

Nurses' knowledge of predictors of surgical wound breakdown among surgical patients in selected hospitals in Ondo state, Nigeria

Edward M.I., Ajibade O.S., Ajibade O.O., Adepoju K.A.

Faculty of Nursing Science, University of Medical Sciences, Ondo, Nigeria

Article Info

Article type:

Original Article

Article history:

Received: December 31, 2022

Accepted: October 11, 2023

Published: June 29, 2024

Keywords:

Predictors, Knowledge, Perception, Surgical wound breakdown, Surgical patient

Corresponding author:

Edward, M.I.

ORCID-NO: <https://orcid.org/0009-0002-95767225>

edwardmaryidowu@gmail.com

edwardmary@unimed.edu.ng

The article can be accessed at:

www.rjhs.org

<http://dx.doi.org/10.4314/rejhs.v12i2.2>

Abstract

Background: Surgical wound infection has been a major problem that delays the recovery of a patient and increases the length of stay in hospital. This exploratory study assessed the knowledge of nurses on surgical wound breakdown, identified the factors contributing to surgical wound breakdown and perception of nurses on what promote wound healing in the surgical wards of UNIMEDTH and postnatal ward of Mother and Child Hospital, Akure.

Method: The study adopted the descriptive, non-experimental research design. The study populations were nurses in the selected wards. Total numbers of all nurses (70) in the selected wards were used for this research work and a self-structured questionnaire was the instrument used to elicit information from respondents. Descriptive and inferential statistical method with the aid of Statistical Product and Service Solutions (SPSS) version 23, frequency tables and bar chart were used to analyze data.

Results: Findings from the analysis revealed that 78.6% of nurses have good knowledge of surgical wound breakdown. 87.1% of the respondents perceived that availability of materials for wound dressing is one of the factors that promote healing. Findings further revealed that poor patients' nutritional habit or malnutrition among others played a vital role in surgical wound breakdown.

Conclusion: Nurses have good knowledge of predictors of surgical wound breakdown and in addition they have positive perception of what promote surgical wound healing. It is believed that will have positive impact on the nursing intervention towards patients in these categories to promote wound granulation with first intention and without complications. It is therefore recommended that the surgical wound care nurses should monitor the course of wound healing, encourage adequate nutrition, avoid wound complications, and treat properly if difficulties emerge as part of trauma and post-operative rehabilitation.

Connaissances des infirmières sur les prédicteurs de répartition des plaies chirurgicales chez les patients chirurgicaux dans des hôpitaux sélectionnés de l'état d'Ondo, au Nigéria

Résumé

Contexte de l'étude: L'infection des plaies chirurgicales constitue un problème majeur qui retarde le rétablissement d'un patient et augmente la durée du séjour à l'hôpital. Cette étude exploratoire a évalué les connaissances des infirmières sur la rupture des plaies chirurgicales, identifié les facteurs contribuant à la rupture des plaies chirurgicales et la perception des infirmières sur ce qui favorise la cicatrisation des plaies dans les services chirurgicaux de l'UNIMEDTH et le service postnatal de l'hôpital mère et enfant d'Akure.

Méthode de l'étude: L'étude a adopté un plan de recherche descriptif et non expérimental. Les populations étudiées étaient des infirmières dans les services sélectionnés. Le nombre total d'infirmières (70) dans les services sélectionnés a été utilisé pour ce travail de recherche et un questionnaire auto-structuré a été l'instrument utilisé pour obtenir des informations auprès des répondants. Une méthode statistique descriptive et inférentielle à l'aide de Statistical Product and Service Solutions (SPSS) version 23, des tableaux de fréquence et un graphique à barres ont été utilisés pour analyser les données.

Résultat de l'étude: Les résultats de l'analyse ont révélé que 78,6 % des infirmières ont une bonne connaissance de la rupture des plaies chirurgicales. 87,1% des personnes interrogées ont perçu que la disponibilité du matériel pour panser les plaies est l'un des facteurs favorisant la cicatrisation. Les résultats ont en outre révélé que les mauvaises habitudes nutritionnelles des patients ou la malnutrition, entre autres, jouaient un rôle essentiel dans la dégradation des plaies chirurgicales.

