

Factors that Facilitate the Tendency of Nurses being involved in Risk-Taking Behaviours. to Pathogens in Abia State University Teaching Hospital (ABSUTH) and Federal Medical Centre, Umuahia

*Felicia Uzoaru Anyim, Solomon Adanma Nwagwu, Chinelo C.N. Vincent, Julia E. Ibebuike,

Department of Nursing Science, Imo State University, Owerri, Imo State, Nigeria

Abstract

Nursing profession is the one that is prone to pathogen attacks Nurses get exposed to pathogens in the course of their daily clinical practices. This happens through contact with blood and other infected fluids and materials. To this end, standard precautions were provided to guide actions against risks. In spite of the guidelines, nurses still suffer illness arising from exposure to pathogens. This is a survey study carried out in two tertiary Health Institutions in Abia State, Nigeria. All the three hundred and seventy-three (373) nurses in the two institutions were participants. The facilitating factors were work pressure, high ratio of patients to one nurse, unavailability of protective materials, poor/harsh working conditions etc. Recommendations included that Health Institutions should employ more nurses to reduce the number of patients to one nurse. Protective facilities should be provided in adequate quantities to minimize risk-taking behaviours among nurses.

Keywords: *nurses, risk-taking behaviours, pathogens*

Introduction

Occupational exposure to pathogens among healthcare professionals (HCPs) has been defined as any contact with skin, eyes, mucous membranes or any other parental contact with blood or other potentially infected fluids or materials that take place during their daily clinical practice.¹ It can occur via different modes.² As a result, every year, many HCPs suffer from one or more incidences of illnesses from exposure to pathogens during their clinical practice.³ Nurses have the unique opportunity to directly reduce health care-associated infections through recognizing and applying evidence-based procedures to prevent infections among patients and protecting the health of the staff. It is well recognized that the risk of transmission of pathogens when providing medical care and the reduction in the rates of the incidence of hospital-associated infections can be kept low through appropriate standardized prevention procedures.⁴

Although high incidence (about 60%) of occupational exposure to microorganisms is observed among all HCPs, nurses form the largest group of health care professionals and are more vulnerable to an occupational exposure.⁵ It has also been reported that transmission frequently occurs during the performance of medical procedures when these healthcare professionals fail to follow aseptic

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precaution.⁶ The study was done to Identify the factors that facilitate risk-taking behaviours of nurses' exposures to pathogens among nurses in ABSUTH.

Research Methods

Research Design

This survey study will be used for the study. The study seeks to obtain information concerning the current status of risk-taking behaviours, describe relationships that exist as well as opinions held which are evident and changes that are occurring or trends that developing among nurses in Abia State University Teaching Hospital.

Area of Study

This study was carried out in Abia State University Teaching Hospital and Federal Medical Centre, Umuahia, Abia State of Nigeria.

Population of the Study

The target population of the study constitutes of all nurses who have been employed and are working in the different units of Abia State University Teaching Hospital and Federal Medical Centre, Umuahia. At the time of carrying out this study (2022) there were a total of 373 nurses. (This was obtained from the nursing services department of both hospitals). This includes the Directors, Director of Nursing Services (DNS) – 16, Chief Nursing Officers (CNOs) - 41, Asst Chief Nursing Officers (ACNO) - 30, Principal Nursing Officers (PNOs) - 120, Senior Nursing Sisters (SNSs) - 66, Nursing Officers (NOs) II - 100.

Sampling Technique

No sampling was done. All the 373 nurses will be used since the population is not large, including those on their annual leave.

Instrument for data collection

The instrument that will be used for data collection will be a 4-point rating scale which will be designed by the researcher. The various sections of the instrument dealt with demographic information, risk taking actions/behaviours of nurses and factors that facilitate the risk-taking behaviours of nurses.

- a. Section A covered areas of demographic data, qualification, years of experience and current area of practice (5 items).
- b. Section B obtained data about risk-taking behaviours (36 items)
- c. Section C obtained data on post exposure behaviours (7 items).
- d. Section D obtained data on factors influencing risk-taking behaviours (7 items),

Ethical Consideration

The researcher obtained an ethical approval letter from the research and ethical committee of Abia State University Teaching Hospital and Federal Medical Centre, Umuahia. Informed consent will

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be obtained from the respondents before administration of the questionnaire. Confidentiality of respondents' information was strictly observed by informing the respondents not to mark or identify their names on questionnaire paper.

Procedure of Data Collection

With the ethical approval letter and introductory letter from the Department of Nursing Science, Imo State University Teaching Hospital, administrative permit was obtained from the Nursing Services Department and subsequently the unit heads and clinics to enable the researcher administer the questionnaire. The questionnaires were personally administered to nurses in each of the wards and clinics by the researcher assisted by two instructed nurse research assistants. The research assistants were instructed on the purpose of the study, selection of subjects. The entire procedure took a period of 5 weeks.

Method of Data Analysis

Data analysis was done with the aid of Statistical Package for Social Sciences (SPSS) version 17.0 using descriptive statistics of frequencies and percentages, mean score and standard deviation. T-test was used to test the hypothesis stated for the study at 0.05 level of significance. The results were presented in tables. Scaled responses were interpreted based on their mean score. Mean Decision Rule: ≥ 2.5 (Accept), ≤ 2.5 (Reject).

