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# **ORIGINAL ARTICLE**



# Theoretical Knowledge and Practices of Nurses in Amman on Wound Care: A Descriptive Study

Amman'daki Hemşirelerin Yara Bakımı Konusundaki Teorik Bilgi ve Uygulamaları: Tanımlayıcı Bir Çalışma

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#### Abstract

Objective: The aim of the study is to obtain information about nurses' knowledge and practices regarding wound care.

**Method:** The study was implemented as descriptive. It was implemented in the surgical, medical and emergency and operation room departments of two hospitals in Amman. The number of nurses who volunteered to participate in the study was 260. Data were collected using a questionnaire prepared by the researcher regarding knowledge and practice on wound care.

**Results:** Mean age and standard deviation of the participants were (28.06±4.92) and 54.2% were females. Sixty-four point nine percent of the nurses answered questions about wound healing correctly, 19.7% answered incorrectly, and 15.4% answered "I don't know". Regarding to the analysis findings question 1, 2 and 3 have the lowest percentage of the correct answers and question 3 have the lowest percentage of the unknown answers. When we asked about the practices related to wound healing, it was determined that 81.2% of the nurses did the practices correctly, 8.4% did them incorrectly, and 10.4% sometimes did them correctly. According to the analysis findings, the 2<sup>nd</sup> and 5<sup>th</sup> ptactices have the lowest percentage of correct answers.

Conclusion: Nurses had high mean knowledge and practice scores in all items. "The percentage of correct answers regarding nurses" wound care practices was found to be higher than their percentage of theoretical knowledge regarding wound care. Nurses' correct answer scores regarding wound care practices were found to be higher than their theoretical knowledge scores regarding wound care. A knowledge gap was detected between theory and practice. Nurses may unknowingly perform correct practices, so a connection should be established between theory and practice regarding wound care with scientific evidence. Studies and in-service training are needed to transform nurses' current knowledge regarding wound care into clinical practice.

Keywords: Wound management, wound care, nursing care, nurse, knowledge and practice

## Öz

Amaç: Çalışmanın amacı hemşirelerin yara bakımına ilişkin bilgi ve uygulamaları hakkında bilgi edinmektir.

Yöntem: Çalışma tanımlayıcı olarak planlandı. Amman'daki iki hastanenin cerrahi, dahiliye, acil ve ameliyathane servislerinde uygulandı. Çalışmaya 260 hemşire gönüllü olarak katıldı. Veriler bilgi ve uygulama ile ilgili hazırlanan soru formu kullanılarak toplandı.

**Bulgular:** Katılımcıların yaş ortalaması (28,06±4,92) olup, %54,2'si kadındır. Hemşirelerin %64,9'u yara iyileşmesi ile ilgili soruları doğru yanıtlarken, %19,7'si yanlış yanıtlamış ve %15,4'ü ise "bilmiyorum" yanıtını vermiştir. Analiz bulgularına göre doğru cevap yüzdesi en düşük olan sorular 1, 2 ve 3. sorulardır ve bilinmeyen cevap yüzdesi en düşük olan soru ise 3. sorudur. Yara iyileşmesi ile ilgili uygulamalar sorulduğunda ise hemşirelerin %81,2'sinin uygulamaları doğru yaptığı, %8,4'ünün yanlış yaptığı ve %10,4'ünün ise bazen doğru yaptığı belirlenmiştir. Analiz bulgularına göre doğru uygulama cevap yüzdesi en düşük olan 2. ve 5. uygulamadır.

Sonuç: Hemşireler tüm sorulara ilişkin yüksek bilgi ve uygulama puanlarına sahipti. Hemşirelerin yara bakımı uygulamalarına ilişkin doğru cevap yüzdesinin, yara bakımına ilişkin teorik bilgi yüzdesinden yüksek olduğu bulunmuştur. Teori ve uygulama arasında bir bilgi boşluğu tespit edildi. Hemşireler bilmeden doğru uygulamalar gerçekleştirebilmektedir. Bu nedenle yara bakımına ilişkin teori ve uygulama arasında bilimsel kanıtlarla bir bağlantı kurulmalıdır. Hemşirelerin yara bakımına ilişkin mevcut bilgilerini klinik uygulamaya dönüştürmek için çalışmalara ve hizmet içi eğitime ihtiyaç vardır.

