

Nurses' Challenges in Wound Care Management- A Qualitative Study

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ABSTRACT

Introduction: Decision-making process of healthcare professionals in an acute care setting is inevitable that necessitates a balancing paradigm of clinical knowledge with the practices of evidence-based implementation. Nurses face contextual challenges in managing the issues of decision-making intervening domains of cognition, skills, and values.

Aim: This study was implemented to determine the decision-making processes used by registered nurses in wound care management in acute care settings.

Materials and Methods: A qualitative method was adopted using a thematic analysis approach. Fifteen nurses involved in the management of wound care unit were purposefully included in the interview from 23rd May to 15th July 2020. The

semi-structured face-to-face interview was conducted, and the collected data was analysed through inductive thematic analysis.

Results: Fifteen nurses working at a tertiary hospital with a mean age of 34.26±3.31 years experience ranging from 3 to 15 years were included in this study. The transcribed interviews were categorised under five themes: Foundation Knowledge and Education; Randomness in seeking practice education; Expert opinion and Evidence-based practice; Multidisciplinary Coordination and Streamlining; and Patient engagement in care.

Conclusion: Nurses demonstrated that wound care management requires the practice of decision-making that requires multidisciplinary and holistic approaches tempered with knowledge about the patient and the expertise of others.

Keywords: Decision making, Patient care, Qualitative research, Skills

INTRODUCTION

The World Health Organisation (WHO) has identified wound management as a global public healthcare issue best assessed and addressed by an inter-professional team approach [1]. Chronic wounds usually require a combined team approach and resource investment from clinicians, patient educators, and case managers [2]. However, healthcare providers managing a variety of wounds require standardised treatment and referral plans, multidisciplinary collaboration, evaluation plans of a given treatment, knowledge, and competence [3]. Multidimensional competency about knowledge, practice, abilities, preferences, and attitudes [4] in the perspective of nursing care, focuses on more comprehensive wound care evidence-based approach. Several studies also discussed the exponential skills and the primary role of registered nurses and graduate nurses' [1,5,6]. Evidence-based practice in wound management is necessary to achieve better patient results and reduce healthcare expenses [1] that defines clinical decision-making as a process of assembling information to allow professionals to decide a course of practice [7].

Historically several factors exist while the nurse's practice of wound care seems to be varying potentially. The predominant association has long been associated with the nurses' practical knowledge and skills than the contextual theory that critically impacts clinical-based decision-making in managing the wound care [3]. However, according to the Cochrane Database, health institutions wound care protocol and the experts' opinions are considered to make clinical practices instead of adhering to evidence-based practices that alter a patient's progress. On the contrary, the same study highlighted that the wound also has a unique nature that cannot be ruled by adopting the standardised protocol [8]. Though exponential literature in recent years discussed the decision-making strategies [3] on the assessment tools and guidelines, consensus about the context of clinical judgement still lacks due to different professionals' groups' opinion [1]. Wound management is predominantly a nurse-led discipline; however, this relies on the judicious use of appropriate

wound-care products to promote wound healing in their practice [9]. Concerning patients' quality of life and well-being, individuals presenting with chronic wounds may have weaker physical health, lower practical, occupational ability, and poorer mental and social well-being than others, in addition to constant pain caused by the wound [10].

Understanding interventions that effectively promote and support the healing cascade and wound repair is imperative for clinicians working in this healthcare domain. Numerous studies have reported the challenges in defining wound care management and correct decision-making among nurses at both beginner and specialist stages [7,11,12]. In Saudi Arabia, wound care practices remain a challenging area as directive specific policies or guidelines are not universally applied in healthcare practice. Furthermore, a high level of cultural diversity within the nursing practitioner community can affect decision making in providing wound care [13]. Therefore, understanding the origins of the decision-making processes and their component factors will help understand patient safety perspectives, thus aiding the ability to provide and maintain high-quality wound care. Despite the advanced innovative technologies making considerable optimistic progress in wound care using a multidimensional platform, nurses' decision making challenges in promoting wound care management need to be explored.

This is the first Saudi Arabian research study focusing on determining the decision-making processes used by registered nurses in wound care management. Besides, only a few qualitative studies have explored nurses' everyday challenges in practicing wound care. Hence, the researchers conducted this study to explore wound care nurses' perceptions, feelings, and experiences in wound care management.