Conclusion: Les infirmières ont une bonne connaissance des facteurs prédictifs de rupture d'une plaie chirurgicale et ont en outre une perception positive de ce qui favorise la cicatrisation des plaies chirurgicales. On pense que cela aura un impact positif sur l'intervention infirmière auprès des patients de ces catégories pour favoriser la granulation des plaies en première intention et sans complications. Il est donc recommandé que les infirmières spécialisées en soins des plaies chirurgicales surveillent l'évolution de la cicatrisation, encouragent une alimentation adéquate, évitent les complications de la plaie et traitent correctement si des difficultés surviennent dans le cadre d'un traumatisme et d'une rééducation postopératoire.

INTRODUCTION

The skin is the first line defense of the body system, protecting the underlying structure from invasion by a microorganism that can be achieved by maintaining an intact skin surface. It is important to prevent skin breakdown or disruption of its integrity which might be potentially dangerous and life-threatening if infected (Khudhair, 2018). The presence of a wound is considered a burden in terms of economic cost to health and impacts on patients' quality of life. When wound requires long-term treatment, it may affect patients' emotion, appearance, confidence, or financial status.

Surgical wound is a type of incised wound occurring as a result of surgical intervention. Surgical wound are formed from an incision in the skin and underline structures, which is usually performed in a sterile environment where asepsis is maintained at all times. The majority of surgical wounds heal by primary intention. In primary intention, the skin edge are brought together and held in position by a mechanical means e.g. suture. This method of closure is adopted in most surgical incisional wounds but if proper care is not taken the wound will breakdown (septic) and the resultant healing occurs by secondary intention. The type of incision and type of materials used in skin closure and length of time spent in hospital have changed dramatically in recent years which has affected the way in which wound management is delivered (Khudhair, 2018).

Surgical wound breakdown is a complication following surgery, whose management poses a clinical challenge. With the growing ageing population and global increase in chronic diseases, such as diabetes and obesity, patient-related comorbidities may contribute to the occurrence of surgical wound breakdown. As such, individuals who may be at risk may need specific management in the pre- and postoperative period. The need for early identification of level of risk, followed up by accurate assessment and timely treatment may prevent minor problems escalating into catastrophes. The role of proper assessment, diagnosis, treatment and diligent record keeping must not be overlooked. Furthermore, the multidisciplinary approach to patient care is needed in the management of patients with a surgical wound dehiscence to ensure consistency in delivery of the care plan for timely and sustained surgical wound healing. Surgical wound breakdown is a serious post-operative complication that receives little or no attention in

the recent time, it is chosen by the researcher to find out the knowledge, factors contributing to surgical wound breakdown and the perception of nurses on what promote wound healing.

The theoretical principles underpinning the research is the Florence Nightingale Theory of environment. Which define nursing as "the act of utilizing the environment of the patient to assist in his recovery". Nurses should create a healthy environment which is essential for healing to take place, the needs for a positive, free from filth and vermin; it is paramount to the client recovery. Miss Florence Nightingale linked health with 5 environment factors: pure or fresh air, pure water, cleanliness, light, efficient drainage.

Study objective

1. To assess the level of knowledge of Nurses on predictors of surgical wound breakdown among surgical patients.
2. To identify the factors contributing to surgical wound breakdown among surgical patients.
3. To assess the perception of Nurses on what can promote surgical wound healing.

Hypothesis

There is no significant relationship between Nurses rank and their knowledge of surgical wound breakdown.

MATERIALS AND METHODS

Design

The study adopted the descriptive, non-experimental research design. This study was carried out in two selected hospitals in Akure, Ondo State which are UNIMED Teaching Hospital, Akure, and Mother and Child Hospital, Akure. Both hospitals are in Ondo State, South-Western Nigeria. The inclusion criteria were nurse in wards where patients has surgical wound while all wards without surgical cases are excluded. This research was carried out in two hospital simply because they are the only tertiary and secondary hospital in Akure, that is, the capital city of Ondo State in the south west region. There are 168 and 120 nurses in the hospitals respectively. There are 15 departments, five general wards which consist of Surgical and Medical Wards (male and female), and children ward. The Surgical Wards is 43 bedded while the Children Ward has 22 cots in UNIMEDTHC, Akure. In the Mother and Child Hospital, Akure the Postnatal ward has 27 beds while childrens' ward has 17 cots. Taro Yamane was used to

determine the sample size and total enumeration of nurses in the selected wards which met the inclusion and exclusion criteria in both hospitals were included due to small population.