Anahtar Kelimeler: Yara yönetimi, yara bakımı, hemşirelik bakımı, hemşire, bilgi ve uygulama

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#### Introduction

A wound is a damage to the body's anatomical structure and functions and can be acute or chronic. Having a wound creates a significant burden on the health and social system due to its negative impact on the patient's quality of life and economic costs. Healing of the patient's existing wound depends on nurses' knowledge of wound care, correct practices and awareness of care methods (1,2). Wound care performed by nurses plays an important role in wound healing, patient care and satisfaction. Nurses who have accurate and sufficient knowledge about wound care can perform comprehensive and detailed patient and wound assessments. It is important to recognize wound-related complications at an early stage (1-3).

Early intervention will prevent the wound from getting worse and will accelerate its healing. This can only be done by nurses who are knowledgeable about wound management (3-5). Wound care nurses can accurately assess the wound and determine the best wound care options. They follow, update and apply best practices in wound care to prevent wound complications. Scientific nursing evidence should be used in wound treatment and prevention to ensure patient safety. Nurses should be encouraged for innovative and scientific practices. Nurses' expertise in wound care reduces surgical wound complications, re-admissions, length of hospital stay, and costs, while also improving patients' quality of life and satisfaction (5-8).

Nurses' evaluation of the patient's general health status and holistic care during wound care positively affects wound healing. Nurses with sufficient evidence-based wound care knowledge help in the decision-making of patients and family about wound care strategies and enhance optimal care options (9).

In the study conducted by Rizalar et al. (10) that the wound care education the nurses currently have is inadequate. Clean wounds are commonly washed with saline solution and covered with dry dressing, pain control during dressing is insufficient, and modern dressings are rarely used (10). Aslan and Kants's study (11), pressure ulcer knowledge and prevention behaviors of nurses working in intensive care units (ICUs) were found to be moderate.

Nurses' knowledge and experience in wound care is a way to increase competence and confidence in practice. This study was conducted to reveal the wound care knowledge and practices of nurses in Amman. There is no study that includes theoretical knowledge and practice of nurses in Amman regarding wound care. Therefore, this study was

## **Main Points**

- Nurses have important roles and responsibilities in wound care.
- Wound care plays a crucial role in patient care conducted by nurses.
- There is a need to assess and improve on management practices of nurses regarding wound knowledge and practice.

conducted to determine the knowledge and practice of nurses. The next goal of the researcher is to plan training if there is a lack of knowledge and practice regarding wound care.

**Aim:** The aim of the study was to determine the theoretical knowledge and practices of nurses in Amman regarding wound care. The research sought answers to the following questions:

- 1. What are nurses' theoretical knowledge of wound care?
- 2. What are nurses' wound care practices?
- 3. Is there a difference between nurses' theoretical knowledge and practices of wound care?
- 4. Are nurses' demographic characteristics and knowledge and practices of wound care different?

#### **Material and Method**

# **Study Design**

This study was designed as a descriptive study.

# **Study Setting**

The study was conducted in two hospitals in Amman, Jordan. The capacity of Jabal Al-Zaytoon Hospital is 200 beds and the capacity of Islamic Hospital is 270 beds. Jabal Al-Zaytoon Hospital has surgical, medical, and emergency services. The daily number of patients is approximately over 300. Islamic Private Hospital has surgical, medical, and emergency department. The daily number of patients is approximately over 400 patients. Wound care practices in the hospitals where the study was conducted are performed by physicians and nurses, and there is no special wound care nurse.