MATERIALS AND METHODS

This qualitative design study was conducted utilising semi-structured face-to-face individual interviews with nurses providing acute wound care management insights in an existing hospital

wound care system at the tertiary hospitals in Saudi Arabia. Fifteen nurses were included from various healthcare sectors with varying degrees of wound care experience and were all considered experts. Informed consent was signed by the nurses who were willing to participate. Purposive sampling was used, as one participant's information directed the choice of additional participants who were likely to provide more significant insights into a specific area based on their experience. It has previously been recommended that qualitative studies require a minimum sample size of at least 12 to reach data saturation [14]. Therefore, a sample of 13 nurses was deemed sufficient for the qualitative analysis and scale of this study. The Nursing Research Ethical Committee at the Vice Deanship of Research and Postgraduate Studies in the Faculty of Nursing, Umm Al-Qura University, approved the study (PGDSR:2020:FON07).

Inclusion criteria: (a) 30-40 years age range who were having Saudi nursing council registration with a minimum of three years experience in acute wound care; (b) who have the desire to participate; (c) having the ability in sharing their experiences in managing acute wounds. From 23rd May to 15th July 2020, semi-structured interviews with open-ended questions were used until data saturation. Furthermore, observational notes were audiotaped and transcribed.

Exclusion criteria: Nurses with less than three years and above 15 years of experience and who were not having Saudi council registration were excluded from the study.

Data Collection

Data was collected from 23rd May to 15th July 2020; semi-structured interviews using open-ended questions were audiotaped and transcribed, providing observational notes [7]. The tool comprised of demographic characteristics, including age, sex, years of clinical experience, and clinical role. A pilot study was performed with two nurses initially expelled from participating in the main research. The pilot study ensured the tool's appropriateness to provide the researcher with prior suggestions concerning its validity.

An interview guide was used, and initial and ongoing questions used in a previous study with a similar objective (explaining health professionals' decision-making in wound care) were also used here [7]. The following open questions were asked initially, such as:

- a. Describe the kind of decision-making strategies followed in wound management at the unit.
- b. Describe the issues that are related to decision making in wound management.
- c. "What help you to make decision making?"

Each session took approximately 40-60 minutes. The interview, followed by subsequent questions, explored participants' responses in greater depth regarding wound care decision-making.

Data Analysis

The data were analysed using thematic analysis, where the study was organised in a phased manner. The investigators had rich qualitative research experience, who did not had a relationship with the nurses, conducted the interviews. The qualitative researchers acknowledged that study conducted in a precise, consistent, and exhaustive manner through documentation, systematisation, and disclosure methods of analysis with enough details to facilitate the readers' interest and identify whether the process is credible in order to preserve the reliability. The recorded interviews were transcribed and analysed using steps of thematic analysis [15]. Data saturation was achieved by conducting data analysis simultaneously with data collection until no new information was presented. The accuracy of the transcripts was ensured by comparing them with the recorded interviews. The six-step thematic analysis procedure [6] was used. In the first step of the analysis process, transcripts were revised a few times for the investigator to become familiar with the interviews' contents. In the

second step, the investigator read the transcript line by line thoroughly, applying a code that described the relevant passages to categorise them according to their meaning or actions in the third step. The working analytical framework was then applied in the fourth step by indexing subsequent transcripts using the existing categories and codes. The fifth step involved a spreadsheet in generating a matrix, where the categories and subcategories were subsequently examined. Finally, analytical conclusions were formed according to the selected extracts and compared with the research questions and purpose.

STATISTICAL ANALYSIS

All the data was collected, recorded in Microsoft excel sheet and analysed as frequency, mean and standard deviation in form of tables.

RESULTS

The nurses' mean age was 34.26±3.31 years, and all were females [Table/Fig-1]. Six participants were working as advanced wound care nurses, nine as bedside nurses. The clinical experience ranged from 3 to 7 years for 9 nurses, and 8-15 years were six nurses [Table/Fig-1].

Clinical unit	Female nurses (n)	Mean Age±SD (in years)	Mean Experience±SD (in years)
Bedside nurses	9	32±1.73	5.1±(1.27)
Advanced wound care nurses	6	37.6±1.63	10.1±(4.9)

[Table/Fig-1]: Distribution based on demographic data.

From the interviews with the wound care nurses participating in this study, their perspectives on wound care practices were collected. Based on the interviews' analysis, five main themes emerged [Table/Fig-2].

