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# Clinical Research with a Hermenutical Design and an Element of Application

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**Abstract**
In 2008 two researchers completed a 2-year study in collaboration with nurse anesthetists and operating room nurses from three operating theaters in western Sweden. In this paper, with focus on methodology and the ethical approach to research, the aim was to describe a hermeneutical design with an element of application used in a perioperative clinical study. The element of application was chosen to involve clinical nurses to participate as coresearchers. This research was inspired by Lindholm's (2006) method for application research developed to bring new knowledge, to create change as well as to unite theory in dialogues with clinical nurses. Through the perioperative dialogue, the coreseacher not only became one who collected data but also the older patients' nurse, who cared for them. A hermeneutical text interpretation with five readings was used to gain new understanding. Perioperative care becomes evident and is dedicated to the patient in perioperative.

## Introduction

Within clinical research, there is a striving toward developing a research design that is in unison with the basic idea of knowledge development, anchored in a hermeneutical research tradition. There is a need to test new designs that consider the patient's vulnerability and develop knowledge as well as integrates research findings in (Eriksson, 2006)**.** During 2005 to 2007 a clinical study with a hermeneutic design and an element of application was carried out as a collaboration among two academic researchers and nine coresearchers (six nurse anesthetists and three operating room nurses). The aim of the clinical study was to protect the older patient's dignity undergoing surgery, using the perioperative dialogue. We chose to focus on the older patient because we had not tested the perioperative dialogue on older patients before. A patient on an operating bed is placed in an exposed position when the body and sometimes taboo areas of the body need to be exposed to the surrounding world (Rothrock, 2007). These situations require that as few people as possible are present in the operating room. It is neither ethically (Lindwall, von Post, & Eriksson, 2007) nor hygienically defensible that the patient is observed by individuals not directly concerned with the procedure at hand (Medicinska forskningsrådet [MFR], 2002). The design has been inspired by clinical application research (Lindholm, Nieminen, Mäkelä, & Rantanen-Siljamäki, 2006), a form of participatory research (Day, Higgins, & Koch, 2009). What knowledge about the older patient and their dignity will emerge?

In this paper, with focus on the methodology and the ethical approach to research, the aim was to describe a hermeneutical design with an element of application used in a perioperative clinical study.

## Background: The perioperative dialogue

The perioperative dialogue sets the prerequisites for the element of application because nurse anesthetists and operating room nurses could be both coresearchers and nurses to the patients. It is an ideal model for perioperative nursing care that fulfills the requirement for continuity in perioperative care (Lindwall & von Post, 2009; Lindwall, von Post, & Bergbom, 2003; von Post 1999) and is based on a caritative caring theory (Eriksson, 2002; Watson, 2006). Its ethos, dignity, is embedded in the idea of one's duty to think and act in a sensitive manner (Lindwall, von Post, & Eriksson, 2007). The perioperative dialogue is influenced by Buber's (1965/1988) philosophy of dialogue, which is based on the sphere of between, created, recreated, and developed in accordance with people's meetings with each other. Buber holds that a dialogue is created in an atmosphere of confidence where two persons face each other. The perioperative dialogue takes place in a setting where the patients are given time to tell their stories: The perioperative dialogue, in our definition, encompasses the caring process and is a nurse anesthetist's or operating room nurse's pre-, intra- and postoperative dialogue with their patient in connection with anesthesia and surgery. The purpose is to protect the human dignity of the patient, alleviate suffering, and create a safe nursing environment and a feeling of well-being

(Lindwall & von Post, 2009, p. 396). The trust created through continuity in the perioperative dialogue is a responsibility that in the promotion of ethical values cannot be passed on to someone else (Lévinas, 1988) without the trust being lost (Lindwall & von Post, 2009).

