

Operating room nurses' experience about patient cares for laparotomy surgeries: A phenomenological study

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ABSTRACT

Introduction: The primary purpose of the present study was to explain the lived experiences of operating room nurses in the field of patient care undergoing laparotomy surgeries. **Methods:** The analytical phenomenological method was used. Ten operating room nurses employed in the operating rooms were selected using purposeful sampling. In-depth and semi-structured interviews were used for data collection. Data analysis was also applied using van Manen's six-step test. **Results:** In this study, 749 initial codes were extracted, classified into three main themes and six sub-themes following the elimination of similar codes. The main themes included a positive view of patient care, preservation of the physical safety of patients, and consideration of patient vulnerability in the operating room. Moreover, responsibility, holistic care, readiness standards of the surgical environment, physical care provision, medical team malpractice, and lack of care context were considered as sub-themes. **Conclusion:** The operating room nurses' experiences of patient care in operating rooms included a positive view of patient care, preservation of the patient's physical safety, and consideration of patient vulnerability in the operating room.

Keywords: Experience, operating room nurses, patient cares, phenomenological study, surgery

Introduction

Caregiving is a complicated and multidimensional concept and the core of various nursing theories.^[1] Nursing and caregiving are inseparable elements.^[2] However, patient care in operating rooms is a complicated concept with no specific definition.^[3] Studying patient care knowledge plays a vital role in understanding and responding to the change in health patterns of the patients, especially in the operating rooms.^[4] Patient care in the operating rooms can be divided into pre-operation, in-operation, and post-operation phases.^[5]

The operating room is one of the most vital wards of a hospital in Iran since it plays a crucial role in improving the quality, productivity, and performance of hospitals due to its high expenses and being the highest income-generating unit time.^[6] Hetland *et al.*^[7]'s study (2018) showed that patient care is a vital goal and value in operating rooms and surgical environments, and all personnel of the operating rooms must have maximum awareness in this field. Hannon *et al.*^[8] (2017) reported that the medical personnel expressed their care experiences and emphasized prompt management of patients' emergency and physical symptoms. The interactions of the medical staff and patients in the operating rooms can enhance patient satisfaction, reduce their pain, improve their situation, and reduce the length of hospital stay.

Factors such as organizational requirements, the physical environment of the ward, inadequate time, high workload, staff

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shortages, and stress of the operating room nurses can restrict the proper interaction with the care receivers in the operating rooms. Despite these problems, operating room personnel should provide acceptable services to enhance patient satisfaction and allocate some opportunities to establish proper communication with the patients.^[9] Similarly, in the study by Karen D Coulman *et al.*^[10] (2020), it was emphasized that patients highlighted the need for more flexible, longer-term follow-up care that addresses social and psychological difficulties post-surgery, and integrates peer support. However, providing sufficient information before the operation and patient care in the operating room can reduce the patients' stress and anxiety and enhance their readiness.^[11] Eileen T Lake *et al.* (2017)^[12] showed that missed nursing care, resulting from staff shortages in the hospital, is a vital threat to patient health.^[13]

The present survey was performed to study the operating room nurses' experience with patient cares for laparotomy surgeries.

Materials and Methods

Philosophical context

The philosophical context of this study consists of hermeneutic and phenomenological approaches that aim to deeply explore the meanings and nature of a phenomenon and the lived experiences.^[14] In this study, Van Manen's hermeneutic phenomenological test (1997) was used to analyze the lived experiences of operating room nurses employed in selected hospitals of the Hamedan University of Medical Sciences.

Research samples

The samples included 10 operating room nurses employed in a public educational hospital operating room. To consider the diversity of the participants' information, the author selected five males and five females with MA and BA degrees. The samples were selected using purposeful sampling from the operating room nurses at the Hamedan University of Medical Sciences. The only inclusion criterion was at least 5 years of work experience in the operating room, and the exclusion criterion was the unwillingness of the participants to continue the study [Table 1].

Ethics

Informed consent was obtained from the participants. The Ethics Committee of the Hamedan University of Medical Sciences approved this study (IR.UMSHA.REC.1398.821) under code No. 9810177726.

Data collection

This study used semi-structured interviews for data collection. The interviews were performed within about 45–83 min individually and in the place and time accepted by the participants. The majority of the study samples selected operating room, meeting room, or resting room for the interviews. The interviews were performed one-by-one and sequentially. The interviews were recorded with the permission of the participants.

