

Metaphorical Perceptions of Operating Room Staff Towards the Concept of Pressure Ulcer: A Qualitative Study

Ameliyathane Çalışanlarının Basınç Yarası Kavramına Yönelik Metaforik Algıları: Nitel Bir Çalışma

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ABSTRACT

Objective: To explain the perceptions of the operating room staff about pressure ulcers through metaphors.

Methods: A descriptive qualitative research design was used. In the study, it was aimed to reach the entire universe, not choosing a sample. A total of 83 operating room staff participated in the study which 45 of them were operating room nurses, 38 of them were anesthesia technicians. The data were collected face to face with the descriptive features form and semi-structured interview form created by the researchers. In the semi-structured interview form, the operating room workers were asked to complete the sentence "Pressure ulcer is like ... because ...". The data were analyzed with the "content analysis" method, which is one of the qualitative analysis methods.

Results: Operating room staff generated a total of 25 types of metaphors for the concept of pressure ulcers and expressed 83 opinions for them. The first five most mentioned metaphors by the operating room staff were icebergs, matryoshka, storm after a sunny day, swamp, garden care and cracked vase, respectively. 19 of these metaphors were repeated nine to two times, and six of them were repeated once.

Conclusion: Metaphors can be used as a powerful research tool in understanding and revealing the cognitive images of operating room staff regarding the concept of pressure ulcers. This study gives clues about how operating room staff imagine the concept of pressure ulcer.

Keywords: Operating Room, Metaphor, Pressure Ulcer, Operating Room Staff, Qualitative Research

ÖZ

Amaç: Ameliyathane çalışanlarının basınç yarasına ilişkin algılarını metaforlar aracılığıyla açıklamak.

Yöntemler: Araştırmada nitel araştırma deseni kullanıldı. Çalışmada örneklem seçimine gidilmeyerek evrenin tamamına ulaşılması hedeflendi. Çalışmaya 45'i ameliyathane hemşiresi, 38'i anestezi teknisyeni olmak üzere toplam 83 ameliyathane çalışanı katıldı. Veriler araştırmacılar tarafından oluşturulan tanımlayıcı özellikler formu ve yarı yapılandırılmış görüşme formu ile yüz yüze toplandı. Yarı yapılandırılmış görüşme formunda ameliyathane çalışanlarından "Basınç yarası ... gibidir, çünkü ..." cümlesini tamamlamaları istendi. Veriler nitel analiz yöntemlerinden biri olan "içerik analizi" yöntemi ile analiz edildi.

Bulgular: Ameliyathane çalışanları basınç yarası kavramı için toplam 25 farklı metafor üretti ve bunlar için 83 görüş bildirdi. Ameliyathane çalışanları tarafından en çok dile getirilen ilk beş metafor sırasıyla buzdağı, matruşka, güneşli bir günün ardından gelen fırtına, bataklık, bahçe bakımı ve kırık vazo oldu. Bu metaforlardan 19'u dokuz ila iki kez, altısı ise bir kez tekrarlandı.

Sonuç: Metaforlar, ameliyathane çalışanlarının basınç yarası kavramına ilişkin bilişsel imgelerini anlamada ve ortaya çıkarmada güçlü bir araştırma aracı olarak kullanılabilir. Bu çalışma, ameliyathane çalışanlarının basınç yarası kavramını nasıl algıladığına yönelik ipuçları vermektedir.

Anahtar Kelimeler: Ameliyathane, Metafor, Basınç Yarası, Ameliyathane Çalışanı, Nitel Araştırma

INTRODUCTION

Pressure ulcer is a universal problem that should be prevented because it increases care costs, prolongs hospital stay and requires an extended treatment process. It is also an indicator of poor quality care and its prevention continues to be a problem despite technological developments and advances in care and treatment.¹⁻⁴ Pressure ulcers are generally defined as localized damage to the skin or deep tissues over a bony prominence or in association with a medical device or other device. Having surgery is a significant risk for developing pressure ulcer.⁴ Pressure ulcers originating from the operating room are defined by the Association of periOperative Registered Nurses (AORN) as a pressure ulcer that develops within the first 48-72 hours after surgery.⁵ It is recommended by AORN that every patient undergoing surgery should be evaluated in terms of risk factors that may lead to pressure ulcer development.⁶ In literature many factors play a role in the development of pressure ulcers and that pressure ulcers originating from the operating room had an incidence of 1.3% and 54.8%.⁷ In the study by Özdemir et al. it was determined that 8.4% of the patients developed pressure ulcers during surgery, while 11.8% of the pressure ulcers observed in 11.8% of the patients were related to the use of medical devices/tools and 23.5% were related to positioning materials.⁸

