

## Barriers to Effective Nurses' Wound Care Practices in a Resource Limited Facility

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**Abstract:** *Despite the tremendous developments in wound care specialty in the past few decades; in terms of technological advancement and the advent of new wound care products, nurses still encounter a lot of challenges in providing effective and efficient wound care that enhances wound healing and promotes positive wound care treatment outcome. Wound care is an ever-evolving and dynamic specialty with recordable achievements. The wound is a common occurrence in every human society that warrants clients' visits to the hospital for effective wound care; as effective wound dressing promotes wound healing; prevents complications, leads to early discharge, and saves costs. However, effective wound care practices are being hindered by some barriers, most especially, in resource limited centers. This study explored the barriers to effective wound care practices in Obafemi Awolowo University Teaching Hospitals Complex, (OAUTHC) Ile-Ife. Findings from this study revealed some barriers to wound care practice. They are: financial constraint, non-compliance / poor adherence with clinic appointments and medical regimen, shortage of staff, lack of opportunity for further training, non-availability of material resources, poor structural design and inadequate equipment.*

**Keywords:** Barriers to Nurses, Prevalence of Wound, Wound Care Practices, Wound Healing

**Article History:** Received: 12 June 2023; Accepted: 20 June 2023; Published/Available Online: 30 June 2023;

### Introduction

Wound accounted for 17.2 million hospital visits in the United States, including ambulatory/outpatient and inpatient surgical visits (Steiner et.al, 2014). It is one of the major reasons for clients' visits to the hospital. Wounds affect every area of a patient's life; it affects the patient's self-esteem, disrupting the family process, causes a burden on medical insurance, absence on duty, and depression (Oliverio et al., 2016). Wound has remained a goldmine in research because of its relatively high prevalence and multiplicity of its causes. For instance, World Health Organization (WHO) established that, about 20 to 50 million more people suffer non-fatal injuries, with resultant disability (WHO, 2015). This is further substantiated by Onyemaechi and Ofoma (2016) study that road traffic accident with its associated wound is the most reported death of trauma in Nigeria.

In spite of the prevalence of wound, wound healing still remains a challenge to many practitioners regardless of the remarkable progress and advancement that the speciality has witnessed in the past few decades (Mccluskey & Mccarthy, 2017). Clinicians irrespective of a professional discipline or work experience are confronted with some barriers to the implementation of best practices. Many barriers exist, hindering effective wound care practice. This is ranging from patient, organization, and technical know-how or inexperience of the clinicians about current trends in wound care practices. While it is necessary for nurses to discover aberration in wound progress in order to avert complications, by making prompt intervention based on assessment needs that are informed by current clinical guidelines (Wilson, 2012); inadequate knowledge of assessment could be a limiting factor.

To enhance knowledge, it is reasonable to pinpoint and anticipate possible factors that can enhance or impede understanding (Gillespie *et al.*, 2014). Many factors have been identified as causes of delayed wound healing or barriers to effective performance. These are: clinical; psychosocial; organisational; and educational. This infers that it is not enough to focus only on the clinical factors that could cause delayed wound healing but also bear in mind other factors as mentioned; unless this is addressed, the implementation of best wound care practice may be a mirage.

The main aim of wound care is to promote wound healing and restoration of injured or damaged tissue; which the patients and the health care professionals wish to achieve as quickly as possible within the shortest possible time. In some instances, majorly in acute wounds, this goal is achieved. Acute wounds progress

through the healing phases in an orderly, progressive, and predictable manner (Powers *et al.*, 2016). Though, the type and rate of wound healing are always influenced by many factors. This includes the aetiology of the wound, severity of the injury, the location or site of the injury, the capacity of the tissue to regenerate, and patient characteristics (Bryant & Nix, 2015). Whereas, in chronic wounds, this may be unachievable, due to a variety of reasons causing the delay in the complete closure of the wound. This could be attributed to some factors; health system and individual factors (Mullan *et al.*, 2020), arterial insufficiency, systemic disease, and the effects of ageing or other barriers.

Regardless of the cause, it is desirable that most wound should heal by primary intention and preferably over a short time. However, there has been reported cases of delay in wound healing, an increase in the incidence and prevalence of chronic wound and surgical wound infections over the years (Gillespie *et al.*, 2014; Schmid *et al.*, 2018).

Though, there may have been recorded improvement in wound care practices in terms of technology, wound products, but yet, wound care still remains a challenge to many clinicians irrespective of their professional specialty, or work experience (Mccluskey & Mccarthy, 2017). It is however clear that the lack of suitable wound care quality measures threatens the survival of wound care practitioners, their services and therefore must be urgently addressed (Snyder *et al.*, 2016).