Sample size and sampling techniques

The sample size was calculated using Taro Yamane. Sample size of 118 and 92 were proportionally determined for each hospital respectively making 210 nurses. Nurse's that managed patients with surgically incised wound were included in the study while non-surgical ward Nurses and nurses on administrative duty in selected hospitals were excluded from the study giving 70 respondents, hence, total enumeration of nurses that meet the inclusive criteria were used because of small population. 13 Nurses in Postnatal Ward of Mother and Child Hospital, Akure, while 16 Nurses in Accident and Emergency unit, 13 from Female Surgical Ward, 13 in Male Surgical Ward, 12 in Children Ward, and 3 in Surgical Outpatient of UNIMEDTH, Akure making 70 respondents.

Instrument for data collection

Participation was made voluntary. The research instrument was an adapted structured questionnaire from a previous study that assessed Nurses knowledge, factors and perception of Nurses on what promote wound healing. The questionnaire consisted of socio-demographic characteristics, closed-end questions requiring Yes or No options to measuring knowledge and a 4-point Likert scale with strongly agree(SA), Agree(A), Strongly disagree(SD), Disagree(D) options. The levels are given a score of 1, 2, 3 and 4 respectively to assess the factors and perception of Nurses on what promote wound healing.

The questionnaire was submitted to research committee for face validity of the instrument. Trial run of the instrument was also conducted and ambiguous questions were either deleted or modified.

Data analysis

Data collected was analyzed based on the results obtained from the questionnaire using descriptive and inferential statistics with the aid of Statistical Product and Service Solutions(SPSS) software version 23 and displayed in form of frequency table and bar chart.

Ethical consideration

During the course of this research study, a letter of introduction and ethical approval with

number NHREC/TR/UNIMED-HREC-Ondo St/22/06/21 was collected in the school and forwarded to the research setting. Confidentiality of information given was ensured.

RESULTS

Socio-Demographic Data of the respondents

The table 1 shows the demographic characteristics of the respondents and it was of note that 40 percent of the population were below 25 years and gender wise, female dominate with 78.6 percent. Close to two third of the nurses 47 (67.1) already had or were on their Bachelor of Nursing Science (BNSc) program. The years of working experience of the nurse varied.

Knowledge of nurses on surgical wound breakdown

Table 4.2 on knowledge of nurses on surgical wound breakdown showed that majority 68 (97.1) of the nurses had knowledge that surgical wound breakdown in a healthcare facilities is associated with infection, and almost all the respondents were aware of the risk factors for surgical wound breakdown 69 (98.6). Vast number 61 (87.1) of the respondents opined that a wound breakdown that is less than 30 days is classified as surgical site infection, and the microorganism responsible for the infection were identified to be Staphylococcus Aureus and E. coli with characteristics signs and symptoms. Stress and pressure on the surgical site were also noted to be a predictors for surgical wound breakdown by many of the respondents 63 (90.0) but less than average 34 (48.6) were able to identify the differences between healing of surgical wound by primary and secondary intention, while the remaining of the nurses do not know about it. Descriptive statistics for knowledge of nurses on surgical wound breakdown, reveal an overall mean score of 5.85 ± 1.004 from a total obtainable score of 7. This shows that the knowledge of nurses on surgical wound breakdown is high.

The figure 1 and table 2.1 shows the knowledge of nurses on surgical wound breakdown. This table and chart reveal that there is high level of knowledge of nurses on surgical wound breakdown.

Factors contributing to surgical woundbreakdown

Table 3 shows the factors contributing to surgical wound breakdown. 61 (87.1) of the respondents perceive that non-availability of

materials for wound dressing is one of the factors, but voiced that the hospital policy on materials use on wound dressing matters when discussing surgical wound breakdown. However, varied percentages of the respondents (60.0, 90.0, 97.0, 98.6) reasoned that the years of experience of the nurses, financial status of the patient, personal hygiene of the patient, poor patients' nutritional habit, that is, malnutrition and actual site of wound are determinants to the occurrence of wound breakdown.