Table 1: The demographic and occupational information of the study samples

Participants No.	Gender	Education level	Age	Work experience (years)
P1	Female	BSN	42	19
P2	Female	BSN	38	15
P3	Female	MSc	33	9
P4	Female	MSc	45	12
P5	Female	BSN	31	8
P6	Male	BSN	37	14
P7	Male	MSc	55	32
P8	Male	MSc	39	16
P9	Male	MSc	48	23
P10	Male	BSN	35	13

To guide the interviews in line with the studied phenomenon, the author used these questions: What comes to your mind immediately after hearing the term “patient care in the operating room”? Do you have any experience with patient care in the operating room? The author also used exploratory questions, such as Explain more? What do you mean? The interviews were transcribed verbatim at the earliest opportunity with Microsoft Word and prepared for analysis. The interviews of the study samples were encoded for privacy and confidentiality (P1, P2, P3,...). The interviews were continued with 10 participants until data saturation. The subsequent meeting with the participants was after the data analysis.

Data analysis

Van Manen's six-step hermeneutic phenomenological test (1997) was used for data analysis. This test includes (1) turning to the nature of lived experience and consideration of it, (2) collecting lived experiences by explaining the studied phenomenon as it was, (3) theme analysis by reflecting on natural and essential patterns of the phenomenon, (4) phenomenological writing to describe the phenomenon by writing and rewriting, (5) making and preserving the oriented and robust relationship with the phenomenon, and (6) creating correlation and balance by considering the theme parts and changing them into a whole.^[15]

Van Manen's theme analysis process separates the theme sentences and derives themes from a holistic and selective approach. Recorded interviews were transcribed verbatim and reread several times. Analysis was started by coding after a short pause and mental discharge. First, every interview was read to gain initial perception. Then, the essential expressions were underlined and recorded as initial codes. The participants' words and the author's perception of their statements were used to name the initial codes. Afterward, the codes were reread to be replaced in the main categories and subcategories based on semantic similarity. Data analysis was performed simultaneously and continuously by data collection. During the data analysis process, 749 initial codes were derived. After the elimination and integration of similar codes, three main themes and six sub-themes were specified.

Rigor

Four criteria, including credibility, confirmability, dependability, and transferability, were used.^[16] The author used methods for the study's credibility, including triangulation, prolonged engagement, body language, non-verbal cues consideration, member check, and persistent observation.

Results

Data saturation was reached after interviewing 10 participants (five males and five females). Hence, three main themes and six sub-themes emerged [Table 2].

The optimistic view of patient care

The optimistic view of patient care was one of the main themes of the operating room personnel's patient care experiences that included two sub-themes: responsibility and comprehensive care.

Responsibility

'Responsibility' is the issue emphasized by most operating room nurses about their care experiences and is also considered the prerequisite of desirable caregiving in the operating rooms. Due to the job regulations and work conscience, the operating room staff is responsible for providing the highest care level leading to the safety and health of the patients. The theme includes two sub-themes, including accurate staff perception of patient care and conscience during surgery.

Accurate perception of patient care

While describing patient care and their experiences, the participants stated that patient care is one of their primary responsibilities, and they never complain about that and accept it as an inseparable part of their life. In this regard, one participant said:

"A patient was hospitalized for inguinal hernia surgery. I was beside the patient from the moment we transferred him from the stretcher to the operation bed to the end of the operation. " (p7)

Work conscience during surgery

'Work conscience' refers to a sense of commitment and innate promise to the assigned responsibilities. The majority of participants emphasized this theme and mentioned that they should behave with the patient as they expect others to behave. One of the participants said:

"Last week, the surgeon was insisting on beginning the operation as soon as possible. Then, the surgeon cooperated. I can never go to bed to rest if I leave my duties uncompleted because I feel guilty conscious." (p1)

Holistic care (comprehensive)

The caregiving method in the operating room is indivisible, and all aspects of patient care, including mental, emotional, spiritual, and social, are considered. This sub-theme includes two categories, including psychological comfort of the patient and observance of the patient's privacy.