Notably, nurses play a key and central role in wound management (Najm & Hussein, 2018) and they constitute a majority among health care workers that deal with wounds (Ethel Althea Andrews, 2015). It is necessary to review the challenges faced by nurses who are actively involved in wound care. Part of challenges identified is, but not limited to the deficiency in nurses' knowledge of contemporary wound care practice (Adejumo & Ilesanmi, 2016; Ogunfowokan *et al.*, [2016]), and if knowledge is extant, it is not replicated in clinical practice (Mccluskey & Mccarthy, 2017). More so, study revealed wide variations between knowledge and wound care practices among nurses (Gillespie *et al.*, 2014; Mccluskey & Mccarthy, 2017). Whereas, clients' expectations of the degree of expertise and a demonstration of up-to-date knowledge in wound care practice are often high.

Meanwhile it is necessary to investigate on the challenges and barriers to effective wound care practices in order to improve the quality of wound care practice by nurses, which if it is mitigated could hasten wound healing and patients' restoration through correct diagnosis and quality wound care service delivery.

Essentially, the choice of dressing materials and treatment plans is centred on the level of knowledge, adequate scientific evidence and availability of appropriate facilities or resources to practice. It is therefore reasonable to believe that the wound outcome would be greatly influenced by nurses' knowledge and the barriers encounter during wound care practices; this is in view of the fact that wound care is much of nurses' responsibility in the clinical and community settings (Najm & Hussein, 2018). Though, there has not been any specialized training on wound care in Nigeria except for specialty like Burn and Plastic. Nonetheless, all nurses possess basic knowledge of wound care and attend to different degree of wounds. It therefore means that investigation into barriers to the effective wound care practice from nurses is pertinent for better outcome (Gillespie & Fenwick 2009).

In view of the evidence surrounding wound management, the study aimed to investigate the barriers to nurses' wound care practice in a resource-limited country like Nigeria. This is with a view to identify barrier(s) to effective wound care practice to improve the outcome of wound care in Nigeria.

## Methods

The study employed a qualitative method research design. This study collected qualitative data using key informant interview guide approach. The Data obtained from the interview were manually sorted, transcribed, categorized, and analysed thematically using Nvivo. The study was conducted in the Ife Hospital Unit of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State. The Ife Hospital Unit (IHU) is the biggest of all the facilities and the administrative headquarter of the hospital. Institutional approval was obtained for the study. The target population was nurses (N-288); particularly those working in the surgical wards, Outpatient Clinics, and the Wound Care Unit of the hospital. This population was purposively selected since each of these categories and cadres of nurses in these units/wards are actively involved in wound management; this attribute justifies the choice of the population for this study. Twelve

(12) information-rich key informants (after saturation) were interviewed; which cut across the designations. The instruments used for data collection was a self-developed Key Informant Interview (KII) guide to explore barriers to effective wound care practice in OAUTHC, Nigeria from the information-rich sources among the nurses. These comprised of nurses' wound care practices, assessment skills, improvement in wound management, success stories and various structural/institutional factors impeding best wound care practice.

### Data Analysis

Each participant was assigned a pseudonym (Key Informant- KI) to ensure confidentiality, their verbatim transcript being produced within 24 hours of the interview session while the information was still fresh in the mind of the researchers. Data obtained from the interview were manually sorted, transcribed, categorized, and analysed thematically.



### Ethical Consideration

In line with adhering to the ethical guidelines that guide the conduct of research, this study sought ethical clearance from appropriate bodies involved. Permission to conduct this study was obtained from the Research Ethics Committee at Obafemi Awolowo University Teaching Hospitals, Ile Ife, Nigeria. Consent was obtained from potential participants. Confidentiality was ensured by assigning study numbers to participants rather than their personal identifying details; the purpose of the study, the potential benefits, and possible risks (no risk) associated with participation were explained to them.

### Credibility

This is made possible through multiple data collections, validation of the respondents' responses. In addition, data was collected from nurses across designations. This helps in capturing the different perspectives of reality. This also helps to generate ample information, and engender the authentication of the information gathered.

### Conformability

This indicates the extent to which the research findings are free from the researcher's biases but corroborated/supported by the data collected. Conformability was ensured in this study partly by its use of multiple sources of data collection; validations of respondents responses and debriefing; the recording and verbatim transcription of the interview.

### Findings

The study investigated the barriers to effective wound care practices among the nurses in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun state.