In the preoperative dialogue, the patients meet their nurse before surgery. The intraoperative dialogue begins when the patients are received in the operating theatre and are recognized by their nurse. In the postoperative dialogue, the patient has the opportunity to finish and evaluate the caring process together with the nurse anesthetist or operating room nurse. The continuity in the perioperative dialogue ensures that the patient can be greeted by a familiar face in the operating room and feel her- or himself in safe hands (Lindwall & von Post, 2009). The perioperative dialogue creates a common world (Rudolfsson, von Post, & Eriksson, 2007). When the patients are allowed to talk about their sick body, suffering can be alleviated (Lindwall & Bergbom, 2009).

## Methodology

The hermeneutical design (Gadamer, 1989), with an element of application, professional preunderstanding, and hermeneutical text interpretation was chosen to discover unfamiliar or already familiar patterns in perioperative praxis. Clinical application research strives to translate caring science theory and to give it a conrete significance for caring praxis (Lindholm, Nieminen, et al., 2006). A motivation for this clinical study was to translate a caring science theory (Eriksson, 2002) and to give the theory a concrete significance in perioperative praxis. Another motive was to use the perioperative dialogue (Lindwall & von Post, 2009; von Post, 1995) to give room for an element of application and to accomplish the goal through a dialogue between the praxis as well as the theoretical horizons (Lindholm, Nieminen, et al., 2006). Through an element of application and the perioperative dialogue, the knowledge of nurse anesthetists and operating room nurses are made use of, while opportunities are also created for them to participate in research. How does an element of application and the perioperative dialogue support the possibilites for nurses to participate in hermeneutic clinical research? How will perioperative nursing become evident; that is, open to the surounding world and dedicated to the patient in perioperative praxis?

### Hermeneutical design

The hermeneutical design with an element of application includes revision and change of understanding, a revision that can result in progress in nursing care (Lindholm, Nieminen, et al., 2006). According to Gadamer (1989) hermeneutical understanding is a unit of understanding, interpretation and application. Application is the fundamental element in hermeneutical understanding and always an inner fusion of interpretation and understanding.

### Clinical application research

Clinical application research (Lindholm, Nieminen, et al., 2006) has been inspired by classic action research (Coghlan & Casey, 2001). In contrast to action research with focus on solving practical problems, being intervening (Reason & Bradbury, 2001) and creating social change (Holmer & Starrin, 1993), clinical application research follows a hermeneutic tradition that includes preunderstanding, understanding, interpretation, and application (Gadamer, 1989) with focus on knowledge development. The epistemological foundation of application research can be traced to hermeneutics, in contrast to classic action research, which is based on critical theory

(Lindholm, Nieminen, et al., 2006). A basic idea is that the research should contribute to a re-vision of clinical praxis as new realization, which, through the participation of coresearchers, can change understanding for and care of patients in praxis (Lindholm, Holmberg, & Mäkelä, 2005).

Clinical application research, as well as action research, has a participatory research approach, which stimulates others apart from the researcher to actively participate in the research process (Holmer & Starrin, 1993; Kock, Selim, & Kralik, 2002). Participatory research means that researchers and participants do research together and where the aim of the collaboration is to create knowledge about and for praxis. Within action research, it is the researcher who is active and contributes to improvements and solutions of the problem under study (Koch & Kralik, 2006), in contrast to application research, where the coresearchers become active participants in the knowledge development through an element of application and thus contribute to changes in praxis. The action in action research can be compared to development work (Holmer & Starrin, 1993), whereas application research contributes to theory generation (Lindholm, Nieminen, et al., 2006). Participatory action research plays a crucial role and asserts its value for the redesign of praxis (Day, Higgins, & Koch, 2008). A participatory research approach includes both taking action and developing and integrating the knowledge on which the actions are based (Bradbury & Reason, 2003; Coghlan & Brannick, 2001). In participatory research, researchers and participants deal with problem identification and research design by discussing the issues, reflecting and making decisions about the research area. The researchers control and bear the responsibility for knowledge development, implementation of research and scientific approach (Hummelvoll & Severinsson, 2005). By using this design with the perioperative dialogue, we have found an alternative to classic action research, where academic researchers can face the perioperative caring reality through the coresearcher's participation in a research group. Through the hermeneutic approach, application research demands that coresearchers and academic researchers become aware of their professional preunderstanding.

