

Assessment of the level of adherence of health care workers to workplace safety measures provided at the Enugu state university teaching hospital Enugu, Nigeria

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Abstract

Aim: To assess the level of adherence of healthcare workers to workplace safety measures provided at the Enugu State University Teaching Hospital, Enugu Nigeria.

Method: A total of 350 health care workers of the Enugu State University Teaching Hospital (ESUTTH) were used for the cross-sectional study which took place between February and August 2019. Basic information like age, sex and duration of work in the hospital were taken. Finally their levels of adherence to the safety measures provided in the hospital were assessed.

Results: The greatest number of respondents fell within the age group 26-35years (40.9%) and the gender distribution showed that 54.6% were female workers. The greatest proportion of the respondents indicated that they have worked in the hospital between 1 -5years (31.1%). Lastly assessment of adherence indicated 67.2% comply with the instructions on hand-washing, 70.3% use gloves when making physical contact with patients. 50.6% claimed that they have an occupational/environmental health policy in their departments. 80.9% use bleach/disinfectants to clean up spillages and other hazardous substances. 52% have knowledge of segregation of healthcare waste. 60.3% engage in routine screening for blood-borne diseases e.g. HIV, Hepatitis B and C. while 57.3% said that they undergo routine medical checkup annually.

Conclusion: Most of the respondents were young adults 26-35years who had worked in the hospital between 1- 5years due to the fact that the teaching hospital had not been in existence for too long. Majority of the respondents (>50% in each case) have a good adherence to the safety measures i.e. hand-washing, use of disinfectants, segregation of hospital waste, and routine screening and regular medical checkups. This situation has been responsible for the maintenance of a very low rate of hospital transmitted (Nosocomial) infections in ESUT Teaching Hospital Enugu.

Keywords: Assessment; Workplace; Safety; Adherence; Enugu; Hospital.

1. Introduction

A study by Khodabakhsh Nejad noted that Human resource is the most important asset for organizational development, as it uses other resources and gets best return out of them [1]. Creating a safe working environment is rationally acceptable and neglecting safety in the workplace can cause a lot of damage and injury to the workforce. Increased injuries caused by the absence of or inadequate safety in the workplace will not only lead to financial losses, but also to the loss of valuable human resources of the organization. The study done by Abdullah et al. on employees' perceptions on occupational health and safety (OHS) management in public hospitals in Malaysia indicated that employees will

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persist to continuously improve their safety, when they know that the management is openly more supportive of safety activities [2]. WHO thus emphasized the necessity for much more attention to be paid to safety and occupational health than before [3]

The hospital is among the highly important and sensitive work environments since the performance of employees in its workplace are associated with the lives of thousands of people. Cynthia Meyers reported lack of safety in hospitals [4]; according to her, hazards and accidents in the hospital environment include: fire outbreak, electrical shock and burning due to it, burn injuries because of spill of acid on hands, skin or respiratory allergy to various chemicals used in hospitals, oxygen cylinder explosion as a result of overfilling, falling down and fractures of limbs or death of employees after falling from height, falling of patients out of their beds, burning in the operation room because of cautery device, busting of unprotected fluorescent light bulbs, and other frequent minor and major events [4]

A 2006 'World Health Report 'Working Together for Health' stated that there is a severe health workforce crisis in fifty-seven countries, most of them in Africa and Asia. Protecting the occupational health of health workers is critical to having an adequate workforce of trained and healthy health personnel [3]. The study by Golafruz et al, confirmed the effectiveness of the implementation of safety management program on increasing the knowledge, attitude and performance of the medical staff and improvement of safety at the hospital [5]. Mardani et al. indicated that given the significant relationship between hospital safety and staff performance, the more the principles of safety are observed in a hospital, the better will become the staff performance. [6].

Milner indicated that safety culture is associated with providing better quality health care to patients, and the results show that the general climate of the organization has a significant impact on the safety climate [7] According to Neal Anthony, Griffin Mark and Hart, 'The safety climate in hospitals is effective on some issues such as medication errors, nurse back injuries, urinary tract infections, patient satisfaction, patients' perception of the responsiveness of nurses, and nurse satisfaction' [8].

A research work by Soltan et al, confirmed the relationship between safe working environment and affective commitment of the staff. In their study, a positive correlation was found between these two variables [9]. The work by Ghasri et al, discovered the relationship between the organizational commitment and workplace safety [10].