Themes	Responses (Participants)	Subcategories
Foundation knowledge and education	P1, P10, and P15	Wound healing process
		Management techniques
Randomness in seeking practical education	P2, P5, P7 P8, P9, and P13	Guidance on decision making
		Hospital policies and procedures
Expert opinion and evidence-based practice	P3, P5, and P11	Holistic approach
		Experts opinion
Multidisciplinary coordination and streamlining	P6, P11, P15	Interdisciplinary team
		Incident reports
Patient engagement in care	P4, P12, and P14	Shared decision making

[Table/Fig-2]: Generated themes of five categories and subcategories. P: Participant

Foundation Knowledge and Education

Wound care nurses demonstrated that it is necessary to have an underlying knowledge of: a) wound healing process, associated factors, and stages; and b) differentiate between diverse types of wounds and techniques of managing them.

"We have Accurate wound assessment knowledge and, fortunately, our institution renders team support in acquiring knowledge about wound management techniques (and) as the hospital has adequate resources to implement wound healing techniques including the dressing products available" (Participant) P1.

I think evidence-based practices knowledge and competency skills are being provided by the institutional training, so that I am able to practice the updated clinical skills (P10).

Amid time limitations, participants made realistic choices regarding wound care practice and acquired information with their experiences as readily available resources, and produced immediate clarifications

based on experience. So, nurses were able to perform the required procedures competently.

On the contrary, some participants reported, "With rare wounds and patients with co-morbidities, we do feel pretty lack of faith and doubt. The primary concerns are that wound care nurse specialists lack training on new equipment (dressing) and supplies because it is initially provided to Surgeon doctors. We have to follow, which may affect our adherence to the treatment plan" (P15).

Randomness in Seeking Practical Education

Using the best available information included actions participants used to seek out wound care information to guide decision-making.

"We mostly obtain wound care-related information through external means such as research and wound care related articles: there are books about wound care available at our department" (P13) or "Research in wound care study is available in my area" (P2).

"My information is based on my previous experience and Google-searching if we are free" (P8).

"The information provided by other specialists is usually taught through prior clinical knowledge and experience, which was not consistently modern and could differ from best practice:

"I use research-based information by asking my colleagues questions and select the best solution" (P5).

"Policy and procedures of wound care management are where I go to seek wound care information" (P9), and "I make decisions based on my knowledge and hospital policy" (P7).

Expert Opinion and Evidence-Based Practice

During wound care practices, despite their past clinical experience: "I take my colleagues opinions on sharing expert knowledge to creating training opportunities" (P11)

"I ask my colleagues with brainstorming ideas, and then I will select the best (option)" (P3)

"I use a holistic approach to make decisions in wound management when there is a concern about diagnosis of wound aetiology, and evaluation was essential" (P5).

Multidisciplinary Coordination and Streamlining

Participants recommended various disciplines and expert groups to provide wound care recommendations suitable to meet the patient's needs.

"Reassessment, I inform my supervisor, to providing daily reports to the multidisciplinary team, (and use) root cause analysis and action plans with [the] interdisciplinary team and incident reports" (P11),

"I happen to meet with the multidisciplinary team" (P6),

"I ask senior nurses and specialists such as wound care nurses or surgeon doctors" (P15).

Patient Engagement in Care

Participants stated that promoting a patient's agreement was a priority and highlighted the importance of informing and educating patients and involving them in the decision-making process. "I take a clear and full agreement plan of care with patients to understanding the purpose of treatment included using preventative procedures, managing complications, and providing explanations for the patient" (P14 & P4), and, "I ask for the patient's opinion" (P12).

DISCUSSION

The efficient management of wounds requires the professionals involved in patients' care (including nurses) with the appropriate knowledge and skills to maximise positive health outcomes [6]. This study aimed to explore nurses' decision-making practices while providing wound care, focusing on their sources of guidance for best practice. Five themes emerged from the data [Table/Fig-1]. It was interesting to note that participants indicated that core knowledge

of wound anatomy and physiology is based on clinical practice, which serves as a knowledge and education theme.

Nurses pointed out those practice-based choices are not evidence-based despite the credence delivered to evidence-based approaches. It starts with the nurses' decisions on their everyday practice, including utilising the best available information, using a consistent approach in assessing wounds, and using a multidisciplinary team approach. In an earlier study, similar results were found concerning the influence of the intuitive based practice that has been recognised as the primary factor to establish a decision-making process among wound care nurses [7].

