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TABLE OF CONTENTS

INFLUENCE OF NURSING TRAINING ON THEIR COMPETENCY IN SELECTING WOUND DRESSING MATERIALS AT A SECONDARY HEALTH FACILITY IN ILORIN, KWARA STATE, NIGERIA

OYELEYE, D.I.; ALIYU, F. T.; AYANDOKUN, A. T.; LONGE, O. O.; FATUKASI, O. A.; DERE, B. N. & OYELEYE, O. E.

ABSTRACT

Wound care is a critical aspect of patient management across all demographics and specialties. It is imperative that wound care meets high standards regardless of the wound's etiology or care setting. This study evaluates the impact of a training program on nurses' competency in selecting wound dressing materials at a secondary health facility in Nigeria. A pre-post quasi-experimental design was used. Nurses at General Hospital, Ilorin, Kwara State, were surveyed using a structured questionnaire before and after a two-day training program. The sample size of 157 was determined using Taro Yamane's formula. Data were analyzed using frequencies, tables and percentages. Pearson Correlation Test and ANOVA to assess changes in knowledge and competency. This study noted that in the demographic characteristics of respondents' majority are within the ages of 26 to 35years (44.6%), females (66.9%), Yoruba (63.7%) and are Christians (52.2%). Also, majority of respondents are married (70.1%), Diploma (53.5%) and 3-8years, 9-14 years (25.5%). This study reveals that during pre -intervention stage, 28.7% of respondents are knowledgeable while 71.3% are not. While during Post-intervention, 32.5% of respondents are knowledgeable and 67.5% are not. This study noted that there is a significant difference between Nurses' competency in wound dressing materials (P= 0.015) and the level compliance of respondents in wound dressing is high (86.6%) post intervention. Two hypotheses were tested and result indicates that there is a significant relationship between age (P= 0.008), education (P=0.001), Years of Experience (P=0.011), and compliance with wound management post intervention. Secondly, there is a significant relationship between age (P= 0.001), education (P=0.003) and compliance with wound dressing materials. In conclusion, the training program significantly improved nurses' knowledge and competency in wound management. Despite the improvement, a substantial portion of respondents still had poor knowledge, indicating a need for continued education and training. Although, the findings underscore the importance of continuous education and training to enhance wound care practices and ensure adherence to best practices. Further research is needed to explore long-term impacts and potential improvements in wound care outcomes.

Keywords: Training; Nurses Competency; Wound Dressing Materials; Health Facility

INTRODUCTION

Wound care affects all patients from neonates to the elderly encompassing all specialties. The best practice statement, Optimizing Wound Care, states that 'any patient with a wound has a right to expect a good minimum standard of care regardless of the etiology of their wound, where the care is delivered or by whom' (Mccluskey & 11Mccarthy, 2012). Therefore, clinicians who care for patients with wounds are responsible for ensuring that their practice is of the highest standard. According to Gonzalez (2018), an open wound is an injury involving an external or internal break in body tissue, usually involving the skin. Almost all individuals will experience an open wound at some point in their life, most open wounds are minor falls, accidents with sharp objects, and car accidents are the most common causes of open wounds. In 2015, up to 50 million people worldwide incurred injuries because of road traffic crashes resulting in additional indirect health consequences associated with this growing epidemic (World Health Organization, 2015). Inadequate or inappropriate treatment of injuries can threaten

individual health. Injuries contribute to approximately 10% of mortality and 12% of morbidity worldwide (Ya-Ting *et al.,* 2020).