**The professional preunderstanding**

The academic researchers' (two nurse anesthetists) understanding of text from the perioperative dialogues and the coresearchers' understanding of their patients are based on their professional preunderstanding. According to Gadamer (1989), all people have an existential preunderstanding of life. However, the professional preunderstanding should be understood not as only existential preunderstanding but, rather, as a preunderstanding arising from the profession under investigation (von Post & Eriksson, 1999), which practitioners have acquired through the culture of which they are part and which is often stated as obvious. This is knowledge that we are indirectly aware of, or when what we have learned becomes an integrated part of the body (Polanyi, 1966).

Kuhn (1970) claimed that the obvious is knowledge that we have been trained with and that is maintained through habits and norms of actions, what we have learned to take for granted and cannot fully express. To become aware of the obvious, we as researchers and coresearchers must clearly state our professional preunderstanding. Gadamer (1989) has said that we can never fully be free from the horizon of tradition because the hermeneutic approach has been established by the affiliation that comes from the fundamental and basic prejudice of community. The profession can support or cloud one's vision, and it therefore becomes necessary for researchers and coresearchers to make their professional preunderstanding explicit and articulate the obvious.

When the profession supports one's vision, researchers recognize what emerges in a, for them, already familiar praxis as a part of their reality. When researchers study their own praxis, the profession might help them to see what they are seeing, and what patients are saying, instead of

being fascinated by all the technical equipment surrounding the patient. This motivates research within the own praxis.

When the profession clouds one's vision, on the other hand, it can be compared to Maya's veil, an expression that Schopenhauer (1912) borrowed from Indian philosophy. Maya's veil is a veil that obscures the true, actual reality and stops us from reaching the knowledge behind the veil. Among other things, *Maya* means "power to seduce us." Maya's veil, the power that can seduce us, is the obvious and the ignorance that obscures the actual reality as a veil. The ability to see and listen is something profoundly human, but the will to see, just like the will not to see, is an ethical standpoint (Lévinas, 1988) that will affect the research results (MFR, 2002). That which becomes explicit can be experienced as obvious, something one has stopped seeing or noticing. Through the obvious, the profession has clouded the vision so that what emerges will not reach the consciousness of the researcher (Molander, 1996). When the researchers do not notice what exists (Polanyi, 1966), it might appear as though they neglect what emerges or make themselves ignorant of reality. Maya's veil can also be what is embarrassing for the researchers to see as it moves them and creates feelings of guilt. The fear of the suffering that may develop within them makes them choose not to see what emerges (Martinsen & Eriksson, 2009). A hermeneutic design demands that academic researchers make their professional preunderstanding explicit before text interpretation and that coresearchers do so before data collection is initiated.

In a caring science approach, the visible truth does not become something unambiguous, but similar to the truth, is seen as likely and as probability (Eriksson, 2006). The ethical obligation of the researchers is to see what emerges, what they are allowed to see. Gadamer (1989) claimed that the evident, which emerges, always is something that has to be made explicit and taken to be true. Pulling Maya's veil aside should, of course, be seen as an ethical act that is performed consciously and with respect for what hides behind the veil. It takes courage and will to pull Maya's veil aside. Preunderstanding is what occupies the mind of the interpreter, and Gadamer (1989) claimed that the interpreter cannot have entire disposion of this.

### A clinical research with coresearchers as an element of application

In a clinical study conducted during 2005 to 2007 of older patients' dignity undergoing surgery, we have tested a hermeneutic design with coresearchers as an element of application and the perioperative dialogue. The element of application can be realized in that coresearchers participate in research along with academic researchers. The participation of the coresearchers means that they take part in research meetings which can be understood as a "hermeneutic room" (Gadamer, 1989) where they are given time to reflect on their praxis and the caritative caring theory. The research becomes both inductive and deductive when the coresearchers open up contextual issues from praxis and the scientific researchers deductively present contextual issues based on theory and previous research (Lindholm, Nieminen, et al., 2006).