Perception of nurses on what can promote surgical wound healing

Table 4 shows the perception of nurses on what promote surgical wound healing. Majority of the nurses 48 (68.6) strongly agreed that prophylactic antibiotics can promote wound healing for patients with no preexisting infection and few 6 (22.9) of the nurses were of the opinion that wound heals faster when petrolatum is applied on a surgical wound. Furthermore, the use of antimicrobial coated suture use of non-woven gauze can promote wound healing (40 (57.1) and 34 (48.6)). Descriptive statistics for perception of nurses on what promote surgical wound healing reveal an overall mean score of 7.43 ± 2.144 from a total obtainable score of 10. This shows that the perception of nurses on what promote surgical wound healing is positively high.

The figure 4 and table 4.1 shows the perception of nurses on what promote surgical wound healing. This table and chart reveal that majority of the nurses 56 (80.0% %) have positive perception, 10 (14.3 %) of the nurses have fair knowledge and then just 4 (5.7% %) have negative perception towards what promotes surgical wound healing.

Hypothesis Testing

H_1 : There is no significant relationship between Nurses rank and their knowledge of surgical wound breakdown.

Table 5 showed that, there is no significant relationship between Nurses rank and their knowledge in prevention of wound breakdown, where $p > 0.05$ ($p=0.377$ %) which implies that nurse's rank does not influence the knowledge of nurses in prevention of wound breakdown.

Consequently, the null hypothesis is accepted.

DISCUSSION

Socio Demographic characteristics of the respondents

The socio-demographic characteristics of the respondents can be seen in Table 1. In this study, majority of the nurses 28 (40.0%) were below the ages of 25 years which was similar to Saeed et al., (2021) where more than half (54%) of the nurses were between the age of 20-28 but contrary to Famakinwa et al., (2014) where they found most of the respondents within the ages of 25 to 39 years, this shows that there is age variance among the nurses, there is no particular age range specific to the profession. Concerning gender, it was also seen in this current study that majority of the respondents 78.0% were females, which is contrary to Saeed et al., (2021) where the gender was ratio 50:50. It is not surprising that majority of the nurses were single, this can be attributed to the young age found among the nurses that participated in this study and this is in concord with Saeed et al., (2021) where 60% were singles. For this study, the educational level most prevalent was BNSc 47 (67.1%), this is optimistic, the profession is advancing and many of the nurses in this region are improving in acquiring the Bachelor of Nursing Science Certificate, many nurses are moving ahead to the university but with Saeed et al., (2021), only 22% were BSc degree holder. Furthermore, larger number of the respondents were NO II 27 (38.6), this result came from the high number of young age nurses that participated in the study. Finally, majority of the nurses have had 0-5 years' experience 44 (62.9%), while in Saeed et al., (2021) three quarter of the participant had 5-10 years' experience, this may be associated to high number of young nurses in the country.

Knowledge of Nurses on predictors of surgical wound breakdown among surgical patients

This study assessed the knowledge of nurses on predictors of surgical wound breakdown among surgical patients. Result of this study showed that many of the nurses have good knowledge 55 (78.6%) on predictors of surgical wound breakdown, moderate knowledge was seen among 13 (18.6%) of the respondents, while poor knowledge was observed from just 2 (2.9%) of the respondents. Although, slightly greater than half of the nurses 36 (51.4%) were unable to differentiate between healing of surgical wound by primary and secondary intention. This shows that many of the nurses assessed on this topic of study can identify the signs of a degrading wound, this result also

indicate that the nurses are aware of the indicators and the risk factors responsible for surgical wound breakdown. Hatamleh et al., (2017) documented a similar finding in their study, revealing that good knowledge was found among 87 (55.1%) of the nurses. However, the findings of Famakinwa et al., (2014) was contrary as the study revealed that 68% of nurses had poor knowledge of prevention of post-operative wound infection. It became more disheartening when the research found in other related studies that as low as 34 (18.7%) of the respondents had good knowledge. The knowledge of nurses on surgical wound breakdown is consistent according to different studies carried out on this topic. Based on the differences in findings, knowledge of nurses should be improved on right from the institution level, emphasis should be placed on undergraduate nursing students, not neglecting the nurses in the labor market. Workshops and seminars should be organized on the topic of surgical wound care, predictors of surgical wound breakdown and the promotion of wound healing.

