Published online 2022 July 20 **Original Article**

Nurse's Experiences of Care Challenges of Admitted Patients with Obesity: A Qualitative Content Analysis Study

Maryam Bagheri[1], Abbas Heydari[2,3*] and Zahra Sadat Manzari[4]

[1]PhD Candidate in Nursing, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran
[2]Medical-Surgical Nursing Department, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran
[3]Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
[4]Associated Professor, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

*** *Corresponding author:*** Abbas Heydari, Medical-Surgical Nursing Department, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran. Email: heidaria@mums.ac.ir

Received 2022 February 19; **Revised** 2022 March 11; **Accepted** 2022 June 09.

Abstract

Background: Nurses have difficulties in caring for patients with obesity (PWO) due to their large size and complex care needs. As there have been few studies on these challenges, it is necessary to identify them for PWO through access to nurses' experiences.
Objectives: This study aimed to explain the nurses' experiences of the challenges of caring for admitted PWO.
Methods: This qualitative study was performed on 12 nurses working in two large urban teaching hospitals in Iran. They were selected using the purposive sampling method. Data were collected using semi-structured interviews during 2018-2020. Content analysis and MAXQDA software (version 10) were used to analyze data.
Results: According to the results, "threat to the patient safety" was the main theme extracted from nurses' experiences, which included three categories, namely "from care difficulty to inaccurate care", "exacerbation of clinical complications", and "limited self-care". The category of "from care difficulty to inaccurate care" consisted of the subcategories of "care difficulty" and "inevitability of performing inaccurate care". The category of "exacerbation of clinical complication" was composed of the subcategories of "domino-like deterioration of the clinical condition", "multiple physical problems", "patient injury", and "death". The category of "limited self-care" included the subcategories of "patient difficulties with personal hygiene", "limited ability to move/change position", and "inability to meet defecation needs".
Conclusion: According to nurses, "threat to patient safety" was the main challenge of caring for PWO. Patients with obesity could receive competent care from nurses who have a thorough awareness of the obesity threat to patient safety.

Keywords: Challenge, Nurse experience, Nursing care, Obesity, Patient safety

1. Background

The number of people with obesity observed an increase in the world from 1975 to 2016. It has been reported that 13% of adults around the world and 24% of adults in Iran are obese (1, 2). The number of admissions (3) and the length of stay at the hospital (4-7) are higher in patients with obesity (PWO) than in normal-weight patients (4-7). Multi-organ involvement and related diseases (8), movement disorder, respiratory complications, thrombosis, and nosocomial infections all contribute to obesity (9). Nurses are in charge of providing care for patients in hospitals. Patients have different and more care needs due to their large sizes (10, 11). Nurses may have difficulty in changing a patient's position (12), transferring them (10), and controlling vital signs while taking care of them (12), all of which can lead to poor quality of care. Healthcare providers have reported poor quality care, unmet needs of PWO (11), and weight bias (e.g., the use of unpleasant words and negative judgments) (13). There are no specific guidelines for nursing care for PWO and the available ones mainly focus on weight loss in these patients (14, 15). Some studies have addressed poor staff-patient interaction, ways of managing this interaction (16), the offensive stigma perceived by patients (17), nurses' unwillingness to care (18), and a specific problem (i.e., urinary incontinence) when caring for older people with obesity (19). Iranian hospitals lack a special care environment, medical facilities, and equipment for PWO. In addition, nurses do not receive special training on the care of PWO during their academic studies and in-service period. There are few national or international studies revealing the challenges and realities nurses experience when caring for PWO. The challenges nurses experience when caring for PWO is the issue posed to researchers. To take care of such patients well, it is important to figure out the challenges, details, and hidden parts of their care. Therefore, it is crucial to have access to nurses with experience caring for PWO. Using a qualitative approach can potentially create in-depth insights.

2. Objectives

The present study aimed to explain the nurses' experience of the challenges of caring for PWO.

3. Methods

A conventional content analysis was used in this qualitative research during 2018-2020. The research

was based on participants' unique perspectives without procrustean preconceived categories or theoretical outlook (20). The consolidated criteria for reporting qualitative research were used to evaluate this qualitative study (21). The research objectives were explained to all nurses, and they participated in the study voluntarily. They were also assured of the confidentiality of their information. The researcher had clinical experience in the field of PWO for more than 16 years. The idea of the research was derived from the combination of these experiences and the review of the literature.