**Table 1: Description of Key Informants**

Demographic Variable	Frequency ( n = 12)
Age in years (Mean age – 35.1yrs)	
20 – 30	4
30 – 40	2
40 – 50	3
50 – 60	3
Sex/Gender	
Male	4
Female	8
Highest Educational Attainment	
Diploma Certificate	4
1 <sup>st</sup> Degree in Nursing or Nursing-Related Course	8
Designation/Position	
Nursing Officer	5
Senior Nursing Officer	2
Chief Nursing Officer	2
Assistant Director of Nursing Service	2

Deputy Director of Nursing Service	1
Years of Experience	
1 – 10	7
11 – 20	2
21 – 30	3
Ward/Unit of Work	
Burn Unit	1
Plastic Unit	1
Orthopaedic Wards	2
Surgical Wards	2
Wound Clinic	1
Wound Centre	2
GOPD	1
Medical Wards	1
Post-Natal	1

Table 1 presents the description of the key informants' demographics. As depicted on the table, a total of 12 purposively selected individuals who have been working in the hospital for 10 years and above formed the sample. The mean age of the participants was 35.1 years. There were 4 males and 8 females. The participants' work experience ranged from 6 to 27 years with a mean of 10.5 years. A majority (8) holds a Bachelor's degree in Nursing or Nursing-Related courses. All the key informants with exception of three (3), holding administrative positions are actively involved in the care of patients with wounds. It should be noted that the aforementioned three nurses in the administrative cadre had been actively involved in wound care practice until their promotion to the directorate cadre Their selection was with a view to recruiting nurses who are vast in the field of wound care.

The result of the interview conducted established some barriers to the implementation of effective wound care practice among the nurses. The themes generated from respondents' submissions are highlighted below.

### Nurses' Reported Barriers to Wound Care Practices

Factors that constitute barriers to wound care are multi-dimensional. They range from patient/client related factors to facility related factors. Prominent among these factors as revealed by interviewees are: financial constraint, lack of facilities, lack of opportunity for advanced/further training on wound care, disproportionate staff/patient ratio, non-availability of material resources such as modern wound dressing agents and non-compliance or poor adherence with clinic appointment among others. These are categorized into two major themes and the sub-themes

Theme 1: Patients' Related Factors

Sub theme 1: Financial Constraint

Sub theme 2: Non-compliance / Poor Adherence with Clinic Appointments and Medical Regimen

Theme 2: Hospital's or Facility's Factors

Sub theme 1: Shortage of Staff

Sub theme 2: Lack of Opportunity for Further Training

Sub theme 3: Non-availability of Material Resources

Sub theme 4: Poor Structural Design and Inadequate Equipment

#### Theme 1: Patients' Related Factors

##### *Sub theme 1: Financial Constraint*

Financial constraint on the part of the patient took the lead among the listed barriers; this is according to the participants' views; the excerpt below represents participants' views:

*One of the major barriers to effective wound management is financial constraints. What else do you expect when the patient cannot procure the necessary materials for her wound dressing? Poor outcome of course as daily dressing regimen may turn to every other day [KI 9].*

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**Sub theme 2: Non-compliance / Poor Adherence with Clinic Appointments and Medical Regimen**

The issue of non-compliance again readily stands out as another barrier to wound care practices in the study setting. In response to the quiz on what barrier(s) to effective wound management they have ever come across in the course of their practice in the study setting, participants were unequivocal on the challenge that the failure of clients to comply with follow-up appointments following discharge from the hospital poses threat to wound care practices. The outburst below credited to one of the participants corroborates this:

*The issue of poor adherence is really a serious problem. It's like some patients just enjoy flagrantly disobeying our directives and treatment regimen. When you ask some patients to come on Sunday for their own sake, they won't come, under the pretence of going to church while we wait endlessly for them here. This poor compliance can delay wound healing and the outcome of care [KI 3].*

**Theme 2: Hospital's or Facility's Factors**

**Sub theme 1: Shortage of Staff**

The shortage of nurses constitutes yet another challenge. When the staff/patient ratio becomes a mismatch, the aftermath is usually excessive workload, stress, and burnout with the resultant negative effect on the quality of wound care. The participants' comments below attest to this fact:

*We are really short -staffed here and there is no way 2 people can do the work of 4 individuals without overexerting themselves. A possible challenge with such is that when one is stressed up, one is prone to making mistakes. Take for instance; we are just covering the Wound Centre this week. You can imagine how stressful it could be for two nurses to attend to over 40 patients with different categories of wounds per day, hence the possible negative effect on the quality of care [KI 11].*

*Shortage of manpower has caused an increase in workload for nurses and this is really affecting our efficiency [KI 6].*

**Sub theme 2: Lack of Opportunity for Further Training**

Many of the participants reported a lack of exposure to further training and updates on wound care. This according to them debars them from keeping terms with developments and advancements in wound management. This is exemplified by participants' comments like:

*No one gets better at doing anything without updating himself or herself. The issue of wound care is no exemption. Since I joined this institution, I have not been opportune to undergo any update course, workshop, or conference on wound management; hence the relative lack of awareness of current development in the field of wound care that pervades among nurses [KI 6].*