According to the literature, the surgical team should cooperate to prevent pressure ulcers that may develop in the operating room and the awareness of the surgical team should be increased by planning annual trainings.^{6,9} Since patients under general anesthesia can't communicate when they experience pain or discomfort, and patients under regional anesthesia will not feel pain, it is among the duties of the surgical team to protect them from injuries caused by inappropriate positions.¹⁰ Multidisciplinary teamwork, assessment of risk factors and planning process are important in the prevention of operating room pressure ulcer.^{6,9} All healthcare professionals working in the operating room should be aware of the factors that pose a risk for operating room pressure ulcer and should implement all necessary interventions to prevent them.^{6,9} Therefore how the concept of pressure ulcers looks from the perspective of operating room staff affects the care of patients during the surgery process. Although there are studies conducted on the occurrence of pressure ulcers in the operating room and associated risk factors in the literature, no study has been found that evaluates the perceptions of operating room staff towards the concept of pressure ulcers. Increasing the awareness of the operating room staff on the subject and revealing their perspectives

are important for determining the content of the trainings to be given and drawing a road map for what to do.

AIM

The aim of this study is to explain the perceptions of the operating room staff about pressure ulcers through metaphors.

Research questions:

- What are the metaphors and thoughts of the operating room staff regarding the concept of pressure ulcers?
- Under which conceptual categories can these metaphors be grouped?

METHODS

Design

This study was conducted using a descriptive qualitative research design. Throughout this study, the authors followed the Consolidated Criteria for Reporting Qualitative Research.¹¹

Participants

The universe of the study consisted of operating room staff working in the operating room of a training and research hospital in Istanbul. The purposive sampling method was used in the study. The relevant hospital has nine operating rooms, including an emergency operating room. Small, medium and large operations are performed in the operating room where the study was performed. The inclusion criteria of the study were being an operating room staff at least one year, agreed to participate in the study and could be reached. The study aimed to reach the entire population without sample selection. A total of 83 operating room staff participated in the study which 45 of them were operating room nurses, 38 of them were anesthesia technicians.

Data Collection

The data were collected face-to-face in the operating room rest room at a time convenient for the participants between September-October 2022 with two forms created by the researchers. Descriptive Features Form, which consisted of a total of four questions related to age, gender, total work experience and job. Semi-structured Interview Form, consisting of the following one sentences. In the semi-structured interview form, the operating room staff were asked to complete the sentence "Pressure ulcers are like ... because ...". In this way, it was aimed to have them write the notion that they compared the concept of "pressure wound" to, together with the reason of analogy. According to Yıldırım and Şimşek¹² the metaphor itself cannot sufficiently reveal the descriptive and visual power of the metaphor, and that it should be followed by the question "why" or "why".

Data Analysis

Descriptive statistics such as mean and percentage were used for descriptive characteristics of operating room staff. The research was analyzed by a statistician experienced in qualitative and metaphor research. To start the analysis of the data, the answer sheets given to the operating room staff was first checked for completeness and those who filled both the subject of the metaphor and the source of the metaphor spaces were evaluated. Answer sheets were numbered from one to 83. Content analysis, a data evaluation method used in qualitative research, was used in this study.¹³ At this stage, the analysis was completed after the steps of classification, elimination, reorganization and compilation, category development, validity and reliability, and transferring the data to the computer environment. The metaphors the participants mentioned grouped under four categories, were logical in nature, and contributed to the understanding of the concept of pressure ulcers, and no forms were considered for exclusion during the elimination and purification phase.

Establishing Validity and Reliability

To ensure the validity of the research the coding of the data and the data analysis process were explained in detail.¹²⁻¹⁴ In order to ensure the reliability of the research, the codes of the researchers and their categories related to the codes were compared to confirm whether the codes included in the categories identified in the research represent the conceptual categories in question. After the research data were coded separately by the researchers, the resulting code and category list was finalized. The formula $[(\text{Agreement}) / (\text{Agreement} + \text{Disagreement})] \times 100$ was used to calculate the reliability of the study. According to the formula, the level of reliability between researchers should be above 70%.¹⁵ The reliability coefficient calculated in this study was 96%, and it was concluded that the categories determined according to the opinions of the experts were highly consistent.

Ethical Considerations and Informed Consent

Ethics committee approval dated 07.09.2022 and numbered 103 was obtained from University of Health Sciences Sancaktepe, Şehit Prof. Dr. İlhan Varank Training and Research Hospital Non-Interventional Research Ethics Committee. Before the study, each participant was informed about the study and their consent was obtained. The ethical principles of protecting the rights, Declaration of Helsinki and privacy of the operating room staff and informed consent were respected throughout the study.