3.1. Participants and context

Nurses with experience caring for PWO in wards, such as internal medicine, surgery, respiratory and cardiology, orthopedics, and intensive care units (n=12) met the inclusion criteria. The maximum variation sampling method was used in terms of work experiences, variety in the clinical workplace, age, and educational level.

3.2. Data collection

Semi-structured and in-depth interviews were used for gathering data from 12 nurses. Individual interviews were conducted at the time and location (in the staff restroom) determined by the participants. The researcher used a voice recorder to record the interviews. Data were collected until reaching saturation. Interviews were transcribed verbatim as quickly as possible and then analyzed for in-depth insight. These were the interview questions: "What difficulties and obstacles did you encounter when providing care for a patient with obesity? What measures did you take to resolve these issues as they arose? How did these issues affect the quality of care these patients received?"

3.3. Data analysis

The first author conducted a three-stage analysis of the data, while the second and third authors served as supervisors to check their interpretations. Graneheim and Lundman's approach (2004) (22) and MAXQDA software (version 2010) were used to analyze data. The initial codes were extracted after determining the analysis units and meaning units. Similar and different codes were compared and then categorized into primary categories. Afterward, subcategories, categories, and themes were formed. The repetition analysis, codes, and categories were modified with each new interview. The data were reported as meaning units, codes, subcategories, categories, and the main theme.

3.4. Trustworthiness

Guba and Lincoln's criteria, including credibility, dependability, confirmability, and transferability, were used to ensure data trustworthiness (23).

4. Results

The participants were between 25 and 55 years old (36±9.04 years) and had a work experience of 11.25±7.8 years**.** Data from 12 participants were used in the final analysis (Table 1).

The interview lasted 20-48 min (mean 35 min) and data were collected over two years. Finally, 420 codes, 9 subcategories, 3 categories, and 1 main theme were obtained from data analysis**.** The main theme of "threat to patient safety" and three categories of **"**from care difficulty to inaccurate care", "exacerbation of clinical complications", and "limited self-care" were extracted from the nurses' experiences (Table 2).

Nurses reported care difficulty and inaccurate care for patients, who had a clinically complex and unfavorable situation and limited self-care due to their obesity. These factors may result in inconsistent care and a risk to the patient's safety.

4.1. From care difficulty to inaccurate care

This category included the subcategories of "care difficulty" and "inevitability of performing inaccurate care".

4.1.1. Care difficulty

This category was characterized by four sub-categories, namely "difficulty in performing clinical skills", "difficulty in meeting patient' basic needs", "difficulty in monitoring patients", and "impossibility of providing care". The patient's huge legs and abdomen made washing and dressing the wound

Table 1. Demographic characteristics of participants

Participant	Age	Interview duration	Educational level	Work experience (years)	Place of interview
N1	32	31	BS	6	Thorax ward
N2	28	34	BS	5	Surgery ward
N3	34	37	MSN	7	ICU
N4	41	44	BS	18	Heart ward
N5	25	20	BS	4	ICU
N6	27	24	BS	7	ICU
N7	35	42	BS	13	Thorax ward
N8	33	41	BS	7	Medical ward
N9	45	33	BS	20	Orthopedic ward
N10	32	40	BS	4	Surgery ward
N11	43	48	BS	15	CCU
N12	55	29	MSN	29	Medical ward

BS: Bachelor of Science; CCU: Coronary care unit; ICU: Intensive care unit; MSN: Master of Science in Nursing

Table 2. Summary of the formation process of theme, categories, and subcategories

Subcategory	Category	Theme
Care difficulty **Inevitability to perform inaccurate care**	From care difficulty to inaccurate care	Threating patient's safety
Domino-like deterioration of the clinical condition **Occurrence of multiple physical problems** **Incidence of injury** **Death**	Exacerbation of clinical complications	
Patient difficulty in terms of personal hygiene **Limited ability to move/change position** **Inability to meet defecation needs**	Limited self-care	

difficult. Additionally, difficulty in bending and opening the legs from each other due to fat and the falling of the patient's abdomen on the genital area made it difficult to observe and catheterize the urethra. Frequent efforts of nurses to access vascular, difficulty in intubation due to short and fatty neck, and difficulty in cardiac massage, all indicated the difficulty in providing care to the PWO. In this regard, one of the participants said:

"…I wanted to puncture a vein in the patient, but I could not. I tried at least three or four times. I used a tourniquet around the patient's arm, but I could not do it. I tied two Foley catheters that fit the patient's arm size together and used them as a tourniquet" [P9].

