction skills and enable them to change their behaviours and improve caring outcomes. It is through the development of the relationship and communication skills that nurses can identify and realize each patient's unique needs. Enhancing intersubjective skills such as listening, communicating and interacting with the awake patient increases and supports the patient's well-being during surgery under regional anaesthesia.

4.3.4 Implications for clinical practice

- Enable a face-to-face encounter with the patient during surgery.
- Let the patient know when you are out of his/her line of vision.
- Understand that communication and interaction are crucial for the awake patient.
- Sit at the side of the awake patient whenever possible to help the patient understand and find meaning in the intraoperative situation.
- Be the patient's bodily extension and explain what is taking place in the OR.
- See, listen and feel with the patient in order to confirm and support the patient.
- Be genuinely present and focus attentively on the patient's individual needs and experiences.

5 Conclusions

This study contributes to knowledge development about intraoperative care for awake patients during surgery under regional anaesthesia. The study also shows the importance of in-depth nursing research in order to transform research findings into nursing practice. It is not about merely applying research findings, because it requires systematic analysis to generate a research-based model. Here one can criticize the prevailing view that assumes that research results can be applied without problematizing.

The intraoperative caring model can be used as a tool to reflect on the awake patient's individual needs and experiences as lived through during surgery in order to support and enhance the patient's intraoperative well-being. The model can be

used as a teaching aid and basis for discussion in interactive workshops, together with video recordings during postgraduate training for NAs. It can be used in clinical practice and for educational purposes to help see the link between the use of research findings and their implications on improving intraoperative care of awake patients.

The model encourages NAs' introspection on the fact that intraoperative care for the awake patient cannot be performed in formal routines that might disregard the uniqueness of each patient's situation. The model highlights that NAs need to think about their communication skills with awake patients, because patients highly value the NAs' genuine presence. It also helps NAs consider whether caring routine practices are based on research findings or on traditions of the unit. The model's content can assist NAs to find an approach that acknowledges the unique patient's lifeworld and at the same time integrates the need for medical knowledge to ensure optimal anaesthesia nursing care for awake patients.

Declarations of interest

The authors declared no conflict of interest.

References

[1] Thompson DS, O'Leary K, Jensen E, Scott-Findlay S, O'Brien-Pallas LS, Estabrooks CA. The relationship between busyness and research utilization: it is about time. Journal of Clinical Nursing. 2008; 17(4): 539-548. PMid:18205684 http://dx.doi.org/10.1111/j.1365-2702.2007.01981.x

[2] Di Censo A, Guyatt G, Ciliska D. Evidence-Based Nursing: A Guide to Clinical Practice. St. Louis, MO: Elseveir Mosby; 2005. PMid:15651860

[3] Wallin L. Knowledge translation and implementation research in nursing. International Journal of Nursing Studies. 2009; 46(4), 576-587. PMid:18674761 http://dx.doi.org/10.1016/j.ijnurstu.2008.05.006

[4] Woods NF, Magyary DL. Translational research: Why nursing's interdisciplinary collaboration is essential. Research & Theory for Nursing Practice. 2010; 24(1): 9-24. PMid:20333909 http://dx.doi.org/10.1891/1541-6577.24.1.9

[5] Berglund M, Westin L, Svanström R, Johansson Sundler A. Suffering caused by care - Patients' experiences from hospital settings. International Journal of Qualitative Studies on Health and Well-being. 2012:7. PMid:22943888 http://www.ijqhw.net/index.php/qhw/article/view/18688

[6] Evensen AE, Sanson-Fisher R, D'Este C, Fitzgerald M. Trends in publications regarding evidence practice gaps: A literature review. Implementation Science. 2010; 5(11) PMid:20181079 http://www.implementationscience.com/content/5/1/11

[7] Nunnelee JD, Spaner SD. Research utilization. Journal of Vascular Nursing. 2002; 20(2): 68-69. PMid:12042758 http://dx.doi.org/10.1067/mvn.2002.121967

[8] Severinsson E. Nursing research in theory and practice – is implementation the missing link? Journal of Nursing Management. 2012; 20: 141-143. PMid:22380408 http://dx.doi.org/10.1111/j.1365-2834.2012.01387.x

[9] ICN. The ICN Code of Ethics for Nurses[Internet]. 2006[cited 2013 February 10]. Available from http://www.icn.ch/icncode.pdf

[10] SFS. Lag om yrkesverksamhet på hälso- och sjukvårdens område[Act on Professional Activity in the Field of Health and Medical Care]. SFS 1998: 531. Stockholm. Swedish.

