Facilitating and Impeding Factors in care of patient with obesity; A Qualitative Content Analysis

Abstract

Aims: Nurses in caring for patients with obesity (PWO) face difficulties in providing services. The difficulty of care causes inaccurate and incomplete care and sometimes not receiving care, and as a result, there is a possibility of many complications for the patient. Therefore, in order to plan appropriate care for PWO, the factors affecting care must be identified. For this purpose, this study was conducted with the aim of explaining nurses' experiences of facilitating and impeding factors in providing care to PWO.

Methods: In this qualitative conventional content analysis study, 20 nurses and 6 PWO in two large hospitals affiliated to Mashhad University of Medical Sciences were interviewed. The participants were selected by purposeful sampling and interview was conducted by in-depth and semi-structured. Data analysis was done using content analysis & MAXQDA software.

Findings: The results of this study, according to the experiences expressed by the nurses, showed that the facilitating and impeding factors in providing care PWO in the hospital in four categories: "cooperation versus passivity in the process of self-care", "influential level family involvement at the patient's bedside", "organizational challenges in care" and "nurse competence level in care".

Conclusion: Nurses and nursing managers, knowing the effective components in difficult care for PWO, can plan appropriate for these vulnerable patients. Organizational changes such as creating collaborative care in difficult situations, considering the patient classification system for PWO, providing large-sized welfare and treatment equipment, increasing the skill level of nurses, ways to improve interaction with the patient and his family can be practical solutions.

Keywords: Obesity, caring problems, nurse's experience, facilitating factors, impeding factors, patient care, caring

Introduction

Today, with the increasing prevalence of obesity worldwide [1] and consequently the likelihood of involvement of multiple body organs and resulting diseases [2], we are faced with an increase in hospitalization rates of these patients [3-7]. Nurses, as primary caregivers in the healthcare team, encounter unique care conditions due to the patient's excessive weight and adipose tissue. They face challenges in patient monitoring, such as one of the simplest nursing procedures [8], assessing the patient's respiration and observing anatomical landmarks [9], palpating the carotid pulse during cardiopulmonary resuscitation, and so on [10]. In some circumstances, care becomes so challenging that providing certain treatments to the patient, such as intubation, cardiopulmonary resuscitation, or patient relocation, becomes impossible. The consequence of this care situation is patient harm, as some care procedures are not performed correctly [8], resulting in inadequate patient treatment and possible treatment delays. Consequently, this leads to an increase in hospitalization time [11], the occurrence of complications such as infection, ulcer formation, delayed wound healing [10], patient falls due to incorrect handling [9], and even death [12]. For instance, Fosco et al. reported an increase in hospitalization time for obese patients compared to non-obese patients (8/7 versus 5/2), admission to the intensive care unit (ICU) (17/2 versus 7/6%), ICU length of stay (116/8 versus 100/4), and higher rates of readmission within 28 days (8/1 versus 5/4) [11]. Another issue is neglected care. Nurses reported that the most frequently omitted actions for all patients were basic procedures such as repositioning, oral care, nutrition, and more important care actions such as medication administration, registration, and patient training [13].

In the study by Karimi *et al*. (2020), the most cited reasons for missed care in the emergency department were stated in the order of human, material, and communicational domains. In the human resources area, the shortage of human resources and unexpected increase in patient numbers were reported as the primary reasons with an average of 3.58. In the material resources area, the unavailability of supplies and equipment during patient care was reported with an average of 2.83. In the communication area, lack of support from the treatment team members was reported as the most significant reason for missed care with an average of 3.04, categorized by area [14].

Pedersen & Kristensen (2023) stated that missed care in orthopedic surgery, particularly in patients with obesity, was slightly higher than in patients with normal weight [15]. Therefore, in these patients, there is a higher expectation of missed care due to the difficulty in care giving.

It is important to understand what factors can have a positive or negative impact on this complex and challenging care. Given the complex nature of caring for these patients and the different clinical environments in Iran in terms of facilities and equipment, awareness of these factors can help nurses and healthcare professionals take measures to facilitate care. Therefore, these factors can be identified by accessing the experiences of nurses involved in care through a qualitative study. So, the researchers conducted the present study with the aim of elucidating the experiences of nurses regarding facilitating and inhibiting factors in providing care for obese patients.

Methodology & Participants

This qualitative study was conducted using conventional content analysis method in 2019-2022. Content analysis is an appropriate method for generating knowledge, presenting facts, and providing practical guidance for action by obtaining rich and in-depth information from the perspective of participants without any specific theoretical bias [16].