Nurses had trouble meeting the patient's basic needs (e.g., moving, changing positions, moving from bed to stretcher) and hygienic and defecation needs. For example, despite the patient's dysuria and symptoms of urinary tract infection, nurses preferred to keep the catheter in the urinary tract because the movement of the patient was difficult and the nurse could not set a bedpan for the patient. This condition confirmed that the patient's safety was at risk. One of the participants stated:

"...Even though there were six of us, we could not move the patient in his bed. We just dragged the patient to the very top of the bed in order to make it easier for him to reach that position" [P6].

It was difficult to close the cuff of the sphygmomanometer because of the fat arm; as a result, the accuracy of blood pressure decreased. Moreover, the nurses faced difficulty in taking an electrocardiogram because of the fat chest. One of the participants said:

"...*Measuring the patient's blood pressure was difficult. The cuff of the sphygmomanometer was not closed around the patient's arm because it was big and fluffy*" [P7].

Despite the nurse's expertise, complex procedures, such as resuscitation, blood sample, intubation, repositioning, and relocation, were often impossible to complete. One of the participants stated:

"...*We could not intubate the patient or massage him. We could not even move him to put the CPR board under him. The anesthesiologist could not intubate the patient because he was very hypoxic*" [P11].

4.1.2. Inevitability of performing inaccurate care

This category included the subcategories of "performing inaccurate specialized care" and "unmet basic needs of patients". In some cases, nurses could not provide accurate and standard care to the patient due to their adipose tissue and complex conditions, inadequate equipment, and lack of knowledge; therefore, it was impossible for them to provide inaccurate and incomplete care. Erroneous blood pressure measurements due to bulky arms and inadequate cuffs or inaccurate ventilator adjustments and the patient's clinical symptoms led to approximate oxygenation. In this regard, one of the participants states:

"...Calculating tidal volume in the ventilator based on weight was too difficult for an obese patient. We had to adjust the ventilator with the patient's oxygen saturation based on the patient's symptoms and our own judgment. We acted based on our creativity. If the saturated oxygen dropped, we would increase the current volume" [P10].

In addition, nurses failed to fulfill the patient's basic requirements, such as changing the patient's position, as well as meeting the patient's hygienic, defecation, and coverage needs completely.

4.2. Exacerbation of clinical complications

The patient's underlying diseases and the emergence of new problems during admission due to the patient's high weight can threaten the patient in various ways. This category consisted of "domino-like deterioration of clinical status due to the high-risk conditions of the patient", "multiple physical problems", "patient injury", and "patient death".

Shortness of breath due to fat in the chest, abdomen, and neck; obesity hypoventilation syndrome; delayed awakening due to the accumulation of sedatives in the fat; prolonged patient attachment to the ventilator and patient dependence on the ventilator; difficult weaning; abdominal distension; and interference with the patient's respiration all made the patient's condition worse like a series of dominoes. Medical conditions, bone diseases, thromboembolism, and varicose veins can increase the patient's complications. Dangerous conditions for the patient included damage to vocal cords and throat, tooth fracture, tooth aspiration, severe hypoxia due to the difficulty and prolongation

of intubation, displacement of the endotracheal tube during patient movement, patient slipping while sitting in a wheelchair, falling from bed due to excessive size, fractures, disruption of skin integrity, and death due to impossible resuscitation despite having a healthy heart. Two of the participants said:

"*...Most of the time, the patient is quickly weaned off the ventilator after being treated for pulmonary hemorrhage. Extubating usually takes 3-5 hours, but he was extubated in a day due to his obesity. The duration of connection to the ventilator was too long, and the positive pressure applied through the ventilator to his chest caused his blood pressure to drop. The positive pressure from the ventilator should be removed from the chest of a patient with heart problem as soon as possible*" [P10].

"*...The patient's heavy weight caused him to be connected to the ventilator for a long time. The patient's stay in the ICU was longer, causing problems in digestion and defecation. His weaning was delayed due to abdominal distention. This patient was connected to a ventilator due to abdominal and gastrointestinal problems*" [P4].

4.3. Limited self-care

This category included the subcategories of "patient's difficulty in maintaining personal hygiene", "patient's limited ability to move and change position", and "patient's inability to meet his defecation needs".

The patient's inability to do self-care activities increased the difficulty and complexity of caring for these patients and endangered patient safety. One of the participants stated:

"...His movement was very difficult because he was obese. When he wanted to change his position on the bed, I predicted that he would fall. The patient should sit on the edge of the bed when the foot dressing was being changed. He was irritated as he attempted to sit down. He could not put his hand on the bedside and sit down. It was very hard for him. In order to sit for a brief period, he would grasp onto the bed's bottom edge. His fall was almost inevitable" [P7].