Wound healing is a complex and dynamic process of replacing devitalized and missing cellular structures and tissue layers (Sorg *et al,* 2017). The human adult wound healing process can be divided into 3 or 4 distinct phases. Formally it was categorized into 3 phases—inflammatory, fibroblastic, and maturation, which has also been denoted as inflammatory, proliferation, and remodelling, in the 4-phases concept, there are the haemostasis phase, the inflammatory phase, the proliferation phase, and the remodelling phase. In the 3-phases approach, the haemostasis phase is contained within the inflammatory phase (Mercandetti, 2021). According to Okur *et al.,* (2020), wound healing is an unmet therapeutic challenge among medical society since wound assessment and management is a complex procedure, including numerous factors playing major role in process of its healing, wounds can mainly be categorized as acute or chronic. Fourie (2013) contended that most health practitioners received little or no training in the care and management of wounds. Similarly, Villa (2013) found that there is a great lack of knowledge among health care professionals regarding wet to dry dressing, and modern wound modalities. This report is corroborated by Challarambus and Challarambus (2013) who reported that younger nurses (between 20–30 years) had better knowledge of modern wound dressing than the older nurses. Nonetheless, the nurses' confidence in their ability to undertake appropriate wound management has been reported to be affected by their knowledge and this knowledge has been associated with the practice of modern wound dressing (Ogunfowokan *et al.,* 2016).

Mccluskey and Mccarthy (2012) asserted that competence gained through education, training and knowledge, can be associated with increased knowledge, and knowledge is considered to be one of the most influential aspects impacting performance. Knowledge and the retention of that knowledge is essential to emerging competent healthcare and there is some evidence to support this. Several studies have shown that training and education have a positive impact on self-reported levels of competence (Selman *et al.,* 2016; Zieber & Sedgewick, 2018), exemplifying the importance of training and education in developing these skills. The lack of basic wound management knowledge can lead to wound mismanagement, resulting in unnecessary costs and the drainage of health care resources (Ogunfowokan*et al.,* 2016). Despite the poor understanding of the concept of moist wound management, Zeng (2018) reiterated that moist wound care remains a gold standard in wound management. Clinicians have also accepted the concept of moist wound healing and moisture balance dressing in wound management, but wet-to-dry gauze remains a popular dressing with healthcare providers (Shah, 2011). However, the knowledge that nurses have about modern wound dressing could also influence their perception of its use (Challarambus & Challarambus, 2013), consequently promoting or deterring the effective use of modern wound dressing materials. Thus, the current study focuses on influence of training on nurses' competency in selecting wound dressing materials at a secondary health facility in Nigeria.

Objectives of the Study

1. To assess if respondents pre intervention knowledge in selecting wound dressing materials at a secondary health facility in Nigeria.
2. To determine the respondents pre intervention level of competency in selecting wound dressing materials at a secondary health facility in Nigeria.
3. To assess if respondents post intervention knowledge in selecting wound dressing materials at a secondary health facility in Nigeria.
4. To determine the respondents post intervention level of competency in selecting wound dressing materials at a

secondary health facility in Nigeria.

5. To evaluate the effect of training on nurses' competency in selecting wound dressing materials at a secondary health facility in Nigeria.

METHODOLOGY

Study Design: The study employs a pre-post quasi-experimental design.

Target Population: Population of professional nurses at General Hospital, Ilorin.

Inclusion and Exclusion Criteria

Inclusion Criteria:

- Nurses employed at General Hospital, Ilorin.
- Nurses who have consented to participate in the study.

Exclusion Criteria:

- Nurses not employed at General Hospital, Ilorin.
- Nurses who did not consent to participate in the study.

Sample Size Determination: Taro Yamane's formula was used to determine a representative sample size of 157 nurses from the population of professional nurses at General Hospital, Ilorin.

Sampling Technique: A simple random sampling technique was employed to select nurses who met the inclusion criteria and were willing to participate in the study.

Method of Data Collection

Data were collected using a self-developed questionnaire administered pre- and post-training to assess nurses' baseline and post-intervention knowledge and competency in selecting wound dressing materials.

Instrument for Data Collection

The instrument include the teaching implementation guide and a structured questionnaire designed to measure nurses' knowledge and competency in wound dressing materials. The questionnaire was validated through expert feedback and a pilot study involving 11 participants. Test retest was done with a reliability score of 0.79.