The samples were selected through purposive sampling among clinical nurses working in the teaching hospitals affiliated with Mashhad University of Medical Sciences who met four criteria: having three years of clinical experience, experience in caring for obese patients, willingness to participate in the study, and ability to express their experiences. Then, theoretical sampling method was used with maximum diversity (based on employment in different departments, different work experiences). In this study, 26 participants were involved, and 27 interviews were conducted, one of which was a supplementary interview with a nurse.

Data was collected through semi-structured interviews. Initially, the interviews started with questions related to general information (age, work experience, etc.), and was followed through questions such as: "In your experience of caring for obese patients, what factors would lead to better care for the patient?" "What obstacles do you face in providing care for obese patients?"

Similarly, questions for patients were like: "How was the care provided to you in the hospital?" "What factors affected the quality of your care?"
All interviews were recorded with participants' permission and immediately transcribed after each session. After analyzing each interview, the next interview was conducted. The location of the interviews for nurses was preferably in the staff break room at their suggested time, and for patients, it was in the patient's room next to the bed in a calm and suitable space. The duration of interviews for nurses ranged from 20 to 62 minutes, and for patients, it ranged from 24 to 47 minutes. Interviews were stopped when data saturation was reached.
Data analysis was conducted using an inductive approach by Graneheim & Lundman (2004), without any preconceived notions by the researcher [16]. MAXQDA version 10 software was used for data analysis. Each interview constituted a unit of analysis, and sentences and paragraphs were considered units of meaning, with open codes identified as initial codes. After extracting open codes, primary categories, subcategories, conceptual categories, and main themes were formed.
Trustworthiness of the data throughout the research was assessed using the criteria of Guba & Lincoln, including credibility, dependability, confirmability, and transferability [17]. A combination of methods was used for data collection to enhance credibility. Reviewing codes with participants was done to ensure dependability. Providing reports and notes to other team members and reviewers ensured confirmability. Sufficient description of the data allowed interested parties to transfer the findings, ensuring transferability.

Findings
Participants in the study included 20 nurses with an average age of 38 years and 13 years of work experience, along with 6 obese patients with a body mass index ranging from 35 to 56 (Table 1).
The results of this study, based on the experiences shared by nurses, indicated that facilitating and inhibiting factors in providing care for obese patients in hospitals fell into four categories: "collaboration vs. passivity in self-care process," "influential level family involvement at the patient's bedside," "organizational challenges in care," and "nurse's competency level in providing care services" (Table 2).

Collaboration vs. Passivity in Self-Care Process: Patients' cheerful disposition energized the care process, while their ineffective interaction made care more challenging. Patients' minimal effort or negligence in self-care and the occurrence of complications were factors contributing to collaboration versus passivity in the self-care process.
One of the identified factors in this study, based on nurses' experiences, was the level of patient collaboration in the care process and the patient's self-care ability. The better the patient cooperated, made efforts in self-care, and maintained positive communication with staff in the hospital, the higher the likelihood of receiving better and safer care. Conversely, if the patient did not cooperate in self-care, showed occasional negligence, or lacked good interaction with staff, their care was compromised, sometimes leading to complications. Nurses stated that caring for obese patients was complex, challenging, and exhausting, and lack of patient cooperation made this situation even more complex and challenging, ultimately disrupting the desired care for them. One participant expressed:
"An elderly lady patient had a pleasant personality, she would get out of bed and walk a few steps with a walker, we enjoyed working with her. But we had another obese patient who kept ringing the bell all the time. It frustrated our nursing assistants. She wouldn't get out of bed. No one wanted to work with her. She stayed in bed so much that she developed bedsores (N7)".
"The patient who had a better temperament, my colleagues endured the difficulty of inserting an IV for him. But the patient who had a bad temperament, my colleague asked me to help him insert the IV. I said if he doesn't scream, I'll come and insert it, but if he wants to scream, I won't come (N7)".