Even when participants reported the value of using research to become familiar with wound care practices, numerous decisions were created through practice-based knowledge obtained from clinical experience. Most participants recognised the wound dressing product by their brand names instead of knowing their interactive properties. Because the nurses work at the wound care unit for five years, they know it by familiarity. Also, while dealing with the complex wound, the innovative technologies need to be implemented with the multidisciplinary team, where the randomness in seeking practice education would give a revolutionary solution. Nurses' decision-making process indicates varied and often contingent approaches requiring high-level knowledge about clinical wound care information. This could vary from looking up the internet or asking a medical colleague [8].

Earlier studies highlighted various topics relevant to wound care, nurse role, context, and practice impact [6-8]. To develop evidence-based practice among clinical nurses, including wound care nurses, act as knowledge brokers in it-the wound care nurses are optimally placed to facilitate a collaborative approach via a case management model. The advanced practice and clinical expertise of the wound care nurse are arguably essential to their role in managing the situation [16,17]; however, in this study, the nurses indicated the need to find additional wound protocols/guidelines to provide treatment in a unique situation that might necessitate the evidence-based practices.

'Expert and evidence-based practice.' (Theme 3)- In certain instances, this involved consulting medical colleagues for advice without considering the validity of their knowledge on complex wound care management. Practice guidelines developed the patient care approach [18] based on the consolidation and gauging of recent evidence from the literature about the relative effectiveness of various treatment strategies, which would result in efficiency, ultimately improving patient outcomes. Surprisingly clinical guidelines for wound care management and investigating their adaptability for nurses working in the wound care unit use would be essential to address the lack of clinical evidence-based guidelines identified in this study.

Subsequently, nurses' roles are influenced by the context of the clinical environment in which they practice, patients' health requirements, competency level, domains of practice, the education level and qualifications of the nurse, and institutional policies [19]. The paramount influences on the quality of wound care are knowledge and attitude. Nursing has long been criticised for the lack of definite profession-specific evidence, rather than adopting other services such as medicine and the social sciences [20]. Nonetheless, nurses still hesitate to adopt clinical evidence-based practices ultimately. This situation has also been noticed within wound care, where it lags due to the shortage of strong practical evidence [21]. In previous reviews, shortfalls were found in the evidence-based underpinning wound care practices, motivating the need to establish a more scientific evidence base [6]. A study among health professionals reported the vital role of unofficial sources of knowledge (e.g., experiential education and intuition) in forming competence in wound care practice. They also acknowledged the need for a structured strategy and restrictions on the implementation of evidence-based practice.

Some nurses found to be having sufficient knowledge, yet low application negatively influenced their competence in practice [22]. Gillespie BM et al., also highlighted the role of practice-based expertise, indicating that although nurses had a knowledge base of wound assessment, they lacked skills in using clinical guidelines to inform other aspects of wound care practice [7]. Other studies also reported many participants lacking wound care-related knowledge [23,24]. These findings suggest that evidence-based practice is positively associated with structured education. The current study also noted the impact of collaborations between different clinical streams that influence evidence-based practice implementation, the emerging theme in this domain of 'Multidisciplinary Coordination and Streamlining' (Theme 4).

In this study, decision-making was based on multidisciplinary and holistic approaches tempered with the patient's knowledge and others' expertise. Optimal wound care is complicated and demands the support of inter-professional collaboration. An adequately coordinated multidisciplinary unit strategy is fundamental to high-quality performance and evidence-based wound care practices [11]. Also, chronic wound management requires a comprehensive review and investigation, including patient perspectives, to appropriately discuss their concerns, as evidenced by the theme 'Patient Engagement in Care' (Theme 5) emerging from the interview analyses. Chronic wound care may be further complicated by fragmenting information and services between acute, chronic, and homecare, community, and hospital settings. For these reasons, a multidisciplinary approach can benefit from role expansion and unification of knowledge from various healthcare specialists, such as nursing, medicine, social work, infection control, and many others [23]. The staff welfare program needs to get updated with additional education to intervene with evidence-based practices to appropriately acquire special skills. Nurses' training in up-to-date methods could bridge the gap between quality and patient outcomes.

Limitation(s)

Results based on participants' perceptions reported in this study may limit the results' generalisability. In general, this study provides a conceptual comprehension of decision-making methods utilised in the wound care system.

CONCLUSION(S)

The managerial program and the recent developments of wound care research evidence would have a tremendous impact on nurses' challenges in practicing wound care management techniques. The barriers to developing the scientific-based protocol based multidisciplinary management strategies require ongoing, consistent collaboration among researchers, trainers, trainees, and organisations to minimise the broader gap between theory and practice.

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