Data Collection Phases

1. **Pre-Intervention Visit:**
   - Administration of a baseline questionnaire to assess the nurses' initial knowledge and competency in selecting wound dressing materials.
2. **Post-Intervention Visit:**
   - Administration of a post-training questionnaire to evaluate changes in nurses' knowledge and competency following the training program.

Data Collection Procedure

1. **Pre-Intervention:**
   - Nurses were given a self-structured pre-training questionnaire to assess their baseline knowledge and competency in wound dressing materials.
2. **Intervention Program:**
   - A two-day training program was conducted, focusing on both theoretical and practical aspects of wound management.
     - **Theoretical sessions:** Covered principles of wound healing, factors influencing dressing selection, and types of dressing materials.
     - **Practical sessions:** Included clinical scenarios, active participation in material selection, and demonstrations.
3. **Post-Intervention:**
   - Nurses were given a post-training questionnaire to assess the impact of the training program on their knowledge and competency in selecting wound dressing materials.

Data Analysis: The variance between pre and post-test samples is calculated using the formula $S^2=\Sigma(-)^2/ -1$. Bivariate statistical tests include the Pearson Correlation Test (r) for hypotheses testing and Analysis of Variance (ANOVA) to compare mean differences between experimental and control groups.

The Pearson Correlation Test assesses the correlation between pre and post-test results in the experimental group (H1) and between experimental and control groups regarding knowledge and competency (H0). A critical r value of 0.754 is used to determine statistical significance. If calculated r > critical r, H1 is accepted; if calculated r < critical r, H0 is rejected.

ANOVA analysis in IBM SPSS Statistics compares response variations between experiment and control groups for each question.

Ethical Considerations: Ethical considerations are upheld, with approval from the Ethics and Research Committee of Kwara State Ministry of Health. Participants are fully informed, consent is obtained, and assurances of confidentiality, anonymity, and the right to withdraw are provided. Administrative approval is obtained, and nurses' written consent is secured, ensuring confidentiality and the right to withdraw from the study.

RESULTS

Table 1 provides a comprehensive overview of the socio-demographic characteristics of respondents, presenting data from both pre- and post-intervention phases.

The age distribution of respondents shows a relatively balanced spread across different age groups. The largest proportion is within the 26-35 age bracket, which accounts for 44.6% of the total sample. This is followed by the 36-45 age group at 36.3%. Notably, the percentage of younger respondents (≤ 25 years) increased slightly from 9.6%. Gender distribution reveals a higher representation of females, constituting 66.1% and male 33.1%. Ethnic composition is predominantly Yoruba, making up 63.7% of the total sample, Igbo 11.5% Nupe 15.9%, Hausa 5.7% and others 3.2%. Religious affiliation that the proportion of respondents identifying as Muslim increased from 47.8%, while the percentage identifying as Christian is 52.2%. In terms of marital status, the majority of respondents were married, with a slight increase from 70.1%. The percentage of single respondents is 19.1% and the divorced category is 10.8%. Educationally, the respondents with a diploma is 53.5%, while those with BNSc is 26.1% and MSc 20.4%. Finally, years of experience in the field showed that Less than 3 years is 17.8%, 3-8years is 25.5%, 9-14 years is 25.5%, 15-20 years is 21.7% and 21 and above is 9.6%. This study noted that in the demographic characteristics of respondents' majority are within the ages of 26 to 35years (44.6%), females (66.9%), Yoruba (63.7%) and are Christians (52.2%). Also, majority of respondents are married (70.1%), Diploma (53.5%) and 3-8years, 9-14 years (25.5%)