Influential level family involvement at the patient's bedside
The subcategories of increased attention accompanied by reduced patient complications, increased family participation in the patient's personal health management, inability to cooperate in patient care, and evasion in patient care caused the influential level family involvement at the patient's bedside.
According to the experiences shared by nurses, another influential factor in providing care for obese patients was the level of family participation in caring for the patient. In situations where the

level of family participation in collaboration with the medical team was higher, the provision of better and safer care increased. Conversely, when families were less cooperative in providing care, the conditions for ensuring safe care decreased. Nurses reported that some families had lower levels of cooperation in care, due to the patient's excessive weight. In some other cases, families perceived hospitalization as an opportunity for their own rest and refrained from collaborating in care to reduce the burden on themselves, essentially evading patient care. However, family cooperation and participation could serve as a good support in caring for obese patients and actions such as managing the patient's personal health. This could help uncover potential risks during the patient's hospitalization, as accompanying the patient, due to spending a lot of time at the patient's bedside and paying attention to the patient, allowed them to notice any minor changes and played an effective role in nurse awareness and reducing complications for the patient. One of the participants stated:

"... Family members don't cooperate much with obese patients. For example, they don't change the patient's position. They say we can't do it alone. Interestingly, even our assistants go, they still say we can't turn him. I mean, they can't help us or don't want to. Sometimes they can't or think that now they've brought their patient here and left them, they should rest a bit (N1)".

"... When the companion said, I swear I feel embarrassed to ask you to come and dress the wound. This kind of support boosts your morale and relieves fatigue. Although I changed the dressing for his patient several times during my shift. But if he says: Don't you see my patient needs dressing! This kind of behavior affects my spirit. It affects my caring attitude towards his patient (N2)".

Organizational challenges in providing care services

Under the category of organizational challenges in patient care, the subcategories included managerial attention to the busyness of obese patients, team development in care, reduced access to medical and welfare facilities for obese patients, and the lack of patient allocation in the patient classification system.

The experiences shared by nurses highlighted the influential and significant factors of organizational challenges. Organizational processes such as attention or lack of attention to issues such as considering obese patients as busy patients and reducing the allocation of patients to nurses with obese patients, rotating the provision of care to obese patients among staff during their hospitalization days, adequacy or inadequacy in personnel distribution, attention or lack of attention to incentive policies for nurses providing care, access or lack of access to medical and welfare facilities suitable for large-sized patients in the hospital, and the presence or absence of clinical guidelines for this high-risk group could act as facilitators for providing care and increasing safety or barriers to providing safe care.

One of the participants stated: "... For obese patients who are busier, colleagues requested that the nurse for these patients be divided among the staff in rotation. This way, no one objected, and pressure was not placed on one person (N7)".

…Bathing this patient was so difficult that I gave incentives to our helpers. Because they bathed him conscientiously, the next time an obese patient came, they didn't shy away from caring for that patient (N14)".

"... This patient was very heavy, and the ward colleagues couldn't move him and had to bring him to the ward with the same bed. Due to the lack of space for a capsule on the bed, they placed the oxygen capsule next to him and connected the patient to a ventilator. This was an unprofessional and unsafe practice. If we had a suitable bed for this patient, we wouldn't have transferred the patient like this (N6)".

The subcategories leading to the level of nurse competency in care included nurse expertise in simplifying the challenges of difficult care, low nursing capability and care relief, and seeking assistance in care.

Nurse's competency level in providing care services

The subcategories leading to the level of nursing competency in care include the simplification of challenging care difficulties, low nursing competency, liberation from care, and seeking help in care. According to nurses' experiences, the level of nursing competency is also one of the most influential factors in providing care to obese patients. In the provision of specialized care services, both low and high skills, the use of one's own and others' experiences, and clinical reasoning and judgment were mentioned as influential factors in maintaining patient safety. The more experienced and

skilled nurses with better reasoning and clinical judgment skills can make caring for these patients easier and provide care in a safer and more confident manner. Nurses with high competency can perform specialized procedures such as intubation, venipuncture, bladder catheterization, and others successfully, while lack of readiness or low competency of nurses may lead to barriers in providing these specialized care interventions and may prompt the patient to seek help or abandon care. Nursing incompetence is often attributed to lack of experience and skill, inadequate knowledge, lack of time, slow pace, low willingness to care, stress, and hopelessness. Sometimes a competent nurse may be unable to provide necessary care due to lack of access to medical or welfare equipment. One patient stated in this regard:

"…A nurse inserted a catheter, and I suffered for several days. It burned as long as the catheter was in place because it was not properly inserted. It hadn't happened like this before when I was hospitalized. They should have someone who knows how to do it properly for me (P1)."

Another example was: "…We had a patient whom the resident tried to intubate three times but failed. I managed to intubate him on the first try. The patient was in a bad condition, and his treatment measures were promptly implemented (N20)."

Discussion

The results indicate that facilitators and barriers in providing care to obese patients include "collaboration versus passivity in self-care processes," "influential level family involvement at the patient's bedside," "organizational challenges in care," and "nursing competency level in care."