The psychological comfort of the Patient

The participants believed that the operating room nurses' skill and capability in encountering patients and controlling their mental state before surgery would reduce the patients' anxiety. One of the participants stated:

A schizophrenia patient came into the room and threw all medicines and syringes firmly on the ground. We just shouted for help. These patients need silence, and all of us use only body language." (p9)

Observance of patient privacy

One of the themes extracted from the operating room staff's patient care experiences was the observance of patient privacy that included various dimensions. A participant said:

"We had a female patient who was anxious and stressed. I asked other operating room nurses to leave the room during catheterization and lithotomy positioning and ensured her that no one was in the room." (p2)

Preservation of patient physical safety

The participants repetitively emphasized the physical care of the patients. The patients under surgery are vulnerable in the operating room due to potential risks and stressful situations.

Table 2: The main themes and sub-themes of the operating room nurses' lived experiences of patient care

Main themes	Sub-themes	Cluster themes
A positive view on patient care	Responsibility	Personnel's accurate perception of patient care Conscience during the surgical process
	Holistic care	The psychological comfort of the patient Observance of the patient's privacy
Preservation of the Patient's physical safety	Readiness standards of the surgical environment	Aseptic technique observance Careful gauze and item counting
	Physical care considerations in surgery	Prevention of surgical site infection Incision line dressing standards
Considering the patient's vulnerability in the operating room	Medical team malpractice	Leaving items in the surgical site Improper prep and drape of surgical site
	Lack of care context	Lack of equipment in the operating room Defective surgical schedule

Readiness standards for the surgical environment

According to the physical challenges for patients under surgical operation, and invasive procedures performed in the operating room, the surgery environment should be prepared based on surgical standards to minimize the effects and potential risks of surgery. The sub-theme includes two cluster themes: aseptic technique observance, accurate gauze, and item counting.

Aseptic technique observance

Aseptic technique observance in the operating room is a fundamental factor in providing indirect care for patients under surgical operation.

"I opened a surgery set and found a hair in it. Under such conditions, I give back the set to CSR, and never use these sets for the operation." (p5)

Accurate gauze and item counting

The majority of participants claimed that the operating room staff's important and professional responsibility is accurate gauze and item counting. One of the participants stated:

"While doing a laparotomy surgical procedures, in which the bowels and colon are brought out completely and put on the long gauze. The other day, we opened 23 gauzes." (p4)

Post-operative physical care measures

Post-operative care aims to help the patient return to safe physiological status by focusing on surgical site dressing. This theme includes two cluster themes, including prevention of surgical site infection and standard incision line dressing.

Prevention of surgical site infection

In this regard, the participants claimed that surgical site infection could increase the probability of morbidity and mortality and ultimately increase hospital expenses.

"During gastrointestinal surgery, I take more care of the patient, I always gloves and gown changed. Because leakage into the peritoneal cavity can be a source of generalized peritoneal sepsis." (p1)

Incision line standard dressing

The incision line dressing is the last step of the surgical procedure. Standard dressing decreases the probability of wound infection. A participant stated:

"I always wear two gloves before beginning a surgical operation. For dressing the wound, I take off the upper gloves so that the dressing does not get dirty. Then, the wound is packed." (p2)

Considering the vulnerability of the patient in the operating room

There are great potential risks that threaten the patients in the field of surgical operation. All of the damages happen as a result of nurse malpractice.

Malpractice of the medical staff

The operating room nurses' malpractice while taking patient care is one of the sub-themes of the patients' vulnerability in the operating rooms, leading to irreparable mental and physical damages for the patients and their families. The theme includes two cluster themes:

Leaving surgical instruments in the surgical site

According to the participants, leaving items in the patient's body leads to a lump, fistula, and abscess after surgery. One of the participants said:

"I never like to go on surgical operation with doctor..., because he is always hasty and impatient. His behavior caused leaving forceps in the stomach of a patient after the Cholecystectomy surgery." (p2)

Improper prep and drape of surgical site

According to the participants' experiences, inadequate sterilization of the skin and drape of the surgical site was one of the leading causes of hospital infections after the surgery. One participant said in this regard:

"One of our colleagues preps the surgical site within less than 1 min, fills the gallipot with 7.5% betadine, but never uses it. I have noted several times, but he never pays attention and does not care about the patient's life." (p6)

Lack of care context

Lack of facilities and an accurate surgery schedule will cause irreparable problems for the whole hospital. This theme includes two cluster themes: lack of facilities in the operating room and a defective surgical schedule.