Table 1: Socio-Demographic Characteristics of Respondents N= 157

Variables	Frequencies	Percentages
Age Group		
..	15	9.6
26 – 35	70	44.6
36 – 45	57	36.3
Over 45 years	15	9.6
Total	157	100
Gender		
Male	52	33.1
Female	105	66.9
Total	157	100
Ethnicity		
Yoruba	100	63.7
Igbo	18	11.5
Nupe	25	15.9
Hausa	9	5.7
Others	5	3.2
Total	157	100
Religion		
Islam	75	47.8
Christianity	82	52.2
Total	157	100
Marital Status		
Single	30	19.1
Married	110	70.1
Divorced	17	10.8
Total	157	100
Educational Status		
Diploma	8 4	53.5
BNSc	41	26.1
MSc	32	20.4
Total	157	100
Years of Experience		
Less than 3 years	28	17.8
3-8years	40	25.5
9-14 years	40	25.5
15-20 years	34	21.7
21 and above	15	9.6
Total	157	100

Table 2 provides insights into wound management knowledge before and after an intervention among 157 respondents. Prior to the intervention, 44.6% had wound management training, which decreased slightly to 42.0% post-intervention. Similarly, 61.2% reported having updated knowledge in the last two years, with 38.8% lacking recent updates. Weekly wound treatment practices were diverse, with 59.8% treating 6-10 wounds, and 21.0% treating fewer than 5. Information sources showed that 37.6% relied on specialist nurses, while others used personal knowledge or guidelines equally (24.2%).

Regarding types of wounds requiring dressing, there was high recognition of burns (88.5%), pressure ulcers (81.5%), and surgical wounds (100%). Knowledge of necrotic and minor injuries was also strong (92.3% and 92.9%, respectively). However, gunshot wounds were correctly identified by 100% both pre- and post-intervention, indicating robust awareness in this area. Overall, the intervention improved knowledge and consistency in wound management practices.

Table 2a: Knowledge of Wound Management

Variables	Pre-intervention (%)	Post Intervention (%)	Total (%)
Have you embarked on wound management training?			
Yes	70 (44.6)	66 (42.0)	136 (86.6)
No	15 (9.6)	6 (3.8)	21 (13.4)
Do you have an updated knowledge in the last two years on wound management?			
Yes	45 (28.7)	51 (32.5)	96 (61.2)
No	33 (21.0)	28 (17.8)	61 (38.8)
Wound treated per week			
<5	20 (12.7)	13 (8.3)	33 (21.0)
6-10	44 (28.0)	50 (31.8)	94 (59.8)
11 or more	14 (8.9)	16 (10.2)	30 (19.1)
Source of information on wound management			
Specialist Nurse	30 (19.1)	29 (18.5)	59 (37.6)
2Surgeon/physician	8 (5.1)	7 (4.5)	15 (9.6)
Own knowledge	19 (12.1)	19 (12.1)	38 (24.2)
Guidelines	19 (12.1)	19 (12.1)	38 (24.2)
Local procedure book	2 (1.3)	5 (3.2)	7 (4.5)
The followings are the types of wound that require dressing			
• Burns			
Yes	70 (44.6)	69 (43.9)	139 (88.5)
No	8 (5.1)	10 (6.4)	18 (11.5)

• Pressure Ulcer			
Yes	65 (41.4)	63 (40.1)	128 (81.5)
No	13 (8.3)	16 (10.2)	29 (18.5)
• Surgical wounds			
Yes	78 (49.7)	79 (50.3)	157 (100.0)
No	-	-	-
• Necrotic dressing e.g. Diabetic foot			
Yes	74 (47.1)	71 (45.2)	145 (92.3)
No	11 (7.0)	1 (0.6)	12 (7.7)
• Minor injuries such as gazes, cuts			
Yes	77 (49.0)	69 (43.9)	146 (92.9)
No	11 (7.0)	0 (0.0)	11 (7.1)
• Gunshot wounds			
Yes	78 (49.7)	79 (50.3)	157(100.0)
No	-	-	-

Table 2b illustrates the distribution of respondents' knowledge on wound management before and after an intervention. Pre-intervention, 28.7% of respondents are knowledgeable while 71.3% were categorized are not knowledgeable. Post-intervention, there was an improvement with 32.5% of respondents knowledgeable, a 3.8% increase, and a corresponding decrease in knowledge to 67.5%. This suggests that the intervention positively impacted respondents' knowledge, enhancing their understanding of wound management. Despite the improvement, a substantial portion of respondents still had poor knowledge, indicating a need for continued education and training. This study observed that during pre -intervention stage, 28.7% of respondents are knowledgeable while 71.3% are not. While during post-intervention, 32.5% of respondents are knowledgeable and 67.5% are not.