Among the factors influencing the provision of care to obese patients in hospitals, "collaboration versus passivity in self-care processes" and "influential level family involvement at the patient's bedside" are significant. Collaboration between the patient and their family as well as caregivers can be a positive and influential aspect in care when they work together as a team. Nurses, in their statements, referred to various situations where ease of care was evident when the patient and their family behaved appropriately and cooperated in care, which is supportive of caregiving. In these situations, nurses utilized supportive behaviors such as compassion, patience, and empathetic communication to understand the patient's distress during care delivery.

Studies also highlight patient participation as an important and influential element in improving the quality of services and patient safety. Increased patient participation facilitates treatment and is associated with fewer adverse events [18]. In care models, patient participation is a fundamental theme in care and treatment, depending on the patient's physical ability, cultural background, patient knowledge, and previous experience, as well as the nature of the illness [19].

In a study by Baker *et al*. (2008), nurses reported that 51% of patient personality influences care in healthcare settings [20]. Lack of patient cooperation may be due to psychosocial aspects of the patient, as some obese patients may be more dependent and have unrealistic expectations. Sometimes, they expect services similar to a 5-star hotel from the hospital, often without motivation and in need of assistance, feeling helpless like patients [21]. Caring for these patients can be more difficult and exhausting for nurses and can affect the provision of safe and comprehensive care. Studies have also reported that non-cooperation from patients can lead to greater harm to nurses [22].

Today, there is a significant emphasis in studies on the importance of active patient and family involvement in caregiving and treatment activities for individuals with chronic illnesses. When family members feel a greater sense of responsibility, they inform nurses and other members of the care team of changes in their patient's condition by actively establishing communication. Therefore, patient and family involvement in practical activities with nurses can have a positive impact on patient care [19]. In this regard, nurses should focus on improving interaction with the patient and their family and encouraging their cooperation in care through education.

Another mediating factor affecting the care process for hospitalized obese patients is the level of nursing competence in patient care. A nurse with sufficient clinical skills can perform caregiving actions even in challenging situations. However, sometimes competent nurses are unable to provide care due to the lack of appropriately sized medical or comfort equipment for the patient. Young and inexperienced nurses, when faced with the inability to perform clinical skills, may resort to strategies such as abandoning care as an incorrect strategy, while requesting assistance from colleagues is considered a desirable strategy.

Foroozesh *et al*. [23] and Ogras *et al*., stated that insufficient skill and inadequate training in caring for obese patients were identified as influential factors leading to improper execution of caregiving techniques, resulting in incomplete and low-quality care for patients [24].

According to a study in Iran, the level of clinical competence among nurses was reported as 65% high, 32.5% moderate, and 2% low. Nurse competence is a crucial factor in providing safe care, ultimately contributing to the enhancement of quality care. Decreased clinical competence can lead to patient dissatisfaction, errors, endangerment of patient lives and staff health, reduced productivity, and incomplete clinical activities. According to the International Council of Nurses, competence encompasses professional, ethical, and legal performance, patient management, and professional development [25]. These studies corroborate the significant impact of this factor in the present study.

One of the influential mediators affecting the care process for obese patients is organizational challenges in healthcare. Factors such as attention or lack of attention to considering obese patients as high-demand individuals in patient allocation to nurses in the management system, providing facilities and treatment options, and clinical care guidelines for obese patients were identified as facilitators or barriers to providing care and increasing safety.

Studies have highlighted organizational factors impacting care delivery, including understaffing and lack of necessary equipment [26]. According to Deckly & Hardly (2021), used a survey of clinical nursing managers and concluded that 85.6% of samples emphasized the presence of care barriers when providing care to obese patients, which most of them were organizational. Obstacles such as equipment shortages (75%), understaffing (65.2%), lack of training (57.6%), absence of guidelines (46.2%), lack of clinical support (38.5%), and managerial support (20.5%) were reported. Most managers (74.4%) stated that they did not have guidelines for their performance when caring for obese patients. Additionally, there was a low level of clinical training in mobility and a lack of clear systems for ordering equipment for obese patients. Furthermore, 93.2% of managers expressed a desire for additional training for caring for obese patients [27]. However, in the study by Tanneberger & Ciupitu-Plath (2017), the majority reported creating fair to good opportunities for education for obese patients [28]. In the present study, one organizational reason was the mismatch between the workload of nurses and the number of nurses available. In Tanneberger & Ciupitu-Plath's study (2017), nurses rated the proportion of staff to patients and shifts as 40% average and 38% poor. Additionally, Baker *et al*. (2008) also mentioned reduced specialized knowledge and reduced healthcare resources as barriers to care delivery, as reported by nurses [20].