### Coresearchers

Nine coresearchers, six nurse anesthetists and three operating room nurses volunteered to take part in the research, and all attended five research group meetings arranged by the two academic researchers. The nurses had between 5 and 25 years of experience within their specializations. They came from five hospitals in western Sweden. The coresearchers took responsibility for data collection; that is, that the perioperative dialogues were conducted and documented following a guide with the questions: Where did you meet the patient? What did you talk about? and How did you finish the perioperative dialogue?

**Data collection**

The sample consisted of 54 older patients (18 men and 36 women) aged between 67 and 88 years. It was the first operation for some participants, whereas others had experience from previous anesthesia or surgeries. The inclusion criteria were patients aged 65 years or older undergoing surgery, cared for in line with the perioperative dialogue, and able to understand and speak Swedish. The nurses' choice of patients was influenced by their work schedules. All of those who were contacted voluntarily accepted the invitation to participate in the study.

An operation can be seen as a critical incident (Flanagan, 1954) in a human being's life, an incident they share with the coresearcher in the perioperative dialogue. The strength of the incident lies in its ability to describe the reality and knowledge about patients' and nurses' experiences in a perioperative reality, which may be released through the nurses' stories. The technique of telling a story is a systematic, inductive, open-ended procedure for eliciting written information from participants (Flanagan, 1954). According to Parker (1990), a nurse's story bears within it metaphors and the special language of silent professional caring reality. The invisible is made evident through the language used in the narrative. A story is a structural abstraction built into human memory, a way of thinking and a primary organizer of information. It is the soul of a culture and a prehistoric and historical trend of human awareness, a way in which we can know, remember and understand (Livo & Rietz, 1986). The data consisted of the coresearchers' stories of 54 dialogues with their patients. The coresearchers documented the story after the dialogue had finished.

**Ethical considerations**

The ethical approach toward research means that patients and coresearchers are given adequate information and that their dignity is preserved through the entire research process, as well as that research ethical principles are taken into consideration in accordance with the Helsinki Declaration (MFR, 2002), which consists of research ethics that safeguard the patient's anonymity and integrity and preserves trust. By using the perioperative dialogue, the coresearcher becomes a familiar nurse, someone who becomes a part of the patient's perioperative incident and the one who collects data. Because it is the patient's nurse who collects data, patients are protected from observation and questions from researchers who are not part of the team. The integrity of the patient is preserved, given that the coresearchers are registered nurses and have an obligation towards patient integrity (ICN, 2005). The coresearchers were familiar with the research field, as Flanagan (1954) phrased it, not unknown observers. In their attitude, the coresearchers strove toward openness and respect for the patient's self-determination. Because they are simultaneously nurses, an ethical priority was established in that the patients' well-being should take precedence over research aims. The carrying out of the perioperative dialogue was merely regarded as a change in routine because the questions asked would have been asked anyway. Within anesthesia and operating care, there are situations that require specific ethical reflection. Ethical approval for the conduct of the study was granted by the University Research Ethics Committee (Dnr C2005/263). Consent for the study was then obtained from the heads of the operating theaters. Patients' identities were protected by neither showing individual names, nor names of hospitals. Informed consent was obtained from the patients, along with permission to use anonymous quotes from the perioperative dialogue.

**Research meetings**

Through arranged research meetings, a "hermeneutical room," the responsibility of the academic researchers was not only to guarantee scientific systematics and stringency but also to be interpreters and leaders of science and theory (Lindholm, Nieminen, et al., 2006). The reflections during research meetings reflected a constant shift between science and praxis as well as between praxis and theory, and it should be seen as a hermeneutical element where the preunderstanding moves from obscurity to light (Gadamer, 1989). New questions are raised and new answers are sought in a dialogue between reseachers and coresearchers. The academic researchers are those that show the way for clinical coresearchers and who might be controlling the knowledge development in the long run. If one wants to see what emerges in praxis, one must reflect on what the ethical view means, the vision that is based on the vision of evidence, to see what presents itself and what wants to be seen (Gadamer, 1989). It is an arduous process to pull Maya's veil aside; that is, to lift the prejudice that prevents seeing and to see what really presents itself. It means that we researchers and coresearchers, with the help of each other and theory, consciously tried to reach beyond the obvious and reflect on what we saw and what we overlooked.