Table 2b: Overall Knowledge Grade of Respondents on Wound Management

Knowledge Grade	Pre-Intervention	Post-Intervention
Knowledgeable	45 (28.7)	51 (32.5)
Not Knowledgeable	112 (71.3)	106 (67.5)
Total	157 (100)	157 (100)

Table 3 presents the competency levels of nurses in wound dressing materials both before and after an intervention, highlighting notable improvements across various areas. Post-intervention, the majority of nurses demonstrated significant gains in communication skills, with those showing very high competence rising from 45.2% to 67.5% (χ^2=16.83, p=0.002). Similarly, competencies in giving health instructions saw a substantial increase, with very high competence growing from 33.1% to 24.8% (χ^2=44.59, p<0.001). Identifying wound care problems also improved, though the change was less dramatic, from 4.5% to 10.2% for very high competence (χ^2=16.70, p=0.002). Assessing patients and wounds saw the most marked enhancement, with very high competence escalating from 44.6% to 72.0% (χ^2=29.11, p<0.001). However, changes in competence for changing dressings were not statistically significant (χ^2=8.72, p=0.068). This study reveals that there is a significant difference between Nurses' competency in wound dressing materials (P= 0.015) post intervention.

Table 3: Nurses' Competency in Wound Dressing Materials

Competence	Very Low Competence	Low Competence	Medium Competence	High Competence	Very High Competence	χ^2	p-value
Communication skills (Pre)	15 (9.6%)	10 (6.4%)	15 (9.6%)	45 (28.7%)	71 (45.2%)		
Communication skills (Post)	8 (5.1%)	9 (5.7%)	11 (7.0%)	23 (14.6%)	106 (67.5%)	16.83	0.002
Changing dressings based on the procedure (Pre)	10 (6.4%)	10 (6.4%)	15 (9.6%)	50 (31.8%)	72 (45.9%)		
Changing dressings based on the procedure (Post)	5 (3.2%)	6 (3.8%)	10 (6.4%)	39 (24.8%)	97 (61.8%)	8.72	0.068
Giving health instructions (Pre)	15 (9.6%)	15 (9.6%)	25 (15.9%)	50 (31.8%)	52 (33.1%)		
Giving health instructions (Post)	2 (1.3%)	3 (1.9%)	10 (6.4%)	103 (39.0%)	39 (24.8%)	44.59	< 0.001
Identifying wound care problems (Pre)	100 (63.7%)	30 (19.1%)	10 (6.4%)	10 (6.4%)	7 (4.5%)		
Identifying wound care problems (Post)	96 (61.1%)	40 (25.5%)	-	5 (3.2%)	16 (10.2%)	16.70	0.002
Assessing patients and wounds (Pre)	10 (6.4%)	10 (6.4%)	15 (9.6%)	52 (33.1%)	70 (44.6%)		
Assessing patients and wounds (Post)	1 (0.6%)	2 (1.3%)	10 (6.4%)	31 (19.7%)	113 (72.0%)	29.11	< 0.001
							0.015

Table 4 illustrates the impact of an intervention on nurses' compliance in wound dressing. Before the intervention, 104 respondents (66.2%) were compliant with wound dressing standards, while 53 respondents (33.8%) were non-compliant. Post-intervention, the number of compliant respondents increased significantly to 136 (86.6%), demonstrating a marked improvement. Consequently, the number of non-compliant respondents decreased to 21 (13.4%). This data indicates that the intervention effectively enhanced nurses' competencies in wound dressing, resulting in a higher overall compliance rate. The substantial increase in the compliance percentage from 66.2% to 86.6% suggests that the training or educational measures implemented had a positive influence on the nurses' ability to perform wound dressing tasks according to established standards. The reduction in non-compliance further supports the effectiveness of the intervention in addressing gaps in nurses' skills and knowledge related to wound care. This study indicates that the level compliance of respondents in wound dressing is high (86.6%) post intervention.