Factors contributing to surgical wound breakdown among surgical patients

The most prevalent reason that promote surgical wound breakdown identified by most of the nurses was infection of wound by exogenous microorganisms such as staphylococcus aureus, Escherichia coli 70 (100.0%), followed by poor patients' nutritional habit and underlying medical condition of patients 69 (98.6%) and 69 (98.6%) respectively. Poor personal hygiene of the patient was also noted by the 68 (97.1) of the nurses. A study carried out by Welsh et al. (2018) documented that surgical wound breakdown rate were higher in patients who have systemic diseases such as diabetes mellitus. The authors also found E.coli to be the main ingredient responsible for the development of surgical wound breakdown and identified 22.8% of the cases, afterwards concluded that E.coli was the second most prevalent microorganism in her study (15.3%). This sounds alike with the findings recorded in this current study. Immobility 172 (94.5%) led the risk factors contributing to surgical wound breakdown followed by impaired nutrition and then the location of the wound according to the writings of Nuru, (2015) in their study. Furthermore, Nuru, (2015) study on surgical infection and associated factor among surgical patients showed that surgical site infection was found commonly among the aged, males, underweight and

overweight, anemic, diabetics, hypertensive, patients with longer pre-operative waiting time, with multiple blood transfusions and without antibiotic prophylaxis. Out of 24 underweight patients 18 (75%) developed SSI, of the 23 overweight patients 11(47.83%) developed infection of their surgical sites. Among 37 anemic patients who underwent surgery 23 (62.16) developed SSI. Findings of (Nuru, 2015) concluded by reporting that Staphylococcus aureus was the most common organism associated with SSI. With so many facts gathered on the factors responsible for surgical wound breakdown, similar results were found that were in line with the end result of this study. It was seen that exogenous microorganisms such as staphylococcus and E. coli were the most common cause of wound breakdown documented by other researchers.

Perception of nurses on factors that can promote surgical wound healing

In relation to the perception of nurses on factors that can promote surgical wound healing, majority of the nurses had 56 (80.0%) positive perception. This was in congruent with the study of Brisibe et al., (2014) which revealed that 86.1% of the respondent sees the need to wash hands before commencing work at the surgical ward, in the same vein, 71.4% opined to using sterile technique to change dressing often, and changing damp sterile dressing as often as possible (45%) (Brisibe et al., 2014). The aforementioned authors concluded that nurses show good perception on what promote healing and prevent site infection. Hence, the perception of nurses towards promotion of surgical wound healing is positive. In this study, it is crystal clear that nurses demonstrate the knowledge of different approach which could be imbibed to quicken the healing process of surgical wounds.

Lastly, the relationship between nurses' rank and their knowledge of surgical wound breakdown was hypothetically tested. The result of the Chi-square showed no significant relationship between nurses' rank and their knowledge of surgical wound breakdown, the null hypothesis was accepted since the P value was greater than 0.05 ($p=0.377$ %). This indicate that the rank of the nurse have no influence on their knowledge of surgical wound breakdown.

CONCLUSION

Based on the result of these present findings, medicals and surgical wound care nurses should monitor the course of acute wound

healing, avoid wound complications, and treat properly if difficulties emerge as part of trauma and post-operative rehabilitation. They should take adequate care of the wound and prevent it from becoming infected, which could lead to more issues. Nurses should also utilize the high knowledge they have on the predictors of surgical wound breakdown to care for patients with surgical wound.

Recommendation

According to the study's findings on predictors of surgical wound breakdown among surgical patients of University of Medical Sciences Teaching Hospital Complex, as well as Mothers and Child Hospital in Akure. The researchers recommends that:

1. The Ministry of Health and Social Welfare should develop and implement a surgical wound care professional education program.
2. There is a need for an internationally approved standard checklist that can be utilized in conjunction with a multidisciplinary health team to prevent and manage postoperative wound infections. The implementation of a standard checklist is thought to have a significant impact on wound infection prevention and reduction.

Conflict: Non declared

Acknowledgements: Appreciation to all Nurses in UNIMEDTHC, Akure and Mother and Child Hospitals, Akure that voluntarily participated in the study.