[11] Youngblut J, Brooten D. Evidence-based nursing practice: Why is it important? AACN Clin Iss Adv Pract Acute Crit Care. 2001; 12, 468-476. http://dx.doi.org/10.1097/00044067-200111000-00003

[12] Hutchinson A, Johnston L. Beyond the BARRIERS scale: Commonly reported barriers to research utilization. Journal of Nursing Administration. 2006; 13: 189-199. http://dx.doi.org/10.1097/00005110- 200604000-00008

[13] Thompson C, McCaughan D, Cullum N, Sheldon TA, Mulhall A, Thompson DR. The accessibility of research-based knowledge for nurses in United Kingdom acute care settings. Journal of Advanced Nursing. 2001; 36: 11-22. PMid:11555045 http://dx.doi.org/10.1046/j.1365-2648.2001.01938.x

[14] Rahm Hallberg I. Moving nursing research forward towards a stronger impact on health care practice? International Journal of Nursing Studies. 2009; 46: 407-412. PMid:19318161 http://dx.doi.org/10.1016/j.ijnurstu.2009.02.005

[15] Cummings GC, Estabrooks CA, Midodzi WK. Influence of organizational characteristics and context on research utilization. Nursing Research. 2007; 56: 24-39. PMid:17625471 http://dx.doi.org/10.1097/01.NNR.0000280629.63654.95

[16] WHO. World report on knowledge for better health. World Health Organization, Geneva[Internet]. 2004[cited 2013 January 14] Available from http://www.who.int/rpc/meetings/pub1/en/

[17] Howat G, Weiters M, Sames M, McLaren A. A pilot study of day case and short-stay thyroid surgery. Journal of One Day Surgery. 2006; 16(1): 9-12.

[18] Jacquet E, Puche P, Alahyane J, Jaber S, Carbalona JP, Bessaou D, et al. Evaluation of inguinal hernia in ambulatory surgery: a prospective monocentric study on 1009 inguinal hernia. Ambulatory Surgery. 2006; 12(4): 167-171. http://dx.doi.org/10.1016/j.ambsur.2005.11.002

[19] Delikoukos S, Gikas D. The role of local anaesthesia in ambulatory anal surgery. Ambulatory Surgery. 2007; 13(3): 1-10.

[20] Raeder J. Anaesthetic techniques for ambulatory surgery. In P. Lemos, P. Jarret & B. Philip (Eds.), Day Surgery: Development and Practice (pp. 185-208): International Association of Ambulatory Surgery, Porto; 2006. PMid:16324787

[21] Ternisien E, Gentili ME, Orain C, Wodey E, Ecoffey C. Blocks at the wrist using nerve stimulation for ambulatory hand surgery. Ambulatory Surgery. 2006; 12(4): 187-190. http://dx.doi.org/10.1016/j.ambsur.2006.01.001

[22] Zanchetta C, Bernstein M. The nursing role in patient education regarding outpatient neurosurgical procedures. Axone. 2004; 25(4), 18-21. PMid:15368880

[23] Chit Ying L, Levy V, Shan CO, Wing Hung T, Kit Wah W. A qualitative study of the perceptions of Hong Kong Chinese women during caesarean section under regional anasthesia. Midvifery. 2001; 17(2): 115-122. PMid:11399132 http://dx.doi.org/10.1054/midw.2000.0249

[24] Mitchell M. Patient anxiety and concious surgery. Research & Audit. 2009; 19(6): 168-173.

[25] Lindwall L. Kroppen som bärare av hälsa och lidande (The Body as Carrier of Health and Suffering). Vasa: Åbo Akademi University; 2004.