Table 4: Overall Level of Compliance of Respondents in Wound Dressing

Compliance Grade	Pre-Intervention	Post-Intervention
Compliance	104(66.2)	136(86.6)
Non-Compliance	53(33.8)	21(13.4)
Total	157 (100)	157 (100)

Table 5 shows chi-square ($\chi 2$) statistics and p-values for several variables comparing pre- and post-intervention outcomes. For gender, there is no significant change ($\chi 2=0.442, p=0.505$ pre-intervention; $\chi 2=1.252, p=0.343$ post-intervention). Age group shows a significant shift post-intervention ($\chi 2=39.073, p=0.008$), indicating differences in compliance levels. Marital status and educational level also show significant changes ($\chi 2=14.236$, $p=0.001$ and $\chi 2=32.846$, $p=0.001$, respectively), suggesting notable effects of the intervention. Years of experience shows a significant result post-intervention ($\chi 2=2.825$, $p=0.011$), while ethnicity does not ($\chi 2=2.886$, $p=0.775$). This study reveals that there is a significant relationship between age ($P= 0.008$), education ($P=0.001$), Years of Experience ($P=0.011$), and compliance with wound management post intervention.

Table 5: Association between Socio-Demographic Variables and Knowledge of Wound Management

	Pre-Intervention					Post-Intervention				
Variables	Non-compliance (%)	Compliance (%)	Total (%)	χ2	p-value	Poor (%)	Good %)	Total (%)	χ2	p-value
Gender				0.442	0.505				1.252	0.343
Male	20 (12.7)	32 (20.4)	52 (33.1)			31 (75.3)	20 (24.7)	51(51.6)		
Female	35 (22.3)	70 (44.6)	105 (66.9)			32 (42.1)	44 (57.9)	108 (7 (76.4)		
Age Group (years)				4.123	0.251				39.073	0.008
≤ 25	5 (3.2)	10 (6.4)	15 (9.6)			12 (60.0)	8(35.2)	20(12.7)		
26 – 35	25 (15.9)	45 (28.7)	70 (44.6)			48 (70.6)	20 (29.4)	68(43.3)		
36 – 45	15 (9.6)	42 (26.8)	57 (36.3)			46 (92.2)	10 (7.8)	56 (35.7)		
Over 45 years	10 (6.4)	5 (3.2)	15 (9.6)			10 (76.9)	3 (23.1)	13 (8.3)		
Marital Status				14.236	0.001				2.846	0.549
Single	15 (9.6)	15 (9.6)	30(19.1)			18 (62.1)	11 (37.9)	29(18.2)		
Married	60 (38.2)	50 (31.8)	110 (70.1)			67 (58.3)	48 (41.7)	115 (73.2)		
Divorced / Separated	10 (6.4)	7 (4.5)	17 (10.8)			5 (38.5)	8 (61.5)	13(8.3)		
Educational Level				1.862	0.394				32.846	0.001
Diploma	30 (19.1)	38 (24.2)	68 (43.3)			74 (58.9)	23 (41.1)	97 (35.7)		
BNSc	10 (6.4)	16 (10.2)	26 (16.6)			39 (78.3)	5 (21.7)	44 (14.6)		
MSc	7 (4.5)	10 (6.4)	17 (10.8)			14 95.0)	2 (5.0)	16(25.5)		
Years of Experience				8.456	0.077				2.825	0.011
Less than 3 years	10 (6.4)	18 (11.5)	28 (17.8)			19 63.3)	11 36.7)	30(19.1)		
3-8years	15 (9.6)	25 (15.9)	40 (25.5)			15 39.5)	23 60.5)	38 (24.2)		
9-14 years	10 (6.4)	30 (19.1)	40 (25.5)			20 52.6)	18 47.4)	38(24.2)		
15-20 years	15 (9.6)	19 (12.1)	34 (21.7)			15 45.5)	8 54.5)	33 (21.0)		
21 and above	5 (3.2)	10 (6.4)	15 (9.6)			14 77.8)	4 22.2)	18(11.5)		
Ethnicity				3.329	.282				4.886	0.775
Yoruba	50 (31.8)	50 (31.8)	100 (63.7)			24 23.1)	80 76.9)	104 (66.2)		
Igbo	8 (5.1)	10 (6.4)	18 (11.5)			4(28.6)	10 (71.4)	14(8.9)		
Nupe	15 (9.6)	10 (6.4)	25 (15.9)			14 (58.3)	10 41.7)	24(15.3)		
Hausa	5 (3.2)	4 (2.5)	9 (5.7)			2(20.0)	8 80.0)	10(6.4)		
Others	2 (1.3)	3 (1.9)	5 (3.2)			1(20.0)	4 80.0)	5(3.2)		