Contribution of Authors: Edward M.I. contributed in areas of conception of idea, data collection, writing of reports and manuscript. Ajibade O.S. contributed to research design and

writing of manuscript. Ajibade O.O. participated in data collection and writing of reports. Adepoju K.A. contributed to data collection, data analysis and writing of reports

References

1. Khudhair, AS Nurses practice concerning postoperative wound care prevention among Nurses in the Surgical Unit of a Teaching Hospital in Nigeria, *Indian Journal of Public Health Research & Development*. June 2018, Vol. 9, No. 6
2. Jain, CM., Bakal, RL., and Burange, PJ. *et al.* Exploring the use of herbal drugs and advanced supporting techniques for wound healing. *Bull Natl Res Cent*, 2022; 46, 16. <https://doi.org/10.1186/s42269-022-00705-3>
3. Famakinwa TT, Bello BG, Oyeniran YA, Okhiah O, and Nwadike RN. Knowledge and Practice of Post-Operative Wound Infection Prevention among Nurses in the Surgical Unit of a Teaching Hospital in Nigeria. *Int. J. Basic Appl. Innov. Res.* 2014, 3(1):23-28.
4. Hatamleh, WA and Sorio, EH: Knowledge, Attitude and Intention towards Nursing Profession among Pre-clinical Students, *Journal of Health Specialties* 2017, p: 135-141 <http://www.thejhs.org>
5. Welsh, L., Wound care evidence, knowledge and education amongst nurses: a semi-systematic literature review. *International wound journal*, 2018. 15(1): p. 53-6
6. Nuru, N. Knowledge and practice of nurses towards prevention of pressure ulcer and associated factors in Gondar University Hospital, Northwest Ethiopia. *BMC Nurse*, 2015. 14: p. 34.47.
7. Brisibe SFA, Ordinioha B, and Gbeneolol PK. Knowledge, Attitude, and Infection Control Practices of two Tertiary Hospitals in Port-Harcourt, Nigeria. *Niger. J. Clin. Pract.* (2014). 17(6):691-695
8. Saeed AE, Jaddoue BA, Hameed DM, Evaluation of Nurses practice About Postoperative Wound Care At Al-Diwaniya Teaching Hospital *PJMHS* April 2021.; Vol. 15, NO. 4

Table 1: Socio-Demographic Characteristics of the respondents (n=70 %)

S/N	VARIABLES	DESCRIPTION	FREQUENCY	PERCENTAGE (%)
1.	Age	< 25 years	28	40.0
		26-30years	23	32.9
		31-35years	12	17.1
		41-45 years	7	10.0
2.	Sex	Male	15	21.4
		Female	55	78.6
3.	Religion	Christianity	59	84.3
		Islamic	11	15.7
4.	Ethnic Group		62	88.6
		Yoruba	1	1.4
		Hausa	7	10.0
5.	Marital Status	Igbo		
		Single	45	64.3
		Married	24	34.3
6.	Educational Level	Widow	1	1.4
		RN diploma	18	25.7
		BNSc	47	67.1
7.	Rank	MSc	5	7.1
		NO II	27	38.6
		NO I	22	31.4
		SNO	14	20.0
		PNO	3	4.3
8.	Grade level	ACNO	4	5.7
		7-10	50	71.4
		11 & above	20	28.6
9.	Word/department	Male surgical ward	14	20.0
		Female surgical ward	15	21.4
		A & E	15	21.4
		Children ward	11	15.7
		Postnatal ward	11	15.7
		Surgical outpatient	4	5.7
10.	Working experience	0-5 years	44	62.9
		6-10 years	19	27.1
		11-15 years	6	8.6
		16-20 years	1	1.4

(Source: Field work %)