5. Discussion

Nurses have numerous challenges in caring for PWO. This study sought to explain the nurses' experiences of the challenges they faced in caring for PWO. The main theme of this study was "*threatening patient safety*", which was extracted from three categories, namely "from care difficulty to inaccurate care, exacerbation of clinical complications, and limited self-care". The findings indicated that the nurses in clinical status of obese patient were in a state of carelessness and tried to perform difficult clinical procedures. These conditions led to trauma for the patient and even put the patient's life in danger. Nurses used a variety of strategies while caring for an obese patient, such as aggressive measures, carelessness, or inaccurate care. These strategies were applied due to adipose tissue, lack of appropriate equipment for the patient's size, and insufficient knowledge and skills of nurses. Inadequate care was provided for patients whose physiological conditions in the hospital aggravated consecutively due to obesity complications. They were at risk of falling and developing more skeletal complications due to inadequate facilities suitable for the patient's size. In other words, incomplete care delayed treatment and recovery, increased length of hospital stays, infection, and bedsores, which ultimately threatened the patient's safety. This problem, along with the patient's inability to meet their basic needs, became more apparent. The overcrowding of care needs and the complexity of care led to more complex care conditions that ultimately threatened the patient's safety.

Previous qualitative studies on PWO extracted the following themes: social disrespect, reciprocal deliberate disregard for obesity during care (16), challenges related to appropriate medical equipments for obese patients like blood pressure cuffs, language challenges, impaired patient interaction (17), reluctance to receive care, reduced resources, unpreparedness during care (24), inability to provide care, weight bias, keeping distance with the patient, familiarity with the patient (without stigmatization), role-playing (strengthening human communication through putting oneself in the patient's shoes), and resources (i.e., human, informational, and physical) (18). Most of these studies addressed patient interaction or problem assessment in a limited area. The current study was more comprehensive than the previous ones in terms of the scope of challenges.

According to the main theme of this study, nurses had to pay attention to patient safety as one of the main domains in the North American Nursing Diagnosis Association (25). They should consider "nursing risk diagnosis for injury" in all nursing procedures (monitoring, procedures, basic needs, and patient self-care). According to Shea and Gagnon (2015), nurses were on the edge of safe care for PWO (18), which was in line with the main theme of the present study. In addition, the experience of caregivers of older people with obesity was reported with three themes of "synergistic effects of obesity and incontinence", "insufficient space in the bathroom and toilet", and "tedious task" (19), which was in line with this study's "care difficulty" subcategory of the category " from difficulty to inaccurate care", and also "exacerbation of clinical complications" category. In the current study, the nurses were obligated to provide inaccurate care. Incomplete care was an international concern for nurses (26). Inadequate care, despite the increased need for services in these patients, boosts the

possibility of safety incidents (27).

A systematic review extracted the themes of care challenge for PWO and described how obesity and medical conditions could affect the reception and quality of patient care (28), which was similar to the category of "exacerbation of clinical complications" in this study. Another category of this study was "limited self-care". The patient's disability and obesity can lead to inadequate patient care and increased unmet care needs (28), which indicates a threat to the patient's safety, confirming the findings of this study.

According to the main theme of the current study, special attention should be paid to preventing threats to PWO safety and a clinical care guideline should be prepared for this group of patients. Assignment of competent nurses to these patients, assistance from the patient's companion and additional staff, and continuous assessment and monitoring of the clinical conditions of these patients should also be considered. One of the most common models showing the cause of the accident is the Swiss Cheese Model proposed by the British psychologist James Reason. According to this model, although there are several defects within each system, they do not always lead to an accident; rather, an accident occurs only when defects in different parts of the system occur unexpectedly, at the same time (21). In the process of providing care to PWO, the safety threat can be considered an unfortunate accident and the categories of "from care difficulty to inaccurate care", "exacerbation of clinical complications" and "limited self-care" as a slice of the Swiss cheese model or levels of defects in patient care. The presence of a defect in one category usually does not lead to an accident because the other categories play a protective role. However, according to this model, an accident occurs when the defects of all categories are in line with each other and all protective layers suffer from defects at a certain point. This model shows how the analysis of care events of PWO and existing deficiencies can be predicted in the emergence of the real clinical risks of the patient. Therefore, predicting the care challenges perceived by nurses and considering the Swiss cheese model of safety incidents for countries with similar contexts to Iran, which are similar in terms of the lack of appropriate equipment for PWO, shortage of specific clinical environment, and absence of specialized education for caregivers, can help reduce the safety risks of PWO.