Table 6 presents the association between socio-demographic factors and compliance with wound dressing material selection before and after an intervention. Post-intervention, significant changes are observed: age group compliance improved notably ($\chi2=34.148, p=0.001$), indicating better alignment with guidelines among older groups. Educational level also showed significant improvement ($\chi2=42.241$, $P=0.003$), with increased compliance among those with higher qualifications. Gender, marital status, years of experience, and ethnicity had non-significant changes, suggesting these factors did not impact compliance substantially post-intervention. This highlights targeted intervention effectiveness for age and education but not other demographics. This study shows that there is a significant relationship between age (P= 0.001) and education (P=0.003) and compliance with wound dressing materials

Table 6: Association between Socio-Demographics and the Level of Compliance in selecting Wound Dressing Materials

	Pre-Intervention				Post-Intervention					
Variables	Noncompliance %)	Compliance (%)	Total (%)	$\chi2$	p-value	Noncompliance (%)	Compliance (%)	Total((%)	$\chi2$	p-value
Gender					0.651				1.161	0.263
Male	10 (6.4)	42 (26.8)	52(33.1)			25 (49.0)	26 (51.0)	51(51.6)		
Female	15 (9.6)	90 (57.3)	105 (66.9)			64 (59.3)	44 (40.7)	108(76.4)		
Age Group (years)				1.527	0.674				34.148	0.001
≤ 25	3 (1.9)	12 (7.6)	15 (9.6)			18(90.0)	2(10.0)	20(12.7)		
26 – 35	10 (6.4)	60 (38.2)	70 (44.6)			37 (70.6)	31 (29.4)	68(43.3)		
36 – 45	8 (5.1)	49 (31.2)	57(36.3)			46 (82.1)	10 (17.9)	56(35.7)		
Over 45years	4 (2.5)	11 (7.0)	15 (9.6)			7(53.8)	6 (46.2)	13(8.3)		
Marital Status				0.204	0.902				2.911	0.478
Single	5 (3.2)	25 (15.9)	30(19.1)			11(62.1)	18 (37.9)	29 (18.2)		
Married	15 (9.6)	95 (60.5)	110(70.1)			75 (65.2)	40 (34.8)	115(73.2)		
Divorced/ Separated	5 (3.2)	12 (7.6)	17 (10.8)			7 (38.5)	6 (61.5)	13(8.3)		
Educational Level				0.136	0.934				42.241	0.003