The first research meeting started with the coresearchers being made aware of their professional preunderstanding, their ethical standpoint, their theoretical, technical knowledge, and their experiences of being nurses in a high-tech environment. Dignity was discussed, including what dignity means to the older patients in perioperative might praxis. The coresearchers were given a task until the next meeting of enhancing their theoretical knowledge of dignity.

At the second meeting, some coresearchers related how they had seen patients violated, something they had not thought about before. The reflections ended up being about ethics and the caring part of the perioperative praxis. Comparing the profession to Maya's veil helped us understand why we as researchers and coresearchers were hindered by our profession to see what we should have seen. For the next research meeting, the coresearchers were given the task to carry out and document a perioperative dialogue with an older patient undergoing surgery.

At the third meeting, the coresearchers said they had become better at listening to what the patient wanted to talk about. Caring had been given a language, and they emphasized the patient more clearly. For the next research meeting, the coresearchers were asked to read the article "Caring Perioperative Culture, Its Ethos and Ethic" (Lindwall, von Post, et al., 2007).

The fourth meeting was spent discussing ethics and the ethos of care in a perioperative culture.

At the fifth and final research meeting, the coresearchers said their "blinders had been shed," and they had started seeing the obvious, which they had not seen before. They had also started making their coworkers aware of the importance of safeguarding and preserving the patient's dignity in the operating theater. Their language had developed. The coresearchers had also become aware of how habits in caring culture affected care.

The academic researchers documented the coresearcher's thoughts, feelings, observations, and reflections during the five research meetings. The professional preunderstanding of the researchers has also changed by making the coresearchers aware of and opens to how the professional preunderstanding has affected research development. In a new way, we were made aware of how the caritative theory, knowledge about dignity, caring ethics and perioperative care, perioperative dialogue, and experiences as nurse anesthetists and operating room nurses have affected our way of seeing what has presented itself. By using this design, the academic researchers also participated in the entire investigation process.

When the coresearchers become aware of their professional preunderstanding and Maya's veil can be pulled aside, the act of becoming aware is seen as a fusion of horizons, which means that the horizon of the profession meets the horizon of the conscious knowledge, and the personal knowledge is extended (Gadamer 1989). When a given horizon emerges in connection to an unfamiliar horizon, a fusion occurs that makes up something qualitatively new and brings about new aspects of both parties, according to Gadamer (1989). If this fusion fails to arise, understanding fails.

**Hermeneutical text interpretation**

The coresearchers' 54 stories were brought together to one text. Hermeneutical text interpretation was chosen by the academic researchers for interpretation of the text, an approach that seeks to understand the meaning of the text more than how the text was created. To understand the text, the researchers have been inspired by nonstructuralistic hermeneutical text interpretation created by Gadamer (1989). Gadamer brought out the meaning of he agreed that it is the text that is to be understood, not the author's purpose with it, and "psychologism"; that is, he does not want to find a psychological reason for a text. The text in this case is the coresearchers' stories from their patients. The text interpretation followed five readings:

- the first reading: integrating the text with the reader,
- the second reading: fusion of horizons,
- the third reading: new questions to the text,
- the fourth reading: summarizing main and subthemes, and
- the fifth reading: a new understanding.

Gadamer (1989) holds that the linguistic formulation creates room for the meaning of the text, based on content and through interpretation.

*Analysis of the text as an original source*

The critical examination of the text focuses on whether the text is an original source and on its validity, which is found in its relevance to a perioperative reality (von Post & Eriksson, 1999). The linguistic relevance of the text has to do with whether the caring reality through the language of the text can be put in a context of clinical caring science (Eriksson, 2006). What became evident through language?