## **Sample Selection**

This study was conducted in the surgical and internal medicine clinics and emergency services. The number of nursing staff working in Jabal Al-Zaytoon Hospital; total 132 (surgical and medical clinics 40, emergency room 30, ICU 40, operation room 22). Number of nurses working at Islamic Private Hospital; total 146. (25 emergency room, surgical and medical clinics 44, ICU 37, operation room 40). The total number of nurses working in both hospitals was 278, and 260 volunteer nurses who met the inclusion criteria constituted the sample of the study. 18 nurses did not volunteer to participate in the study. 93.5% of the nurses were reached.

#### **The Inclusion Criteria**

Registered nurses who have worked full-time in hospital for at least one year, have at least a bachelor's degree and can read English.

# **Study Tools**

Data were collected using a questionnaire form prepared by the researcher (3-5,8,9). Opinions of four surgical nursing faculty members were obtained for the prepared questions.

No method was used to obtain expert opinions. Questions were asked whether they were appropriate. The questions were found appropriate and no changes were made other than question stems and spelling corrections in line with the suggestions. Then, a pilot application was conducted with 10 nurses. No changes were made after the pilot application. The questionnaire consists of three sections.

- 1. The first section about demographic characteristics of nurses constitute 5 questions (gender, age, marital status, working experience, and ward).
- 2. The second part asks about wound care knowledge. It consists of 12 questions and has three options.
- 3. The third part asks about wound care practices knowledge. It consists of 12 questions and has three options.

Questions regarding nurses' knowledge and practice regarding wound care were evaluated with their responses to the options "yes/correct", "no/wrong" and "I don't know" and their percentages were calculated. It was determined whether the participants in the sample knew the information questions about wound care and whether they applied the practices correctly.

# **Data Collection**

The data for the study was collected by the researcher between August 1-20, 2020. The questionnaire was administered face to face during the nurses' break times. It took approximately 15 minutes.

# **Ethical Aspect**

Ethical approval (Institutional Review Board) was obtained from the Islamic Hospital in Amman, Jordan (approval number: 15/2020/2241, date: 13.08.2020). Permission was also obtained from the hospitals managements. Informed consent was obtained from the nurses who participated in the study.

# **Statistical Analysis**

Statistical Package for Social Sciences (SPSS) software version 21.0 was used (SPSS, version 21.0, Chicago, IL, USA). Descriptive statistics such as frequencies and percentages were used for variables, and Pearson's chi-square test was used to determine differences. When statistics were significant, the selected significance level was p<0.05.

A correlation test was performed to determine relationship between nurses knowledge and practice, a positive moderate correlation found that when the total knowledge is high that will affect positively on nursing practice; p-value of total knowledge and practice of nurses is (0.001) which mean that there are significances correlation were found between nurses knowledge and practice.

#### Results

The mean and standard deviation (SD) of age were  $(28.06\pm4.92)$ . 54.2% of the nurses were female. 26.9% of the nurses were working in the ICU, 31.0% in medical, and 41.2% in surgery. 49.2% of nurses had more than three years of experience.

According to Table 1, 64.9% of the nurses answered the questions correctly. 15.4% stated that they did not know. Regarding to the analysis findings question 1, 2 and 3 have the lowest percentage of the correct answers and question 3 have the lowest percentage of the unknown answers.

According to Table 2, it was determined that 81.2% of the nurses performed wound care practices correctly. The p-value was analysed by using chi-square tests for the answers to find if there any significant difference between correct and wrong answers for the participant. Regarding to the analysis findings question 2, 5 and 11 have the lowest percentage of the correct answers.

A positive moderately significant correlation was found between nurses' knowledge and practices regarding wound care. The mean and SD of total nurses knowledge were as (17.61±3.94), and the mean and SD of total nurses practice were as (15.49±2.80). A correlation test was performed to determine relationship between nurses knowledge and practice, a positive moderate correlation found that when the total knowledge is high that will affect positively on nursing practice. P-value of total knowledge and practice of nurses is (p<0.001) which mean that there are significances correlation were found between nurses knowledge and practice.