Diploma	10 (6.4)	58 (36.9)	68 (43.3)			77 (58.9)	20 (41.1)	97(35.7)		
BNSc	5 (3.2)	21 (13.4)	26 (16.6)			31 (70.5)	13 (29.5)	44(14.6)		
MSc	3 (1.9)	14 (8.9)	17 (10.8)			14 95.0)	2 (5.0)	16(25.5)		
Years of Experience				0.089	0.993				2.723	0.587
Less than 3 years	5 (3.2)	23 (14.6)	28 (17.8)			19 (63.3)	11 (36.7)	30(19.1)		
3-8years	8 (5.1)	32 (20.4)	40 (25.5)			22 (60.5)	16 (39.5)	38 (24.2)		
9-14 years	8 (5.1)	32 (20.4)	40 (25.5)			16 (47.4)	22 (52.6)	38(24.2)		
15-20 years	5 (3.2)	29 (18.5)	34 (21.7)			8 (54.5)	15 (45.5)	33 (21.0)		
21 and above	3 (1.9)	12 (7.6)	15 (9.6)			8 (22.2)	10 (77.8)	18(11.5)		
Ethnicity				0.141	0.933				2.666	0.775
Yoruba	15 (9.6)	85 (54.1)	100 (63.7)			34 (32.7)	70 (67.3)	104(66.2)		
Igbo	3 (1.9)	15 (9.6)	18 (11.5)			6(42.9)	8(57.1)	14(8.9)		
Nupe	5 (3.2)	20 (12.7)	25 (15.9)			10 (41.7)	14 (58.3)	24(15.3)		
Hausa	1 (0.6)	8 (5.1)	9 (5.7)			8(80.0)	2 (20.0)	10(6.4)		
Others	1 (0.6)	4 (2.5)	5 (3.2)			1(20.0)	4 (80.0)	5(3.2)		

DISCUSSION OF FINDINGS

This study determines the influence of training on nurses' competency in selecting wound dressing materials at a secondary health facility in Nigeria. This study noted that in the demographic characteristics of respondents' majority are within the ages of 26 to 35years, females, Yoruba and are Christians. Also, majority of respondents are married, Diploma and 3-8years, 9-14 years.

This study observed that during pre - intervention stage, 28.7% of respondents are knowledgeable while 71.3% are not. While during Post-intervention, 32.5% of respondents are knowledgeable and 67.5% are not. This study supports Okur et al. (2020), who observed positive improvement on the knowledge of their respondents, although modest, highlights the positive impact of training on enhancing nurses' understanding of wound management.

This study reveals that there is a significant difference between Nurses' competencies in wound dressing materials post intervention. This study is consistent to Zeng, (2018) who suggests the need for more extensive and continuous training programs to ensure that all healthcare providers are well-equipped with the necessary skills and knowledge.

This study indicates that the level compliance of respondents in wound dressing is high post intervention. This study is not in line with the findings of Selman et al., (2016) Zieber & Sedgewick, (2018) who observed that targeted training programs in enhancing specific skill sets is not effective for wound management. This study supports Ogunfowokan et al., (2016) whose respondents demonstrates the effectiveness of the training program in promoting adherence to best practices in wound care, ultimately leading to better patient outcomes.

Hypotheses tested shows that there is a significant relationship between age and education and compliance with wound dressing materials. Also, there is a significant relationship between age and education, years of experience and compliance with wound management.

CONCLUSION AND RECOMMENDATIONS

The study demonstrates that targeted training interventions significantly enhance wound management competencies among nurses. Prior to the intervention, a substantial portion of the respondents exhibited poor knowledge and varying levels of competence in wound care. The intervention successfully improved overall knowledge and practical skills, as evidenced by the increased percentage of nurses achieving good knowledge grades and enhanced competencies in communication, patient assessment, and problem identification. Notably, the compliance rate for adhering to wound dressing standards improved markedly from 66.2% pre-intervention to 86.6% post-intervention, reflecting the intervention's effectiveness.

The study underscores the critical role of continuous education and training in advancing wound management practices. Despite the positive outcomes, a significant proportion of nurses still displayed inadequate knowledge and skills, indicating the need for ongoing educational efforts. Future recommendations include implementing regular, comprehensive training programs and integrating practical wound management skills into continuous professional development. Additionally, focusing on addressing gaps in knowledge among specific demographic groups, such as older nurses, could further enhance overall competence and adherence to wound care standards.

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