The text has told us about the older patients' reality in a perioperative dialogue. The story came from our own time and our own profession and was easily recognized as a description of reality. As nurse anesthetists we could recognize the reality of the text. The language was articulated through a caring and a medical language which is relevant to a perioperative reality.

**The professional preunderstanding**

The movement of understanding can be seen as a merging of the movement of tradition and the movement of the interpreter through the professional preunderstanding that has been set by that which mutually unites the researcher with tradition and makes it possible to consider what has been written as true. Not until we can hold what has been said as true, does the understanding of the text begin. Gadamer (1989) claimed that the meaning of tradition, to the hermeneutic approach has been established by the commonality, is based on the fundamental and basic prejudices. Before the readers start reading the text, they shed private prejudices; that is, they

make themselves aware of their professional preunderstanding. It then becomes necessary to restrain the professional preunderstanding so that new knowledge might emerge from the text (Gadamer, 1989). The understanding of the text assumes that the reader can enter into the reality of the text. The professional preunderstanding of the researchers was our caring science knowledge, reflections with the coresearchers, but also knowledge, experiences, duties, ethics and commitments that we carried with us as nurse anesthetists and researchers. Our encounters with sick patients and their suffering are also a part of our professional preunderstanding. The text would have become unintelligible to the researchers as we had not had their professional preunderstanding.

## The reader's encounter with the text

*The first reading: integrating the text with the reader*

To approach the text in an as unprejudiced way as possible, the text is not read, compared, or interpreted until data gathering is completed and compiled as a single text. It is read from beginning to end without interruptions. Kemp (1972) has observed that the last conclusion might change everything. The text is allowed to express itself (Gadamer, 1989) in that the first reading is an open reading, which means that the reader asks what the text has to say. The professional preunderstanding makes the readers prepared to receive the text and to integrate it with their professional understanding when they read through the text for the first time. During the reading, the reader asks the text questions. The text replies and poses new questions: "Is this the way it is? Is this reality?" "Yes, it is." The readers let themselves be moved by the text. The text became a part of the readers when they listened and allowed the text to say something true about reality without questioning the objective nature of that reality (Gadamer, 1989). When reading, the readers ask the text questions. The text answers and poses new questions to the readers.

While reading, questions emerged, such as, "Is this specifically revealing the situation of an older patient?" "Do I really understand what they are telling me?" And the text answered; "Yes, the story may correspond to the older patient's life." The text spoke to us as nurse anesthetists.

*The second reading: fusion of horizons*

The text is carefully read through with an open mind so that the text can present itself in all its "otherness" (Gadamer, 1989). The readers can then grasp the meaning of the text. The text talks to the reader; it expresses a message. The professional preunderstanding had to be reconsidered in relation to the unfamiliar text and new questions to be asked emerged. Gadamer stated that a dialogue with a text leads to a fusion of horizons; that is, the reality of the text becomes part of the reader. The readers' attitudes toward the reality that they are about to interpret should, according to Gadamer, have the form of a question: Is it this way or that way? In the fusion of horizons, it became obvious that the older patients made a presentation of themselves. Who is the older patient? was therefore asked of the text.

*The third reading: the question to the text*

The horizon of the text and the horizon of the reader are brought into a relationship with each other through a hermeneutical experience. This turns out to be meaningful to the readers: First, they have to acknowledge their lack of knowledge about what the text is about. What knowledge has to become deeper in order for the reader to understand the text? Second, the readers must find the questions that the text asked them. What kind of knowledge does the text want to convey? Gadamer (1989) claimed that it is impossible to understand a text only if one does not understand

it as an answer to a question. Furthermore, he asserted that one can understand it only if one poses the actual question. The text is then carefully read through to discover answers to the question; that is, significant expressions and quotations with common and distinguishing qualities. Through the answers, the text could comprise another element of understanding (Gadamer, 1989).