RESULTS

Operating Room Staff Characteristics

No sampling was used since it was aimed to reach the

entire population during the research process. However, 10 operating room staff were not included in the study because they were unwilling to participate (n=6) or could not be reached (n=4). The research was completed with 83 individuals, reaching 89.2% of the population (83/93). 59% of the participants were women, the mean age of the operating room staff was 38.94±8.04 (minimum: 20; maximum: 54) years, 54.2% were nurses, 45.8% were anesthesia technicians and the mean of the total working year was 5±1.95 (minimum 2-maximum 12).

Data on the Metaphors

As shown in Table 1, operating room staff generated a total of 25 types of metaphors for the concept of pressure ulcers and expressed 83 opinions for them. The first five most mentioned metaphors by the operating room staff were icebergs, matryoshka, storm after a sunny day, swamp, garden care and cracked vase, respectively. 19 of these metaphors were repeated nine to two times, and six of them were repeated once.

The mentioned metaphors were grouped under four categories (Table 2).

Table 1. Metaphors Generated by Operating Room Staff for the Concept of Pressure Ulcers

Metaphor order	Metaphor	
1	Iceberg	9
2	Matryoshka	7
3	Storm after a sunny day	6
4	Swamp	6
5	Garden care	5
6	Cracked vase	5
7	Mirror	4
8	A horror movie with an unpredictable ending	4
9	Pitcher with a hole	4
10	Debt not paid on time	4
11	Travelling in the ocean	3
12	Diving into deep water	3
13	Jelly	3
14	Lipstick always applied from the same side and out of shape	3
15	Rotten apple	3
16	Shoe that is constantly stepped on one side	2
17	Zippered bag	2
18	Iron used less than necessary in a construction	2
19	Spoiled food	2
20	Double-edged blade	1
21	Oven-baked cookies	1
22	Ever-growing errand	1
23	Soaked dish sponge left aside	1
24	Whirlpool	1
25	Cooking the milk without overflowing	1
25 kinds of metaphors and the number of opinions stated		83

Table 2. Distribution of the Metaphors Generated by the Operating Room Staff for the Concept of Pressure Ulcers by Category**Unseen Danger**

- Zippered bag (You don't know what's inside.)
- Traveling in the ocean (There is no end.)
- Diving into deep waters (You don't know what's going to come out in the deep.)
- Iceberg (There is more tissue damage deep below the visible.)
- A horror movie with an unpredictable ending (can cause many different infections after it develops.)
- Storm after a sunny day (Pressure wound that develops during surgery, even if the surgery was successful, overshadows the positive process and negatively affects the healing process of the patient.)
- Ever-growing errand (It is like a pressure ulcer when wounds deepen because of not taking proper precautions in a timely manner.)
- Debt not paid on time (If you do not pay your debt on time and do not take appropriate measures on time, pressure ulcers become progressive and deeper wounds.)
- Matryoshka (As you go inside and get deeper, new and deep wounds appear.)

Structural Deformation

- Spoiled food (Tissues kept under pressure decay like spoiled food)
- Soaked dish sponge left aside (Just as a soaked sponge cannot be used due to scent and bacteria, the tissues exposed to pressure cannot be used as before.)
- Jelly (The consistency and structure of the tissues also deform, it is very difficult to restore them.)
- Shoe that is constantly stepped on one side (There is always pressure on the same point in the pressure wound, because of this pressure, deformation occurs in the tissues.)
- Lipstick always applied from the same side and out of shape (Changing the side while applying lipstick is similar to rotations that must be done or not done to prevent pressure ulcers.)
- Rotten apple (also has structural deformation, just like pressure ulcers.)

Being Attentive

- Over-baked cookies (in both cases, the main problem is not managing the time and not intervening on time.)
- Iron used less than necessary in a construction (Supporting the pressure points incompletely precipitates pressure ulcers.)
- Cracked vase (Just as a cracked vase cannot be used, a pressure ulcer cannot be restored once developed, so care must be taken to avoid it.)
- Cooking the milk without overflowing (The pressure ulcer is like that thin spot where the milk starts to overflow. After it develops, you deal with dirt and wounds.)
- Double-edged blade (If you do not provide careful care, pressure ulcers will develop.)
- Garden care (Just as the garden requires attention and needs to be watered every day, pressure ulcers also require proper care.)
- Mirror (It is the reflection of the care we give.)

Whistle in the Wind

- Whirlpool (The effort to get out of the whirlpool is similar to the effort to treat a pressure ulcer after it has occurred.)
- Swamp (Once you fall, the wound gets deeper each time you struggle to get out.)
- Pitcher with a hole (It's like trying to fill a pitcher with a hole with water.)