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Results

Table 1a: Results of analyses of factors facilitating the risk-taking behaviours of nurses in ABSUTH

S/N	Item Statements	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{x}	SD
	Indicate your level of agreement or disagreement that these factors dispose you as a nurse to risk-taking behaviours in your profession? (N=166)						
1	Few nurses attending to many patients	60	50	32	24	2.88	0.58
2	Inadequate provision of protection devices	80	58	17	11	3.24	0.21
3	Poor working conditions	45	90	19	12	3.01	0.19
4	Unavailability of some necessary working materials	75	48	29	14	3.10	0.2
5	Inadequacy of working equipments	69	57	18	22	3.04	0.19
6	Non-functional equipments	58	72	27	9	3.07	0.19
7	Work pressure	90	50	17	9	3.33	0.21
8	Pressure from patients	98	37	29	2	3.39	0.21
9	Empathy for the sick	58	79	17	12	3.10	0.21
10	Lack of mentoring mechanism	59	78	18	11	3.16	0.22
11	Lack of workshops and seminar	90	45	12	19	3.24	0.21
12	Poor remuneration	50	58	30	28	3.13	0.21
13	Average mean and standard deviation scores					3.14	0.24

Table 1a has data on the factors facilitating risk-taking behaviours of nurses in ABSUTH. All the factors raised as facilitating the risk-taking behaviour of nurses were accept by the nurses. This is because the items have more than 2.50 as mean score. The average mean score is 3.14 showing that the factors represent the opinions of the nurses with regard factors promoting occupational

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risk-taking behaviours. Their average standard deviation score is (0.24) also very low, showing that the nurses did not differ in their opinions.

Table 1b: Results on factors facilitating the risk-taking behaviours of nurses in F.M.C. Umuahia (n=194)

S/N	Item Statements	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{x}	SD
	Indicate your level of agreement or disagreement that the following facilitate the nurses' risk-taking behaviours? (N=184)						
1	Few nurses attending to many patients	95	80	5	4	3.44	0.20
2	Inadequate provision of protection devices	98	62	14	10	3.34	0.67
3	Poor working conditions	85	70	22	7	2.26	0.20
4	Unavailability of working materials	89	59	16	20	3.18	0.19
5	Inadequacy of working equipments	84	92	5	3	3.4	0.20
6	Non-functional equipments	62	89	29	4	3.13	0.20
7	Work pressure	90	65	11	18	3.17	0.19
8	Pressure from patients	100	78	4	2	3.5	0.21
9	Empathy for the sick	72	86	18	8	3.2	0.20
10	Lack of mentoring mechanism	69	99	13	3	3.3	0.67
11	Lack of workshops and seminar	88	60	20	16	3.2	0.20
12	Poor remuneration	99	78	3	4	3.5	0.21
13	Average mean and standard deviation scores					3.30	0.24

The data in table 3b show the opinions of the nurses regarding factors that promote their tendency of exposure to pathogens. The nurses accepted all the factors as promoting the risk-taking behaviours by rating all the items highly, more than the mean score of 2.50. Their average mean score is 3.30 with small differences in their opinions. This shows that these risk facilitating factors exist in both institutions but in slightly varying degrees.

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Discussion

Pressure from patients was rated first in ABSUTH going by the data on table 3a. This followed by work pressure, inadequate working equipment Umuahia poor working conditions etc. according to magnitude of item mean scores. Few nurses attending to many patients was uppermost amongst participants from F.M.C Umuahia. Inadequate provision of protective materials ranked second. Lack of workshop and seminar scored high in both institutions, 3.24 and 3.20 respectively. All the item (12 of them) scored above 3 points in the two institutions except item 1 in ABSUTH which had 2.88 mean score. In the same vein, there is a difference in the average mean score of the two institutions – 3.14 and 3.30 to which the results of test of hypothesis three revealed that the opinions of nurses differ according to health institutions. Results of past studies confirmed these findings. The findings of Oji *et al.*⁷ showed that compliance of health professionals with standard precautions was low 12%. Thais *et al.*⁸ discovered in their studies factors influencing adherence to standard precautions among nursing professionals in psychiatric hospital of Sad Paulo to include lack of safe working conditions, lack of ongoing training and lack of management actions to control infections. These findings lend credence to the results of this study. It is not enough to give a laid down regulations which if applied will protect the nurses from risks, it is important to provide enabling environments for compliance. Nursing is a profession characterized by empathy and desire to help the helpless, it will be difficult for a nurse to watch a patient to die without care because of lack of protective device. The risk-taking behaviours are propelled by the desire to save a life and actions are usually spontaneous and assistance – driven. It is more serious when there is a high ratio of patients per nurse and protective materials are in short supply coupled with the fact that a nurse on duty is expected to do her job for the hours on duty. In such situations exposure to risk-behaviour as imminent. It is probably at this point that the very senior ones withdraw and delegate duties to younger and less experience ones as shown in their post exposure behaviours.

Conclusion

Findings show that nurses take risks by failing to adhere to preventive and control measures. The frequency of risk-taking behaviours decreases with years of experience. Exposure to risks occurs in the profession irrespective of years of experience. Inadequacy of protective facilities facilitate the risk-taking behaviours of nurses.

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