*I think the dearth of specialists like burn and plastic nurses constitutes a hindrance to best practices in wound management in our setting. To my mind, these are individuals who can bring their professional knowledge and skill to bear on wound care with marked improvement [KI 3].*

**Sub theme 3: Non-availability of Material Resources**

The non-availability of modern dressing agents was equally reported by participants as one of the challenges of wound care practices. It should be noted that many of these modern products are not produced locally, meaning that they are usually imported. So they are likely to be affected by the forces of demands and supply, fluctuations in foreign exchange with the devaluation of the naira, and economic recession. The point that is being made is that they are not always readily available, even when the patient can afford their cost. The excerpt of participant's comment below reinforces this line of thought.

*We sometimes find ourselves in situations where the patient had sufficient funds, but the recommended product is not available or out of the market. And sometimes the available substitute may not be as good and as effective for such wounds [KI 12].*

**Sub theme 4: Poor Structural Design and Inadequate Equipment**

Further analysis of the interview transcript revealed the duo of poor structural design and inadequate equipment as an added barrier to wound care practices in the research setting. The majority of the participants complained of a lack of equipment and structural designs which are not fit for the care. The statement below which readily stands as a common slogan among the participants aptly attest to this:

*The lack of appropriate dressing instruments is one of the challenges we are encountering. For instance, materials like forceps, trolleys are not enough. Besides, the environment, in terms of structural design is not conducive for wound dressing [KI 6].*

## Discussion

The study revealed some barriers to nurses' wound care practices in the study setting. These barriers as reported in their order of frequency were: financial constraint on the part of the patients; lack of facilities which the nurses reported often forced them to improvise; non availability of training updates in wound care; inadequate staff strength; and treatment default by clients. The lack of training identified in this study corroborates Huff's (2011) report that nurses tend to perceive their undergraduate education as lacking depth in multiple components which are required to provide adequate wound care. Zarchi *et al.* (2014) assert that the information found in the textbooks is sparse and out-dated gave credence to the Huff's (2011) assertion. In the same vein, Prática *et al.* (2016) reasoned that the gap between teaching and service may be affecting the nursing training process at the undergraduate level since the majority of their respondents reported insufficient information on the care of wounds.

Again, the lack of adequate equipment for wound care established by this study stands as another hurdle to best wound care practice. Gjødsbøl *et al.* (2012) found that diagnostic materials that are vital to wound treatment were not readily available in most of the health establishments. Lee (2019), Liu *et al.* (2018), Sillero and Zabalegui (2018) submissions that some factors in the work environment can negatively impact the activities of employees also strengthens this finding.

Inadequate staff strength that had become a perennial feature of the Nigerian health sector was another barrier identified by this study. In the words of Adeloye *et al.*, (2017), this is a challenge that must be resolved in order to salvage the sector from suboptimal functioning. Oyibo (2015) noted that the quality nursing care is determined by having adequate numbers and a quality nursing workforce. Other empirical studies (Lee, 2019; Rauta, 2019) had equally shown a significant association between inadequate staffing or shortage of staff and excessive workload, burnout/stress, with resultant negative effect on productivity and quality of care. One cannot but agree with Sillero and Zabalegui (2018) then that providing necessary resources (manpower, funds and materials) plus good management skills will go a long way in improving wound care practice.

## Conclusion

The study identified some barriers to effective wound care practices. These are the challenges that need to be addressed in order to improve the quality of care, enhance prompt wound healing and prompt patient recovery, and care satisfactions. The barriers identified are: Patients' Related Factors as financial constraint and non-compliance / poor adherence with clinic appointments and medical regimen. While hospital's or facility's factors are shortage of staff, lack of opportunity for further training, non-availability of material resources, poor structural design and inadequate equipments topped the list of barriers to best wound care practice among the nurses.

## Relevance to Clinical Practice

The main aim of wound care is to promote wound healing and restoration of injured or damaged tissue; which the patients and the health care professionals wish to achieve as quickly as possible within the shortest possible time. Meanwhile, it is crucial to identify the barriers that are mitigating against effective wound care practices to attain standard wound care practice that is devoid of errors and improve the quality of care.

## Limitation of the Study

Although the generalizability of the study was thought to be limited due to the purposive sampling technique but maximum variation sampling method was adopted. The study is however considered applicable being involving the information-rich key informants foundational in the area of wound care in the study setting.

## Acknowledgements

I appreciate the management of Obafemi Awolowo University Teaching Hospitals Complex for granting the approval for the study and thank the nurses for their willingness to participate in the study.

**Conflict of Interest:** There is no conflict of interest

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