The research carried out by Pollitt et al, pin-pointed leadership and managerial resilience as key drivers of health and safety performance [11]. The authors noted that the key to the success of any health and safety management system rests on management's drive towards making safety of practical value throughout the organization rather than one that was simply talked about. In a study done by Alice W Gichuhi et al. on 'Health Care Workers Adherence to Infection Prevention Practices and Control Measures: A Case of a Level Four District Hospital in Kenya' the authors concluded that there was adequate compliance with IPPC, though there were challenges to implementation that needed to be addressed [12].

2. Material and methods

A total of 350 health care workers comprising of 50 workers selected from each of the following seven departments in the teaching hospital; clinical medicine, surgery, nursing, medical laboratory, works, pharmacy and physiotherapy were used for the study. After obtaining an ethical clearance from the hospital ethical committee and an additional permission from the heads of departments of each of the departments mentioned, a pretested self-administered questionnaire was used to collect information from each of the respondents. The questionnaires were prepared by referring to the recommended safety practices within the hospital and made in such a way that it would be very simple to understand. It was in English language and divided into three sections. The first section collected demographic data from the respondents excluding their names; the second section assessed their knowledge of the safety facilities available to them in the hospital while the third section dwelt on their adherence to the prescribed safety measures. The data was analyzed using the statistical package for social statistics (SPSS) version 11 and the results were displayed in the form of tables and graphs.

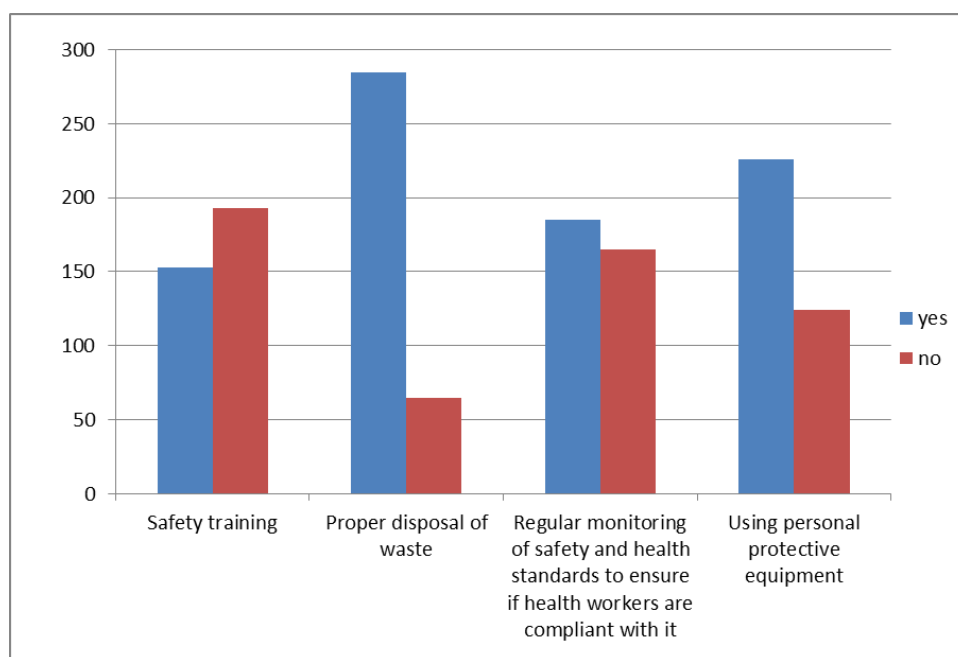
3. Results

Age group with the highest frequency is 26-35 years (40.9%). 54.6% were females and the greatest number of respondents (35.1%). have worked for 1 to 5 years (Table 1). 53 % of the respondents do not believe that there is effective safety training put in place in the hospital. 81.4% believe that there was proper disposal of wastes. 52.8%

agreed that there was regular monitoring of safety and health standards to ensure health workers are compliant with it. 64.6 % agreed that use of personal protective equipment was a safety measure (Figure 1).