Based on the findings, the identification of facilitators and barriers in care delivery can be useful for managers and nurses. It compels them to take measures to eliminate obstacles and strengthen facilitators, ultimately enhancing the quality of care for obese patients in hospitals. In this regard some measures recommended such as enhancing respectful communication between patients and nurses [29], adopting a collaborative team approach to care providing [30], and teamwork development [31]. Additionally, some measures can prevent adverse health outcomes and missed nursing care in these patients and lead to improved safe care for them, these measures include the increasing number of personnel [10, 23] for caring obese patients, focusing on nurse education [31] regarding the specific care needs of obese patients such as hygiene, toileting, nutrition, mobility changes, and safety precautions [10], developing protocols for care providing to obsess patients [29], enhancing nurses' clinical skills [23], procuring appropriate care and comfort equipment proportional to the body dimensions of these patients in hospitals [10, 23] such as beds, air mattresses, commode chairs, shower chairs, patient transfer aids like ceiling lifts and standing lifts, friction-reducing devices, and grab bars [10], establishing a specialized obesity team for consultation on mobility and care issues for these patients [29], and using the ABCD approach for managing critically ill obese patients (airway and respiratory management, reducing back injuries for nurses, increasing awareness of issues such as vascular access problems, pressure ulcer risk, differences in drug dosing and metabolism, etc.) [32].

Limitations of this study were the simultaneous sampling and the COVID-19 epidemic, as well as the unwillingness of some nurses or their time constraints for interviews. Whereas the appropriate participants were selected over time, and the research process continued.

Conclusion

This study showed that facilitators and barriers in providing care to obese patients are influenced by concepts such as collaboration versus passivity in self-care processes, influential level family

involvement at the patient's bedside, organizational challenges in care, and the level of nurse competence in care. Nurses and nursing managers, when they have a proper understanding of the factors affecting the provision of care to this group of patients, can develop appropriate and fair care plans for these vulnerable patients. Measures such as encouraging patient and family cooperation, enhancing constructive interaction between nurses and patients, improving clinical nursing skills, promoting teamwork in care, and raising managerial awareness of caring for these patients as challenging and demanding care can be facilitative.
Based on the study results, the impact of interventions focused on fostering interaction between patients (patient and accompanying individual) and nurses, as well as the effect of nurse empowerment programs regarding care for obese patients, can be evaluated in future research.

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Ethical Permissions
This study, with the ethics code IR.MUMS.REC.1397.054, was approved by Mashhad University of Medical Sciences. Ethical principles were observed in this study, including ensuring confidentiality of participants' information, obtaining informed consent forms from participants, allowing interview recordings, and ensuring participants' freedom to withdraw from the study at any stage.

Conflicts of Interests
None declared

Authors' Contribution
First Author (A.H): Main Researcher/Study Designer/Manuscript, Preparation/ Discussion Write , Writing- Reviewing and Editing, Final approval of the version(35%)
Second Author (Z.S. M): Assistant Researcher/Study Designer/Data Analyst/Final Manuscript Revision, Writing- Reviewing and Editing (30%)
Maryam Bagheri*: Main Researcher/Writing Proposal/Data Collection/Data Analyst/Introduction Writer/Discussion Writer, Reviewing and Editing and Final Approval of Manuscript (35%)

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Table 1. Demographic attributes of the participants

Participants	Number	Average age	Gender	Work experience	BMI	Interview duration
Nurse	20	38±9.04	Female: 17 Male: 3	38		20-62 minutes
Patent	6	53±7	Female: 5 Male: 1		35-56	24-47 minutes

Table 2. Summary of the formation process of subthemes, themes, and overall theme

Subcategory	Category	Theme
Patient's cheerful demeanor energizing care actions	Cooperation against passivity in self-care	Facilitators and barriers to care
Ineffective patient interaction leading to more challenging care		
Minimal self-care effort		
Negligence in self-care leading to complications		
Increased attention of patient companion and complication reduction in patients	Influential level family involvement at the patient's bedside	
Increased family involvement in individual patient health management		
Companion's inability to care for the patient		
Negligence of accompanying person in patient care		
Managerial attention to more care services for patient with obesity	Organizational challenges in care	
Teamwork development in care		
Reduced access to medical, comfort facilities for obese patients		
Lack of properly categorized the obsess patient in the patient classification system		
Nurse competency in care	Level of nurse competence in care	
Nurse's low capability and care abandonment		
Seeking assistance in care		