Differences between descriptive characteristics-based on knowledge and practice of nurses regarding wound care were tested by using Student t-test and one-way analysis of variance test formats. No statistically significant differences were found between the knowledge and practice of nurses based on gender, (t=0.653; p=0.515) for knowledge, and (t=0.019; p=0.985) for practice of nurses.

Statistically, no significant difference was found between the knowledge and practices of nurses according to their gender. A significant difference was found between the nurses' working years and their knowledge and practices regarding wound care (p<0.001). It was found that those with 2-3 years of nursing experience had higher knowledge scores. The knowledge level of intensive care nurses was higher depending on the department in which the nurses worked. The practices of the nurses were similar depending on the department in which they worked.

Table 1.
Nurses' Knowledge Regarding Wound Care (n=260)

Overtions	Yes/	Yes/correct		wrong	I do not know		p-value*	
Questions	n	%	n	%	n	%	0.014	
Q1: Is it appropriate to use povidone in cleaning chronic wounds? (No)	207	79.6	50	19.2	3	1.2		
<b>Q2:</b> In granulated wounds with a mild to moderate exudate a hydrocolloid dressing is a good choice as it maintains the granulation tissue and aids in epithelialization (Yes).		47.7	35	13.5	101	38.8	0.001	
Q3: Do good bacteria inhibit wound healing in chronic wounds? (No)	124	47.7	33	12.7	103	38.5	0.001	
<b>Q4:</b> Wound assessment and care requires a holistic approach (Yes).	191	73.5	14	5.4	55	21.2	0.001	
Q5: Is moist dressing appropriate for chronic wound treatment? (Yes)		65.4	14	5.4	76	29.2	0.001	
6: Localized infection is often characterized by the lassical signs and symptoms of inflammation (Yes).		67.7	39	15.0	45	17.3	0.001	
Q7Are topical enzymes suitable for removing necrotic tissue? (Yes)	194	74.6	14	5.4	52	20.0	0.001	
<b>Q8:</b> Pain and discharge from the wound are signs of surgic wound infection (Yes).	al 248	95.4	12	4.6	0	0.0	0.194	
<b>Q9:</b> The condition of the wound affects the wound healing process (Yes).		98.8	3	1.2	0	0.0	0.372	
Q10: Prolonged hospitalization delays wound healing (Yes).		63.5	76	29.2	19	7.3	0.002	
Q11: Should assessment of wound pain be done only by the clinician? (No)		20.0	183	70.4	25	9.6	0.001	
Q12: I received adequate training in wound care (Yes).	232	89.2	23	8.8	5	1.9	0.023	
The distribution of answers about knowledge								
Correct Wrong				I don't k	now			

Correct	Wrong	I don't know
64.9%	19.7%	15.4%
*=the n-value was analysed by using chi-square tests		

# **Discussion**

Wound care management is an important skill in nursing practice and is one of the indicators of the quality of patient care. Evidence-based theoretical knowledge and practices are very important in wound care management and ensuring the quality of care (12,13). Nurses who know the wound healing process correctly can best manage wound monitoring, wound care, and appropriate discharge education. Nursing knowledge and skills must be continuously developed to improve the quality of health care and patient satisfaction (9-13). In our study, 64.9% of the nurses answered theoretical questions about wound care correctly, while 15.4% stated that they did not know the answer (Table 1). This result suggests that nurses' theoretical knowledge about wound care is at a moderate level. Nurses need to improve their theoretical knowledge about wound care. In some studies, it was observed that nurses' knowledge and practices regarding wound care were at a moderate level (10,14).