First, we had to acknowledge our lack of knowledge about the older patients. Second, we had to find the questions that the text asked us. The text wants to tell us about, Who is the older patient?

*The fourth reading: summarizing main and subthemes*

The  text with the quotations and significant expressions is carefully read through looking for its meaning. The goal is to find main themes: the mutual, basic characteristics for all significant expressions. The distinguishing qualities and differences then form subthemes, which give the main themes their character. Each subtheme will be described using quotes from the text. To achieve interrater reliability, the coresearchers can function as coraters, to conclude whether the themes are useful for and related to the practice under study (Kvale & Brinkmann, 2009).

This common quality was formed into one main theme: the older patient, a person having to undergo surgery, and then distinctive qualities were looked for, resulting in four subthemes*:*

- a person with a story to tell, with memories of the life he or she has lived;
- a person whose body has betrayed him or her;
- a person who is worried and afraid before the operation; and
- a person who will need help from family and friends.

Each subtheme has been described using quotes from the text.

*The fifth reading: the new understanding*

In the fifth reading the entire text is read once again to reconfirm all themes compared to the text as a whole in search for a new understanding of the whole, from its parts and the parts from the whole, which Gadamer (1989) described as the hermeneutic circle. This process of understanding involves an abstraction of the main theme, and the subthemes formed a new understanding, a coherent whole that is seen as valid and free from inner contradictions. The new understanding can be described using a figure or through assumptions.

At this point we have acquired a new horizon. The older patients have been understood as a person with a past time, historical time, the life lived; present time, a time of changes; and a future, a time for recovery after surgery**.**

## Discussion

The hermeneutic design takes the patient's vulnerability and exposed position into consideration through the continuity of the perioperative dialogue and safeguards their anonymity and integrity as well as preserving the patient's trust throughout the research process. As a part of the perioperative dialogue, the coresearchers provide a continutiy that ordinary participant-oriented research cannot offer (Hummelvoll & Severinson, 2005). Using the perioperative dialogue for data collection, the older patient was not, as is common in action research, exposed to looks and questions from an unknown observer, someone who registered only what their preunderstanding allowed them to see (Gadamer, 1989) in an unfamiliar and high-tech world. The strength of the perioperative dialogue is that the coresearchers can take their ethical responsibility for data

collection when they were a natural part in the patients' perioperative dialogues and were familiar with the context (Flanagan, 1954). All patients in this clinical study were satisfied with the time the nurse anesthetist or operating room nurses gave them. Rudolfsson (2007) has previously described that patients appreciate when the nurse takes time for them in the perioperative dialogue.

The element of application is based on ethics that demand the coresearchers to allow their profession to guide their vision in an insightful way and to pull Maya's veil aside; that is, make themselves aware of what helps or hinders them from seeing what presents itself but at the same time admitting that they have become blind to the obvious. Reaching insights about professional preunderstanding can be seen as an ethical act and an ethical responsibility that helps the coresearchers see and understand the older patient's need and the researchers to listen to what the text talks about. Within participant-oriented research in general, the effect of the professional preunderstanding on how the participants observe what presents itself has not been emphasized, something that can be seen as a strength in a design with an element of application. Reaching insights about preunderstanding widens the horizon, according to Gadamer (1989), because the insight includes an element of self-knowledge, a necessary aspect of experience. Preunder-standing is what facilitates or occupies the mind of the interpreter and it cannot be freely used.

Understanding will be the central element in the hermeneutical approach because it involves reflection and application (Gadamer, 1989). Coresearchers and researchers cannot separate beforehand the productive prejudices that make understanding possible from what in itself leads to misunderstanding, which is why the research group was created. The reflective spirit of the "hermeneutical room" was important to how understanding led to new understanding and not only to explain and solve problems within one field, as in classic action research (Fagermoen, Hamilton, Svendsen, & Hejellup, 2002). By participating, the coresearchers expanded their caring science and their ethical and methodological knowledge, which participants in action research do not normally do (Day et al., 2009; Lindholm, Nieminen, et al., 2006). Limitations of the design might be that it demands that the coresearchers are interested in participating in research groups and willing to be in development.