Table1 Socio demographic Characteristics of Respondents

Variable	Frequency	Percentage
Age		
Below 25	39	11.1
26 - 35yrs	143	40.9
36 - 45yrs	115	32.9
46 - 55yrs	42	12.0
Above 56yrs	11	3.1
Total	350	100.0
Gender		
Male	159	45.4
Female	191	54.6
Total	350	100.0
How long have you been employed		
Below 6 months	34	9.7
6 months to 1 year	58	16.6
1 - 5 years	123	35.1
5 - 10years	101	28.9
Above 10 years	34	9.7
Total	350	100.0



X-axis=Safety measures put in place in ESUT teaching hospital; Y-axis =No of respondents (Health Care Workers)

Figure 1 Safety measures put in place in ESUT teaching hospital**Table 2** Assessment of adherence to safety practices

Variables	Frequency(f)	Percent (%)
How often do you wash your hands after attending to patients?		
Before every patient and after the last patient	223	67.2
Before the first patient and after the last patient	109	32.8
Total	332	100.0
What do you use to wash your hands?		
Liquid soap	288	85.0
Solid soap	23	6.8
Detergent	24	7.1
Nothing, just water	4	1.2
Total	339	100.0
Do you use gloves on physical contact with each patient?		
Yes	246	70.3
No	104	29.7
Total	350	100.0
Do you, or your department or unit keep a copy of occupational health and environmental safety policy?		
Yes	196	56.0
No	154	44.0
Total	350	100.0
What are the special precautions taken for cleaning spillages and potentially hazardous substances?		
Use of water and detergent	66	19.1
Use of disinfectant or bleach and water	279	80.9
Total	345	100.0
How are hospital wastes organized?		
In no particular order	163	47.5
Segregation of individual types of waste	180	52.5
Total	343	100.0
Do you go for routine screening for blood borne diseases like HIV, Hepatitis B & C etc?		
Yes	211	60.3
No	139	39.7
Total	350	100.0
If yes, how often?		
Monthly	34	16.1
Biannually	55	26.1
Annually	121	57.3
Others	1	0.5
Total	211	100

67.2% wash their hands after the last patients. 85% use liquid soap to wash their hands. 70.3% use gloves on physical contacts with each patient. 56% said that their departments keep a copy of occupational and environmental safety policy. 80.9% use disinfectant or bleach and water for cleaning spillages and potentially hazardous substances. 52.5%

thought that hospital wastes are segregated into individual types of wastes. 60.3% go for routine screening of blood borne diseases like HIV, Hepatitis B&C etc. 57.3% go of routine screening annually.

4. Discussion

The socio-demographic data that were assessed (Table1) include age, sex and duration of employment in the hospital. Out of the total number (350) the males were 45.4%, while the females were 54.6%. The greatest number of respondents had been working in the hospital for 1 to 5 years due to the fact that the hospital had just been in existence for 10 years and it has been building up its workforce gradually. 81.4% of respondents agree that the hospital engages in good waste disposal, 52.8% feel that there is a regular monitoring and supervision of adherence to safety procedures while 64.6% agree that the workers are provided with adequate personal protective equipments. (Fig 1). All these signify that the hospital management is paying enough attention to the safety of their workforce. This agrees with the study by Abdullah et al, on the employees' perceptions on occupational health and safety (OHS) management in public hospitals in Malaysia which indicated that employees will persist to continuously improve their safety, when they know that the management is openly more supportive of safety activities [10]. The table on adherence (Table2) indicates that most of the respondents agree that they adhere to the safety practices prescribed for them. This is in conformity with the study done by Alice W Gichuhi et al, which noted that there was adequate compliance with IPPC, though there were challenges to implementation that needed to be addressed [12]

5. Conclusion

The study revealed that the hospital is performing above average in the area of proper disposal of waste, regular monitoring and supervision of the workers on adherence to safety practices and in the provision of personal protective equipment. While there may be the need to improve on the scores recorded in the areas already mentioned, the major area that needs to be addressed is the training and retraining of health care staff on safety practices so as to be updating their knowledge. Although the study also noted that the level of adherence to the prescribed safety practices by the health care staff is quite encouraging, there is need for a regular monitoring and supervision to ensure that the staffs maintain the adherence level already attained. This is even more indicated now that the COVID 19 pandemic is ravaging the world and the health care workers are at the greatest risk.

Compliance with ethical standards

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Disclosure of conflict of interest

I hereby declare that there is no conflict of interest as no other author contributed to the manuscript.

Statement of informed consent

Approval was obtained from the hospital ethical committee before the study was embarked upon. The heads of the different departments were also contacted before their staffs were used. Informed consent was obtained from every individual involved in the study before a questionnaire was administered to him or her.

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