In the our study, only 19.2% of the nurses answered the question about the use of povidone in cleaning chronic

wounds correctly. According to this result, it wasth ought that the nurses had a lack of knowledge about chronic wound cleaning solutions and needed to improve it. Additionally, 47.7% of the nurses gave incorrect answers regarding good bacteria in chronic wounds. Ingranulated wounds with a mild to moderate exudate, a hydrocolloid dressing is a good choice as it maintains the granulation tissue and aids in epithelialization. However, 38.8% of the nurses who participated in the study stated that they did not know this. Studies have shown that although the theoretical knowledge of nurses is insufficient in some cases, their practice is better (3,9,10,14). Nurses with sufficient evidencebased wound care knowledge help in the decision-making of patients and family about wound care strategies and enhance optimal care options. Sari et al. (15) surveyed 235 participants in an Indonesian city and revealed considerable knowledge deficiencies about wound care.

Nurses should be able to evaluate the patient holistically during wound care. It is extremely important to assess and rehabilitate the patient's physical condition, keep

Table 2.
Nurses' Practices Regarding Wound Care (n=260)

a .:		Yes No		No	o Sor		netimes	p-value*
Questions		n	%	n	%	n	%	0.009
<b>Q1:</b> I use gloves to change sterile dressing performing wound care (Yes).	gs when	243	93.5	14	5.4	3	1.2	
<b>Q2:</b> I assess the skin during my daily wou (Yes).	nd assessment	145	47.7	107	41.2	8	3.1	0.001
<b>Q3:</b> I definitely use aseptic technique dur dressing (Yes).	ing wound	251	96.5	6	2.3	3	1.2	0.142
<b>Q4:</b> I use standards (protocols, guideline wound care (Yes).	s, etc.) regarding	219	84.2	19	7.3	22	8.5	0.001
<b>Q5:</b> Do I recommend that the patient take antimicrobial agent before surgery? (Yes)		101	38.8	78	30.0	81	31.2	0.004
<b>Q6:</b> I use sterile solution for wound cleaning (Yes).		256	98.5	0	0.0	4	1.5	0.242
Q7: We implement a policy on wound asse	essment (Yes).	236	90.8	3	1.2	21	8.1	0.001
Q8: I can check and evaluate the wound s	site (Yes).	255	98.1	0	0.0	5	1.9	0.154
<b>Q9:</b> I use special products (such as beds) pressure sores (Yes).	to prevent	235	90.4	3	1.2	22	8.5	0.487
<b>Q10:</b> I feel confident to make recommend about the covers for wounds? (Yes)	ations to my team	182	70.0	12	4.6	66	25.4	0.001
<b>Q11:</b> I provide information about appropriate wound dressings for my patients (Yes).		179	68.8	15	5.8	66	25.4	0.001
Q12: Nurses in my hospital use sterile glowound dressing changes (Yes)	ves during chronic	234	90.0	3	1.2	23	8.8	0.001
The distribution of answers about prac	tice							
Correct practice	No practice				Someti	imes		

the wound moist, use appropriate dressings and keep the wound temperature constant. The nurse should assess the wound daily for infection. To do this, nurse monitors the patient's blood counts, serositis, and hematoma. They should regularly measure the size of the wound and be able to observe and intervene in wound infection. The nurse who provides wound care is expected to have all this information (8,16,17).

\*=the p-value was analysed by using chi-square tests

8.4%

81.2%

Ferreira et al. (3) concluded in their study to evaluate nurses' knowledge and practices on wound care that nurses' knowledge levels on some issues related to wound care were inadequate. As a result of the study, it was stated that there was a shortage of nurses specialized in wound care, insufficient work experience and lack of training in woundcare (3). However, having nurses specialized in wound care will increase the quality of care. Wound, Ostomy and Continence Nurses Association, it has been confirmed that being a wound care specialist is necessary and important for wound management and the care of surgical wounds, reducing the incidence of complications and increasing the adequacy of wound care (2).

In the study by Heerschap et al. (18) participants frequently discussed the benefits of a wound care specialist on the wound-management team to assist in the decision-making process. The wound specialist was discussed as a beneficial resource for whenever wound complications arise or staff are uncertain how to proceed with care (18).