The word cloud obtained according to the frequency of the metaphors explained by the operating room staff regarding the concept of pressure ulcer is given in Figure 1 metaphors with higher frequency are those with larger font size.

DISCUSSION

Qualitative research involving metaphors has been used frequently in nursing sciences in recent years.¹⁶⁻¹⁸ The findings of this study, which we conducted with the operating room staff, provide information on the pressure ulcer perceptions and perspectives of the operating room staff. Although there are studies with quantitative data on pressure ulcers in the literature, there are no studies with

**Figure 1.** The Word Cloud of Metaphors

metaphors, so the findings of the study will be discussed in itself.

In our study, in which we aimed to explain the perceptions of the operating room staff about pressure ulcers through metaphors, a total of 25 metaphors were generated and a total of 83 opinions were expressed. When these metaphors were analysed, it was determined that the operating room staff expressed the concept of pressure ulcers with different metaphors and differing explanations of these metaphors. Among the 25 metaphors for pressure ulcers in total, the ones most frequently mentioned by the operating room staff were iceberg, matryoshka, storm after a sunny day, swamp, garden care and cracked vase. These metaphors and their explanations emphasize the ambiguity of pressure ulcers and refer to the mechanism by which operating room staff can control pressure ulcers. These metaphors emphasized in the research were collected under four different categories at the end of the analysis: unseen danger, structural deformation, being attentive and whistle in the wind.

The unseen danger category contained the most metaphors. Iceberg was a very common metaphor. The operating room staff explained that they would not know how deep the pressure wound went and therefore the size of the wound, so they interpreted the pressure ulcer with the metaphor of an iceberg as it represents the unknown. Similarly, with the metaphor of the matryoshka, the operating room staff suggested that wounds of different depths can always emerge from the pressure wound. As stated in the literature⁴, pressure ulcers are classified in different stages and their depth varies according to the stages. In this context, in line with the metaphors made in our study, we can say that the awareness of the operating room staff on the pressure ulcers is high.

In the category of structural deterioration, the operating room staff mentioned jelly and other metaphors such as lipstick always applied from the same side and out of shape and rotten apple to refer to pressure ulcers in the context of structural deformation. On the other hand, in the being attentive category, the operating room staff stated that pressure ulcers can be prevented by paying attention to the care given with the metaphors of garden care, cracked vase, and mirrors expressed in the category of being attentive. As stated in the participant comments, pressure ulcers can be prevented by 90% with the identification of risk factors, early diagnosis and good care.⁹ Our study data are in parallel with the literature. In addition, with the swamp metaphor they used in the category of whistle in the wind, they meant that no matter what was done after the pressure ulcer developed, it could not be reversed as it

happens when a person sinks even deeper when attempting to get out of the swamp.

Aydoğmuş and Işık Andsoy¹⁹ reported that nurses working in intensive care units had significantly higher scores on pressure ulcer prevention, risk and wound definition than nurses working in surgical clinics. They determined a statistically significant relationship between nurses' correct response scores and how frequent they encountered with pressure ulcers, whether they used scales, received in-service training, read articles about pressure ulcers and did research on the internet.¹⁹ The metaphors and related expressions that emerged in our study actually show that the operating room staff think that pressure ulcers can be prevented with care and intervention, and that a pressure ulcer will not heal no matter what is done once it occurs. In addition, the operating room staff stated that they encountered pressure ulcers not during the formation phase, but during the treatment phase after they developed and told that they would like more information on the subject in in-service trainings or operating room orientation programs.

Limitations of the Study

The limitation of this study is that it took longer than expected to reach the sample because operating rooms are dynamic and shift work areas.

In conclusion, metaphors can be used as a powerful research tool in understanding and revealing the cognitive images of operating room staff regarding the concept of pressure ulcers. This study gives clues about how operating room staff imagine the concept of pressure ulcer. Understanding how the concept of pressure ulcer is perceived by the operating room staff through metaphors will provide an important foresight to better analyse the concept of pressure ulcers that may occur during surgery, to understand the concept of pressure ulcers in operating room staff, and to develop strategies in patient management. We recommend that the results of this and similar studies be shared with the operating room staff to raise awareness and the issue of pressure ulcers be addressed in the operating room in-service trainings.

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Yazar Katkıları: Fikir- DHE, FEA; Tasarım - DHE, FEA; Süpervizyon - FEA; Kaynaklar- DHE, BİK, GP; Materyaller- DHE; Veri Toplama ve/veya İşleme- DHE, BİK; Analiz ve/veya Yorumlama- DHE; Literatür Taraması- DHE, BİK, GP; Makale Yazımı - DHE, GP; Eleştirel İnceleme - FEA

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