[26] Karlsson A-C, Ekebergh M, Larsson Mauléon A, Almerud Österberg S. "Is that my leg?" Patients' experiences of being awake during regional anesthesia and surgery. Journal of PeriAnesthesia Nursing. 2012; 27(3): 155-164. http://dx.doi.org/10.1016/j.jopan.2012.02.005

[27] Karlsson A-C, Ekebergh M, Larsson Mauléon A, Almerud Österberg S. Only a whisper away. A philosophical view of the awake patient's situation during regional anaesthetics and surgery. Nursing Philosophy. 2012; 13(4): 257-265. http://dx.doi.org/10.1111/j.1466-769X.2012.00538.x

[28] Karlsson A-C, Ekebergh M, Larsson Mauleon A, Almerud Österberg S. Patient-nurse anesthetist interaction during regional anesthesia and surgery based on video recordings. Journal of PeriAnesthesia Nursing. 2013. In press. http://dx.doi.org/10.1016/j.jopan.2012.11.009

[29] Husserl E. Cartesian meditations (D. Cairns, Trans.). The Hague: Martinus Nijhoff; 1977. http://dx.doi.org/10.1007/978-94-009-9997-8

[30] Husserl E. The crisis of European sciences and transcendental phenomenology. An introduction to phenomenological philosophy. (D. Carr, Trans.). Evanston, IL: Northwestern University Press; 1970.

[31] Dahlberg K, Dahlberg H, Nyström M. Reflective Lifeworld Research (2nd ed.). Lund: Studentlitteratur; 2008.

[32] Husserl E. Ideas pertaining to a pure phenomenology and to a phenomenological philosophy. (F.Kersten, Trans.). Dordrecht, The Netherlands: Kluwer Academic Publisher; 1998.

[33] Husserl E. Logical investigations: Vol. 1 (J. N. Findlay, Trans.). London, UK: Routledge & Kegan Paul; 1970.

[34] Dahlberg K, Segesten K. Hälsa & Vårdande i teori och praxis (Health and caring in theory and practice). Stockholm: Natur & Kultur; 2010.

[35] Kirkevold M. Integrative nursing research—an important strategy to further the development of nursing science and nursing practice. Journal of Advanced Nursing. 1997; 25: 977-984. http://dx.doi.org/10.1046/j.1365-2648.1997.1997025977.x

[36] Lützén K, Cronqvist A, Magnusson A, Andersson L. Moral stress: synthesis of a concept. Nurs Ethics. 2003; 10: 312-322. http://dx.doi.org/10.1191/0969733003ne608oa

[37] Paterson B, Thorne S. The potential of meta-synthesis for nursing care effectiveness research. Can J Nurs Res. 2003; 35(3): 39-43. PMid:14603568

[38] Sandelowski M, Docherty S, Emden C. Focus on qualitative methods. Qualitative metasynthesis: issues and techniques. Res Nurs health. 1997; 20: 365-371. http://dx.doi.org/10.1002/(SICI)1098-240X(199708)20:4<365::AID-NUR9>3.0.CO;2-E

[39] Gadamer H-G. Truth and Method. London: Continuum Impacts; 2006: 291.

[40] Dahlberg K, Dahlberg H. To not make definite what is indefinite: A phenomenological analysis of perception and its epistemological consequences in human science research. The Humanistic Psychologist. 2003; 31(4): 34-50. http://dx.doi.org/10.1080/08873267.2003.9986933

[41] Merleau-Ponty M. The Visible and the Invisible. Evanston: Northwestern University Press; 1968.