6. Conclusion

The results of this study showed that safety threat in the care of PWO was based on such concepts as "from care difficulty to inaccurate care", "exacerbation of clinical complications", and "limited self-care" of the patient and had a special place in the care of these patients. Nurses can strive to provide safe care for patients of a larger size and heavier weight when they have a proper perception of safety in various aspects of PWO care.

Nurses and managers can use these findings as a guide in providing safe care for PWO. Nurse supervisors and managers need to understand these difficult and complex care conditions and adopt measures, such as allocating fewer patients to the caregiver, assisting the nurse, and providing better care facilities and conditions. These interventions can improve the quality of care for PWO. The limitation of the study was the incidence of coronavirus disease 2019 pandemic and the difficulty of conducting interviews with nurses.

Acknowledgments

The authors would like to thank the participants who shared their experiences. This study was part of a PhD thesis conducted by the first author.

Footnotes

Conflicts of Interest: The authors declare that there is no conflict of interest.

Authors' contributions: M. B.: Conceptualization, Methodology, Data collection by interview, MAXQDA software: Data curation, Writing: preparing the original draft.

A. H.: Conceptualization, Investigation, Validation, Supervision, Final approval of the version.

Z. S. M.: Conceptualization, Validation, Writing: Reviewing and Editing.

Funding: This study was approved and funded by the Vice-Chancellor for Research at Mashhad University of Medical Sciences, Mashhad, Iran, with grant number (961649).

Ethical considerations: This study was approved by the Ethics Committee of Mashhad University of Medical Sciences (IR.MUMS. REC.1397.054).

References

1. WHO. Obesity and overweight. 2021. https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight#:~:text=For%20adults%2C%20WHO%20defines%20overweight,than%20or%20equal%20to%2030.
2. Tabrizi JS, Sadeghi-Bazargani H, Farahbakhsh M, Nikniaz L, Nikniaz Z. Prevalence and associated factors of overweight or obesity and abdominal obesity in Iranian population: a population-based study of northwestern Iran. *Iran J Public Health.* 2018;**47**(10):1583-92. [PubMed: 30524990].
3. Rockx MAJ, Fox SA, Stitt LW, Lehnhardt KR, McKenzie FN, Quantz MA, et al. Is obesity a predictor of mortality, morbidity and readmission after cardiac surgery? *Can J Surg*. 2004;**47**(1):34-8. [PubMed: 14997923].
4. Padwal RS, Wang X, Sharma AM, Dyer D. The impact of severe obesity on post-acute rehabilitation efficiency, length of stay, and hospital costs. *J Obes.* 2012;**2012**:1-7. doi: 10.1155/2012/972365. [PubMed: 22523669].
5. Nguyen AT, Tsai CL, Hwang LY, Lai D, Markham C, Patel B. Obesity and mortality, length of stay and hospital cost among patients with sepsis: a nationwide inpatient retrospective cohort study. *PLoS One*. 2016;**11**(4):1-12. doi:

10.1371/journal.pone.0154599. [PubMed: 27124716]
6. Moriconi D, Masi S, Rebelos E, Virdis A, Manca ML, De Marco S, et al. Obesity prolongs the hospital stay in patients affected by COVID-19, and may impact on SARS-COV-2 shedding. *Obes Res Clin Pract.* 2020;**14**(3):205-9. doi: 10.1016/j.orcp.2020.05.009. [PubMed: 32534848].
7. Hauck K, Hollingsworth B. The impact of severe obesity on hospital length of stay. *Med Care*. 2010;**48**(4):335-40. doi: 10.1097/MLR.0b013e3181ca3d85. [PubMed: 20220534].
8. Miyazawa D. Why obesity, hypertension, diabetes, and ethnicities are common risk factors for COVID-19 and H1N1 influenza infections. *J Med Viro*. 2021;**93**(1):127-8. doi: 10.1002/jmv.26220. [PubMed: 32579235].
9. Chuang JF, Rau CS, Liu HT, Wu SC, Chen YC, Hsu SY, et al. Obese patients who fall have less injury severity but a longer hospital stay than normal-weight patients. *World J Emerg Surg*. 2016;**11**(1):1-6. doi: 10.1186/s13017-015-0059-9. [PubMed: 26734069].
10. Foroozesh R, Sadati L, Nosrati S, Karami S, Beyrami A, Fasihi T. Challenges in nursing care of morbidly obese patients: Nurses' viewpoints. *J Minim Invasive Surg Sci.* 2017;**6**(2):1-7. doi: 10.5812/minsurgery.12040.
11. Lumley E, Homer CV, Palfreyman S, Shackley P, Tod AM. A qualitative study to explore the attitude of clinical staff to the challenges of caring for obese patients. *J Clin Nurs*. 2015; **24**(23-24):3594-604. doi: 10.1111/jocn.13016. [PubMed: 26467348]
12. Baqraf F, Mohamed MA, Mahgoub AA. Obstacles face nursing staff toward care of critically ill obese patient in intensive care units. *Assiut Sci Nurs J.* 2020;**8**(23):100-12. doi: 10.21608/ASNJ.2021.54495.1090
13. Wakefield K, Feo R. Confronting obesity, stigma and weight bias in healthcare with a person centred care approach: A case study. *Aust Nurs Midwifery J*. 2017;**25**(1):28-31.
14. Wharton S, Lau DC, Vallis M, Sharma AM, Biertho L, Campbell-Scherer D, et al. Obesity in adults: a clinical practice guideline. *CMAJ*. 2020;**192**(31):875-91. doi: 10.1503/cmaj.191707. [PubMed: 32753461].
15. O'Shea D, Kahan S, Lennon L, Breen C. Practical approaches to treating obesity: patient and healthcare professional perspectives. *Adv Ther.* 2021;**38**(7):4138-50. doi: 10.1007/s12325-021-01748-0. [PubMed: 33929659].
16. Hales C, de Vries K, Coombs M. Managing social awkwardness when caring for morbidly obese patients in intensive care: A focused ethnography. *Int J Nurs Stud.* 2016;**58**:82-9. doi: 10.1016/j.ijnurstu.2016.03.016. [PubMed: 27087301]
17. Hales C, Coombs M, de Vries K. The challenges in caring for morbidly obese patients in Intensive Care: A focused ethnographic study. *Aust Crit Care.* 2018;**31**(1):37-41. doi: 10.1016/j.aucc.2017.02.070. [PubMed: 28320611].
18. Shea JM, Gagnon M. Working with patients living with obesity in the intensive care unit: a study of nurses' experiences. *ANS Adv Nurs Sci*. 2015;**38**(3):17-37. doi: 10.1097/ANS.0000000000000074. [PubMed: 26061972].
19. Griebling TL. Continence Care for Obese Nursing Home Residents. *J Urol.* 2011;**186**(1):213-4. doi: 10.1016/j.juro.2011.03.084.
20. Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res*. 2005;**15**(9):1277-88. doi: 10.1177/1049732305276687. [PubMed: 16204405].
21. Buus N, Perron A. The quality of quality criteria: Replicating the development of the Consolidated Criteria for Reporting Qualitative Research (COREQ). *Int J Nurs Stud*. 2020;**102**: 103452. doi: 10.1016/j.ijnurstu.2019.103452. [PubMed: 31726311].
22. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today*. 2004;**24**(2):105-12. doi: 10.1016/j.nedt.2003.10.001. [PubMed: 14769454].
23. Polit D, Beck C. Essentials of nursing research: Appraising evidence for nursing practice. 9th ed. Philadelphia: Lippincott Williams & Wilkins; 2018.
24. Bouldin SD. Obesity in Health Care: Perceptions of Health Care Providers and Patients at an Academic Medical Center [D.H.A. Thesis]. United States: The University of Mississippi Medical Center; 2020.
25. Herdman TH, Kamitsuru S. NANDA International, Inc. Nursing Diagnoses: Definitions & Classification 2018-2020. 11th ed. New York: Thieme.; 2018.
26. Diab GMAE, Ebrahim RMR. Factors leading to missed nursing care among nurses at selected hospitals. *Am J Nurs Sci*. 2019;**7**(2):136-47. doi: 10.12691/ajnr-7-2-5.
27. Booth C, Moore C, Eddleston J, Sharman M, Atkinson D, Moore J. Patient safety incidents associated with obesity: a review of reports to the National Patient Safety Agency and recommendations for hospital practice. *Postgrad Med J.* 2011;**87**(1032):694-9. doi: 10.1136/pgmj.2010.106989. [PubMed: 21788232].
28. Harris JA, Castle NG. Obesity and nursing home care in the United States: a systematic review. *Gerontologist*. 2019;**59**(3):196-206. doi: 10.1093/geront/gnx128. [PubMed: 29253135].