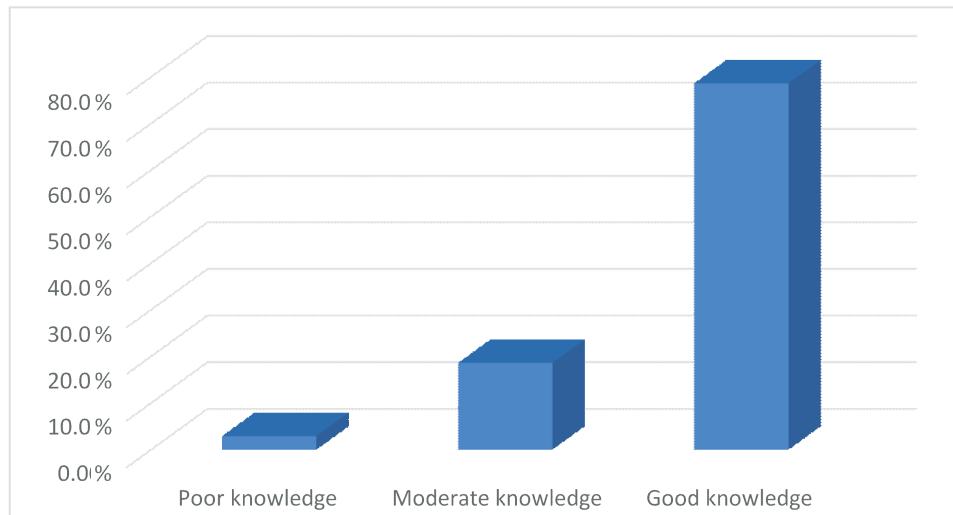
Table 2: Knowledge of nurses on surgical wound breakdown (n=70 %)

VARIABLE	YES (%)	NO (%)
Do you know that surgical wound breakdown is a healthcare associated infection?	68 (97.1 %)	2 (2.9 %)
Do you know that age, smoking, malnutrition, diabetes, obesity, steroids and NSAIDs drugs are risk factors for surgical wound breakdown?	69 (98.6 %)	1 (1.4 %)
Do you know that wound breakdown that is less than 30 days is classified as surgical site infection?	61 (87.1 %)	9 (12.9 %)
Do you know abnormal exudates, loose wound edges, redness and swelling may indicate wound breakdown?	68 (97.1 %)	2 (2.9 %)
Do you know that Staphylococcus aureus and Escherichia coli is the major microorganism causing surgical wound breakdown?	64 (91.4 %)	6 (8.6 %)
Do you know that stress and pressure on the surgical site are predictors for surgical wound breakdown?	63 (90.0 %)	7 (10.0 %)
Did you know the difference between healing of surgical wound by primary and secondary intention?	34 (48.6 %)	36 (51.4 %)

(Source: Field work %)

Table 2.1: knowledge of nurses on surgical wound breakdown

	FREQUENCY (n=70)	PERCENTAGE (%)
Poor knowledge	2	2.9
Moderate knowledge	13	18.6
Good knowledge	55	78.6

**Figure 1: Knowledge of nurses on surgical wound breakdown****Table 3: Factors contributing to surgical wound breakdown (n=70 %)**

VARIABLE	YES (% %)	NO (% %)
Availability of materials for wound dressing	61 (87.1 %)	9 (12.9 %)
Hospital policy on materials use for wound dressing	57 (81.4 %)	13 (18.6 %)
Nurse's year of experience	42 (60.0 %)	28 (40.0 %)
Financial status of patient	63 (90.0 %)	7 (10.0 %)
Nurses level of skill	62 (88.6 %)	8 (11.4 %)
Nurses non-compliance to practice of aseptic technique	65 (92.9 %)	5(7.1 %)
Poor patient personal hygiene	68 (97.1 %)	2 (2.9 %)
Underlying medical condition of patient's e.g. diabetes, vascular disease etc	69 (98.6 %)	1(1.4 %)
Poor patients' nutritional habit (Malnutrition %)	69 (98.6 %)	1 (1.4 %)
Site of surgical wound e.g. abdominal wound, knee etc.	62 (88.6 %)	8(11.4 %)
Poor surgical techniques e.g. loose sutures or stitches	65 (92.9 %)	5 (7.1 %)
Infection of wound by exogenous microorganism e.g. Staphylococcus aureus, Escherichia coli etc.	70 (100.0 %)	0(0 %)

(Source Field work: %)

Table 4: Perception of nurses on what can promote surgical wound healing (n=70 %)