[42] Graham ID, Tetroe J. Whither knowledge translation. Nursing Research. 2007; 56(4S): 86-88. PMid:17625480 http://dx.doi.org/10.1097/01.NNR.0000280638.01773.84
[43] Sandelowski M, Leeman J. Writing usable qualitative health research findings. Qualitative Health Research. 2012; 22(10), 1404-1413. http://dx.doi.org/10.1177/1049732312450368 PMid:22745362
[44] Moreno M, Durán M, Hernandez Á. Nursing care for adaption. Nursing Science Quarterly. 2009; 22: 67-73. PMid:19176862 http://dx.doi.org/10.1177/0894318408327296
[45] von Post I. Professionell naturlig vård ur anestesi- och operationssjuksköterskors perspektiv['Professional nursing care' from the nurse anesthetists' and operating room nurses' view]. Dissertation. Åbo Academy University, Vasa. 1999.
[46] Description of competence for Registered Nurse with Graduate Diploma in Specialist Nursing – Anaesthesia Care[Internet]. [cited 2012 January 10]. Available from www.swenurse.se.Documents/Komptensbeskrivningar/kompanestesiWEBB.pdf Swedish. PMid:17266756
[47] Finfgeld, D. L. (2003). Metasynthesis: the state of the art—so far. Qualitative Health Research, 13(7), 893- 904. PMid:14502956 http://dx.doi.org/10.1177/1049732303253462
[48] Stetler, C. B., Ritchie, J., Rycroft-Malone, J., Schultz, A., & Charns, M. (2007). Improving quality of care through routine, successful implementation of evidence-based practice at the bedside: An organizational case study protocol using the Pettigrew and Whipp model of strategic change. Implementation Science,2(3). PMid:17266756 http://dx.doi.org/10.1186/1748-5908-2-3
[49] Stetler CB. Research utilization: defining the concept. Nursing Scholarship. 1985; 17(2): 40-44. http://dx.doi.org/10.1111/j.1547-5069.1985.tb01415.x
[50] Estabrooks C. The conceptual structure of research utilization. Research in Nursing and Health. 1999; 22(3): 203-216. http://dx.doi.org/10.1002/(SICI)1098-240X(199906)22:3<203::AID-NUR3>3.0.CO;2-9
[51] Kearney MH. Levels and applications of qualitative research evidence. Research in Nursing and Health. 2001; 24: 145-153. PMid:11353462 http://dx.doi.org/10.1002/nur.1017
[52] Sandelowski M. Using qualitative research. Qualitative Health Research. 2004; 14: 1366-1386. PMid:15538005 http://dx.doi.org/10.1177/1049732304269672
[53] Ekebergh M. Developing a didactic method that emphasizes lifeworld as a basis for learning. Reflective Practice. 2009; 10(1): 51-63. http://dx.doi.org/10.1080/14623940802652789
[54] Ekebergh M. Lifeworld-based reflection and learning: a contribution to the reflective practice in nursing and education. Reflective Practice. 2007; 8(3): 331-343. http://dx.doi.org/10.1080/14623940701424835
[55] Rycroft-Malone J, Harvey G, Seers K, Kitson A, McCormack B, Titchen A. An exploration of the factors that influence the implementation of evidence into practice. Journal of Clinical Nursing. 2004; 13: 913-924. PMid:15533097 http://dx.doi.org/10.1111/j.1365-2702.2004.01007.x
[56] Eiddwen T, Davies B. Nurse teachers' knowledge in curriculum planning and implementation. Nurse Education Today. 2006; 26: 572-577. PMid:16567024 http://dx.doi.org/10.1016/j.nedt.2006.01.014
[57] Profetto-McGrath J, Negrin KA, Hugo K, Bulmer Smith K. Clinical Nurse Specialists' Approaches in Selecting and Using Evidence to Improve Practice. Worldviews on Evidence-Based Nursing. 2010; 7(1): 36-50. PMid:19744192 http://dx.doi.org/10.1111/j.1741-6787.2009.00164.x
[58] Di Censo A. Roles, research and resilience: The evolution of advanced practice nursing. Canadian Nurse. 2008; 104(9): 37-40.
[59] Goudreau KA, Baldwin K, Clark A, Fulton J, Lyon B, Murray T, et al. (2007). A vision of the future for clinical nurse specialists: Prepared by the National Association of Clinical Nurse Specialists, July 2007. Clinical Nurse Specialist. 2007; 21(6): 310-320. PMid:18000448 http://dx.doi.org/10.1097/01.NUR.0000299623.82216.7e
[60] Dahlberg K, Todres L, Galvin K. Life-world led healthcare is more than patient-led health care: an existential view. Medicine Health Care and Philosophy. 2009; 12: 265-271. PMid:19101822 http://dx.doi.org/10.1007/s11019-008-9174-7