Lack of equipment in the operating room

The majority of participants believed that the operating room is the most effective ward in the hospital. Efficient surgery requires providing up-to-date facilities and equipment, and the lack of such services increases the patients' vulnerability.

"During cholecystectomy surgery using laparoscopy for a 53-year-old woman with four childbirths with extended adhesions, the gallbladder fundus was separated from the surrounding adhesions by a Maryland Dissector. So, the 90-min surgical operation lasted about 4 h, leaving many complications for the patient." (p3)

Defective surgical schedule

According to the participants, a minor defect or lack of observance of the standard schedule would result in irreparable complications for the patient.

"Some time ago, a 72-year-old man was referred for Whipple surgery. The residents admitted the patient based on the graphs of one month ago." (p4)

Discussion

This article helps to define the concept of caring for patients undergoing laparotomy and how to differentiate the primary

care provided from other parts of the hospital. A prerequisite for caring for this type of patient is having a positive attitude toward patient care and maintaining the patient's physical and mental security. Finally, paying attention to the injuries of patients undergoing surgery in the operating room is also an important principle.

A positive view of patient care was the central theme of patient care in the operating room and included two sub-themes: responsibility and holistic care.^[15,16] A qualitative study under the title of "Experiences of patient care when being on mechanical ventilation during weaning process" was conducted by Tingsvik (2018)^[17] in Sweden. Finally, three main themes emerged: acceptance of patient care, maintaining human dignity, and enduring difficulties.

Regarding the responsibility as a sub-theme with two cluster themes, including the staff's proper understanding of patient care and conscience during the surgical process, Parola (2018)^[18] claimed that the nature of patient care is responsibility, purposefulness, sympathy, and defending the patient. Sandhu *et al.* (2017)^[19] have shown that, according to the residents, the patient is the most critical person in the operating room, and they are required to accept their professional responsibilities which was similar to another research.^[20] Meng *et al.* (2019)^[21] have emphasized that the operating room nurses should use hands, hearts, and minds to make an improved and healing environment to care for the mind and soul of the patients. Bolderston (2010)^[22] conducted a study under the title of "the concept of care: perception of radiation therapists" on 27 radiation therapists. Sekse *et al.* (2018)^[23] found, to provide good care, operating room nurses need to make an honest and open relationship with the patients.

Alaqla *et al.* (2018)^[24] conducted a study based on the participants' lived experiences and found that patients' privacy includes four main dimensions: solitude, intimacy, anonymity, and self-control. This sub-theme includes two cluster themes, including aseptic technique observance and accurate gauze and instrument counting.^[25]

In a study conducted by Sankpal *et al.* (2020),^[26] a 40-year-old woman had undergone cholecystectomy surgery. After the surgery, it was found that a gauze had penetrated the duodenum.

The participants believed that the operating room nurses should provide maximum care for the patients. The findings of Mostafaei *et al.* (2020)^[27] showed that the vulnerability of mothers after cesarean section is prevalent, and the injury rate has a significant and positive correlation with the mother's body mass index (BMI). Similar findings of the opinions of operating room nurses were also reported previously.^[28,29] Peñataro-Pintado *et al.* (2021)^[30] reported that some of the key issues that affected the perioperative nurses' ability to achieve their duties and guarantee patient safety were the stress of

working in the operating room, unsuccessful announcement in the multidisciplinary group, and time pressures.

Since no study has been conducted in the field of patient care in the operating room, it is necessary to conduct basic studies to increase knowledge in this field. Since the findings of the present study reflect the experience of operating room nurses in patient care, all operating room planners can use them to strengthen the care system of the patients undergoing surgery.

Conclusion

The findings of this survey showed:

- The operating room nurses' experiences can increase the level of care from patients referred to the laparotomy surgery
- Relaxing the patient along with creating a suitable atmosphere has been one of the main experiences of the nurses after successful surgeries
- Treatment of infectious wounds and medical care of the patients in the operating room have been the two main experiences after successful surgeries.

Lived experiences of the operating room nurses in the field of patient care included a positive view on patient care, preservation of the patient's physical safety, and consideration of the patient's vulnerability in the operating rooms. This study seems to have helped clarify the concept of caregiving by the operating room nurses and its discrepancies with other wards of the hospital.

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Conflicts of interest

There are no conflicts of interest.

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