When the coresearchers have been allowed to be active throughout the entire research process, the evaluation concluded that they had "shed their blinders" and that they had "revealed what was hidden in the obvious." However, the design might also be limited through the inability of the caring organization to facilitate for the nurses to become coresearchers and sometimes the unwillingness of coworkers to allow their practiced routines to be changed (Lindwall & von Post, 2008; von Post, Frid, Kelvered, & Madsen, 2005). The coresearchers were responsible for that the research was carried out and knowledge later converted into praxis; that is, they not only became participants but also had the responsibility for changes in praxis.

All participant-oriented research, when others apart from the researcher participate more actively in the research process than what is common, will not self-evidently become research, according to Holmer and Starrin (1993). Action research can be seen as development work, whereas the participants of application research, through research meetings, were trained in a scientific approach while actively participating in scientific research.

The text from the perioperative dialogues was written by nurse anestethists or operating room nurses and was the older patients' voices in the perioperative dialouge. According to Gadamer (1989), reality is given a structure through a text. Using hermeneutical text interpretion, we could produce knowledge from the nurses' clinical stories. Gadamer stated that when interpreting a text, one allows a text to be a voice, which means that a text is relevant to establishing and realizing

knowledge. Gadamer holds that that which can be understood is language and the text obtains a voice and silent knowledge obtains a language when the text is read through in a dialouge with the text. Caring science acquires concepts, a coherent picture of reality, and the professional caring culture acquires a language. The story and the hermeneutic text interpretation, through its way of allowing the text to speak, gave perioperative care an extended language and a language which was already there in the obvious, but without being articulated (Kuhn, 1970). The language provides evidence to what wants to show itself in praxis.

The finding of the clinical study showed that the older patients undergoing surgery were persons with memories of the life they had lived, whose body had betrayed them, who were worried and afraid before the operation, and who will need help from family and friends. The older patient is a unique human being, a wholeness with a past of their own and a life they have lived; the present is a time of change, and the future, a time for recovery (Lindwall, Lindberg, Daleskog, & von Post, in press). Through continuity in the perioperative dialogue, the older patient is given time and space to talk about joys and sorrows in everyday life, about the body undergoing surgery and about life after surgery. The nurses in the perioperative dialogue care for the older patients by allowing them to be someone, a unique human being, and thereby alleviate the patient's suffering and create well-being in an exposed and vulnerable situation (Sundell, von Post & Lindwall, in press). The implication for praxis will be demonstrated by the findings from this application research. The perioperative dialogue can be a model for perioperative caring, a way for nurse anesthetists and operating rooms nurses to be coresearcher and also a way for data collection.

## Conclusion

In conclusion, this paper has described a methodology for clinical research with a hermeneutical design and an element of application. By using the perioperative dialogue, the nurse anesthetists and operating room nurses could be coresearchers and at the same time be the patient's nurse. The coresearchers' participation made it possible for academic researchers to become a part of the patient's perioperative reality.

The defining features have been summarized as follows.

- Continuity in the perioperative dialogue created prerequisites for an element of application, for nurse anesthetists and operating room nurses to be coresearchers.
- The hermeneutical room comprises the research meetings where the coresearchers are trained in caring science, ethics and research methodology. The training makes the coresearchers discover new phenomena in praxis and see once again what they stopped seeing, and this way they question the unethical habits.
- The hermeneutic research tradition demands that researchers and coresearchers make the professional preunderstanding explicit and learn to pull Maya's veil aside so that they can see what presents itself.
- Professional preunderstanding creates conditions for us to describe and communicate silent knowledge.
- Through hermeneutic text interpretation, the narrator is allowed to speak and implicit knowledge is given a language.
- Perioperative care becomes evident when it is allowed to present itself to the surrounding world and is dedicated to the patient in perioperative praxis.

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