VARIABLE	SA (% %)	A (% %)	D (% %)	SD (% %)
Prophylactic antibiotics for patients with no preexisting infection can promote wound healing	48 (68.6 %)	15 (21.4 %)	6 (8.6 %)	1 (1.4 %)
Antibiotics treatment for patients with preexisting infection can promote wound healing	51 (72.9 %)	18 (25.7 %)	1 (1.4 %)	0 (0.0 %)
Application of petrolatum on surgical wound can promote wound healing	16 (22.9 %)	21 (30.0 %)	26 (37.1 %)	7 (10.0 %)
Antimicrobial dressing with silver or polyhexamethylenebiguanide in patients with cardiovascular, neurosurgery and orthopedic case can promote wound healing	35 (50.0 %)	29 (41.4 %)	5 (7.1 %)	1 (1.4 %)
Improving patients nutrition can promote wound healing	59 (84.3 %)	11 (15.7 %)	0 (0.0 %)	0 (0.0 %)
Improving patient personal hygiene can promote healing	59 (84.3 %)	11 (15.7 %)	0 (0.0 %)	0 (0.0 %)
Ensuring aseptic technique and proper sterilization of surgical instruments can promote wound healing	57 (81.4 %)	11 (15.7 %)	1 (1.4 %)	1 (1.4 %)
Changing of dressing every 48 hours can promote wound healing	42 (60.0 %)	25 (35.7 %)	2 (2.9 %)	1(1.4 %)
The use of antimicrobial coated suture can promote wound healing	40 (57.1 %)	25 (35.1 %)	5 (7.1 %)	0 (0.0 %)
The use of non-woven gauze can promote wound healing	34 (48.6 %)	25 (35.7 %)	8 (11.4 %)	3 (4.3 %)

(Source: Field work %) SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree

Table 4.1: Perception of nurses on what can promote surgical wound healing (n=100 %)

	FREQUENCY (n=70)	PERCENTAGE (%)
Negative Perception	4	5.7
Fair perception	10	14.3
Positive perception	56	80.0

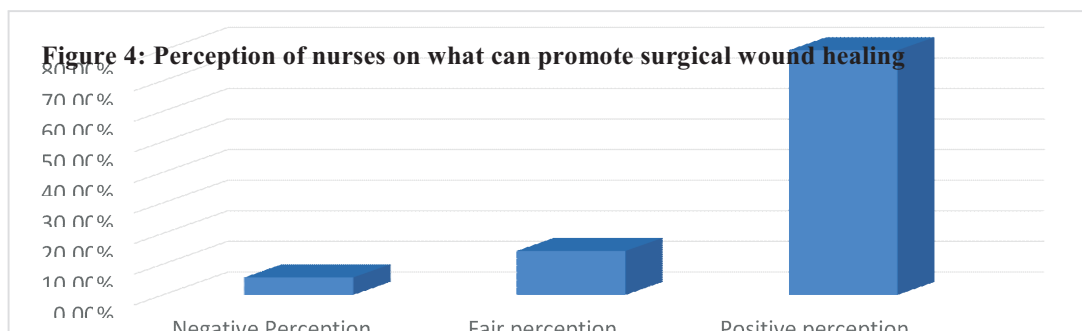
**Figure 4: Perception of nurses on what can promote surgical wound healing**

Table 5: Relationship between Nurses rank and their knowledge of surgical wound breakdown

Nurses rank	Knowledge of surgical wound breakdown.			Total	Chi Square	df	P-Value (2-sided %)
	Poor knowledge	Moderate knowledge	Good knowledge				
NO II	1	3	23	27	8.598	8	0.377
NO I	1	8	13	22			
SNO	0	2	12	14			
PNO	0	0	3	3			
ACNO	0	0	4	4			
Total	2	13	55	70			

► Please cite this article as:

Edward M.I., Ajibade O.S., Ajibade O.O., Adepoju K.A.. Nurses' knowledge of predictors of surgical wound breakdown among surgical patients in selected hospitals in Ondo state, Nigeria. *Research Journal of Health Sciences*, 2024; 12(2): 106-115

Research Journal of Health Sciences subscribed to terms and conditions of Open Access publication. Articles are distributed under the terms of Creative Commons Licence (CC BY-NC-ND 4.0). (<http://creativecommons.org/licenses/by-nc-nd/4.0>).