10.4%

It is very important that the nurse providing wound care does the application correctly. In our study, 81.2% of the nurses stated that they performed the practices correctly, but only 10.4% stated that they sometimes performed the practices correctly. The majority of the nurses participating in the study stated that they used sterile gloves, used sterile solution to clean the wound, and always checked and evaluated the condition of the wound area. Findings in this study also showed that 96.5% of the participants had practised aseptic technique in wound dressing (Table 2). Similarly, in the study by Christiana and Salawu (7), an score of the practice of surgical nurses in the experimental group on aseptic technique was reported as 92.9%. Aseptic technique plays an important role in wound care and in the management of surgical cases within the hospital, including operating rooms. In their study observing the practices of

nurses regarding postoperative wound care, Mwakanyamale et al. (19) stated that good wound care practices were implemented, dry sterile dressing was applied and antiseptic solution was used for dressing. Moran and Byrne (20) reported in their study that 7% of the nurses used Betadine solution to clean the wound and less than 10% used normal saline solution to clean the wound. Betadine is ideal form in or wounds, cuts, abrasions and injuries. It is an antiseptic that kills or slows the growth of microorganisms that cause infection. It is often used for skin antisepsis before invasive procedures, but is not recommended for wound washing and should not be used. The prospective study showed nano silver gel is safe and effective in wound management and gives better efficacy and faster response as compared to traditional betadine dressing (21).

Surgical site infections are wound infections that occur after surgical procedures. Bathing or showering with an antiseptic skin wash before surgery is a well-accepted procedure to reduce skin bacteria. Reducing skin microflora may reduce the incidence of surgical site infections.

Only 38% of the nurses stated that they recommended their patients to take a shower with an antimicrobial agent before surgery, while 30.0% stated that they did not recommend it.

Pre-operative showering with antiseptic agents is a well-accepted procedure for reducing skin microflora. In the study conducted by Okgün Alcan et al. (22), a small number of nurses stated that patients were routinely given a shower/bath before surgery in the institution they worked in. The high rate of nurses who did not give a shower/bath before surgery and who did not know the practices of their institutions on the subject reveals the need for education on the subject and the need to conduct studies to increase the awareness of nurses (22).

Nurse managers should observe and continuously evaluate the practices of nurses. At the same time, nurses should receive regular training in wound management and wound assessment. Only in this way can improvements be made (4,23).

Yao et al. (17) stated that the quality of wound care is of critical importance for rapid, painless, and complication-free healing of surgical wounds. Postoperative wound care in surgical clinics is one of the important elements of nursing interventions.

The nurse's important responsibilities in wound management include mechanical cleaning, irrigation, and dressing of the wound, and records for wound follow-up. The wound care nurse is responsible for following new developments in wound care and staying current on wound care concepts and products. Taking care of wounds is a dynamic, complex process and requires specific knowledge of the nursing team, comprising professionals who will develop this care both in prevention and in the specific treatment (4,6,24).

The findings obtained in our study showed that there is a positive moderate correlation that will positively affect nursing practice when total knowledge is high (Table 3).

When we looked at theoretical knowledge and practices in our study, we also saw that the rate of nurses doing the practice scorrectly was higher than their theoretical knowledge. This made us think that nurses did some practices correctly without basing them on theoretical knowledge. We can say that there is a knowledge gap. This gap is between wound care knowledge and practice. Therefore, nurses need to be trained on wound care. The aim is to establish connections between theoretical and practical and scientific evidence on wound care (1).

In our study, no statistically significant difference was found between the knowledge and practices of nurses according to gender. According to work experience of nurses, statistically significant differences were found between knowledge and practice. It was determined that nurses with 2-3 years of experience had higher theoretical knowledge (Table 4). Studies have found that knowledge scores are significantly affected by nurses' characteristics. As age and working years increase, nurses' knowledge and correct practices increase (20,24). There were no significant differences in the practices of nurses according to the clinics they worked in. However, it was determined that intensive care nurses had a higher level of knowledge (Table 4). Studies have shown that intensive care nurses' knowledge levels regarding preventing pressure ulcers are sufficient or moderate, and their attitude levels increase as age and professional experience increase.

The role of nurses has become progressively important in wound care. Poor quality wound care can negatively impact patients, caregivers, nurses, and healthcare costs. Some studies revealed that nurses who cared for patients with wound care demonstrated slightly insufficient knowledge and a positive attitude, faced significant wound care

Total knowledge	Total practice
	iotal practice
1	0.427*
	0.001
260	260
i	260

Table 4.	
Nurses' Knowledge and Practices Regarding Wound Care According to Their Descriptive Characte	ristics (n=260)

Descriptive characteristics (n=260)	Total knowle	edge of nurses	Total practice of nurses		
Gender Male (n=119)	t=0.653 p=0.515	Mean ± SD	t=0.019 p=0.985	Mean ± SD	
Female (n=141)		(17.78±3.94) (17.67±4.33)		(15.49±2.64) (15.48±2.94)	
Experience year					
0-1 (n=32)		(19.63±3.37)		(16.91±3.32)	
1-2 (n=30)	f=35.178	(16.33±2.72)	f=12.607	(16.47±2.94)	
2-3 (n=70)	p=0.001	(20.50±3.84)	p=0.001	(16.26±3.03)	
>3 years (n=128)		(16.05±3.77)		(14.49±2.07)	
Departments					
Surgical and medical (n=83)	f=17.251	(16.04±3.68)	f-2.042	(14.90±2.60)	
ICU (n=70)		(19.80±3.45)	f=2.863 p=0.059	(15.90±2.81)	
Emergency and operating room (n=107)	p=0.001	(17.66±4.34)		(15.68±2.89)	

barriers, and were moderately confident toward wound care. The studies results are important for use by researchers, educators, managers, and policy makers in improving wound care quality. Continuous and integrated wound care education programs should be developed based on the nurses' wound care knowledge, attitude, and confidence to provide high-quality wound care for patients. Further development of educational programs and frequent measurement of these parameters can lead to a significant improvement in the quality of care provided (9,11,14,25).

# **Study Limitations**

The responses given by the participants reflect only the nurses working in that hospital and it was based on a questionnaire and there was no possibility of observation.

# Conclusion

Nurses had high mean knowledge and practice scores in all items. Wound care knowledge accounted for more than 50% and in practice wound care accounted for more than 80%.

Nurses' knowledge and practices percentages were high in all items. Wound care knowledge was more than 50% and their correct practices of wound care was more than 80%. The percentage of nurses' correct practices of wound care was higher than their percentage of theoretical knowledge about wound care. A knowledge gap was detected between theory and practice. Nurses may unknowingly perform correct practices, so a connection should be established between theory and practice regarding wound care with scientific evidence. It is recommended that training on wound care in academic and in-service training programs for nurses should be provided, protocols should be developed and their use should be ensured.

Ethics Committee Approval: Ethical approval (Institutional Review Board) was obtained from the Islamic Hospital

in Amman, Jordan (approval number: 15/2020/2241, date: 13.08.2020). Permission was also obtained from the hospitals managements.

**Informed Consent:** Informed consent was obtained from the nurses who participated in the study.

#### **Footnotes**

**Author Contributions:** Surgical and Medical Practices - M.S.A.M., Ü.D.Y.; Concept - M.S.A.M., Ü.D.Y.; Design - M.S.A.M., Ü.D.Y.; Data Collection and/or Processing - M.S.A.M., Ü.D.Y.; Analysis and/or Interpretation - M.S.A.M., Ü.D.Y.; Literature Review - M.S.A.M., Ü.D.Y.; Writing - M.S.A.M., Ü.D.Y.

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