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KNOWLEDGE, ATTITUDES AND PRACTICE OF STANDARD PRECAUTIONS AMONG HEALTH CARE WORKERS IN GENERAL HOSPITAL BABURA, JIGAWA STATE

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ABSTRACT: This study investigates knowledge, perception, and standard precaution among health care workers in general hospital Babura, Jigawa state Nigeria. Health care workers (HCWs) are at high risk of needle stick injuries and blood borne pathogens, such as HIV, and hepatitis B and C viruses, as they perform their clinical activities in the hospital. This study was therefore designed to determine the knowledge, attitude, and practice of standard precaution among HCWs in general hospital Babura, Jigawa state, Nigeria. This study adopted cross sectional study carried out among 167 from the total population size of 288 staffs working at general hospital Babura using Taro Yamane formula. They were selected through stratified sampling technique. The instrument used for data collection was a semi-structured questionnaire that asses the knowledge, attitudes and practice of standard precaution. The study revealed that 52% of the respondent range from 36 – 50 years, 41% are within the range of 20 – 35 years and 7% are 51 – 65 years. Majority (79%) of the respondents had good knowledge, attitudes 73% and practice 72% of standard precautions respectively. The finding also revealed that significant number of the respondents 75(45%) reported always recapping needles after use. The study concluded with some recommendations that training and retraining of staffs regularly on standard precaution: hepatitis B virus immunization should be made compulsory, needle recapping should be prohibited, unsafe, and unwarranted use of infections should be minimized and a post exposure prophylaxis protocol should be in place with a well-known designated focal person.

INTRODUCTION:

Standard precautions are recommended to prevent transmission of infection in hospitals. However, their implementation is dependent on the knowledge and attitudes of healthcare workers (HCW) (Ogoina *et al*, 2015). Worldwide occupational exposure to blood and body fluids is a major health care-related problem (Mekonnin *et al*; 2018) that becomes ubiquitous means of exposure to blood-borne pathogens (Auta *et al*; 2017). According to different studies from 35 million health care workers (HCWs), (Mission, 2012) up to 3 (Mekonnin *et al*, 2018; Yenesew and Fekadu, 2014) millions are exposed to blood-borne diseases. As a consequence of occupational exposures, 66,000 HBV, 16,000 HCV, and 1,000 HIV infections occur among HCWs each year (Pruss-Ustun *et al*, 2005, Kassa *et al*; 2016).

According to the World Health Report (2002); an estimated three million HCWs all over the world experience percutaneous exposure to blood-borne viruses Hepatitis C and B and HIV viruses annually. Similarly, it has been estimated that about 2.5% of HIV cases and 40% of HBV and HCV cases among HCWs worldwide are the result of these exposures (Guilbert, 2003; Wicker *et al*., 2007; Mizuno *et al*., 1997).

According to the World Health Organization (2003), standard precautions can be defined as a set of infection control measures meant to reduce the risk of transmission of blood borne and other pathogens from both recognized and unrecognized sources.

STATEMENT OF THE PROBLEM:

Health care workers face a wide range of hazards on the job; including needle stick injuries, back injuries, latex allergy, violence, and stress. Health-care workers (HCWs) need protection from these workplace hazards just as much as do mining or construction workers. WHO global burden of disease from sharps injuries among health workers showed that 37% of the hepatitis B among health workers was the result of occupational exposure. Infection with the hepatitis B virus is 95% preventable with immunization but less than 20% of health worker in some regions of the world have received all three doses needed for immunity. While less than 10% of the HIV among health workers is the result of an exposure at work. Needle stick injuries, the cause of 95% of the HIV occupational seroconversions, are preventable with practical, low-cost measures and have the co-benefit of preventing exposure to other blood borne viruses and bacteria (Tirthankar, 2013).

The rising prevalence of morbidity and mortality following exposure to blood borne infections is due to the lack of knowledge, wrong attitude towards and non-compliance to standard precautions as well as bad practices such as bending of needles, recapping of needles, detachment of needles, reuse of needles and lack of adequate sharps containers and disposal facilities, shortage of supply of injection equipment and unwarranted and unsafe use of injections, that put both patients and HCWs at risk of occupational exposure, (https://researchcub.info/project-4205.html/project-4203.html).

AIM:

The aim of the study is to assess the knowledge, perception and practice of standard precautions among health care workers in General Hospital, Babura, and Jigawa State.

SPECIFIC OBJECTIVES:

1. To assess the level of knowledge of standard precautions among health care workers in General Hospital, Babura.

2. To determine the attitude of health care workers in General Hospital, Babura towards standard precautions.

3. To determine the level of practice of standard precautions among health care workers in General Hospital, Babura.

4. To determine some of the factors that affect knowledge, attitude and practice of standard precautions among the health care workers.

SIGNIFICANCE OF THE STUDY:

When research is completed, the finding of this study is adopted and implemented to enable the health personal to understand their roles in preventing infection by using personal protective device (PPE). On the other hand the health care workers should be educated to know the important of personal protective device and their uses to avoid getting infection and injuries

RESEARCH QUESTIONS:

1. How can you assess the level of knowledge of standard precaution among health care workers in general hospital Babura.

2. What are the attitudes of health care workers in general hospital Babura towards standard precaution?

3. How can you determine the level practice of standard precaution among health care workers in general hospital Babura.

4. What are the factors that affect knowledge of standard precaution of the health care workers?

SCOPE/DELIMITATION OF THE STUDY:

The scope of this study is to assess the knowledge, perception and practice of standard precautions among health care workers in General Hospital, Babura, Jigawa State.

CONCEPTUAL REVIEW:

According to (CDC, 2020) defined Standard Precautions as the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where health care is delivered. These practices are designed to both protect DHCP and prevent DHCP from spreading infections among patients. Standard Precautions include;

1. Hand hygiene.
2. Use of personal protective equipment (e.g. gloves, mask, eyewear).
3. Respiratory hygiene/cough etiquette.
4. Sharps safety (engineering and work practice controls).
5. Safe injection practices (i.e. aseptic technique for parenteral medications).
6. Sterile instruments and devices.
7. Clean and disinfected environmental surfaces.

Each element of standard precautions is described in the following sections. Education and training are critical elements of Standard Precautions, because they help DHCP make appropriate decisions and comply with recommended practices,

(https://www.cdc.gov/oralhealth/infectioncontrol/summary-infection-prevention-practices/standard-precautions.html).

Also Standard Precautions was defined as; Standard Precautions are set of infection control practices used to prevent transmission of diseases that can be acquired by contact with blood, body fluids, non-intact skin (including rashes), and mucous membranes.

(https://www.dhs.wisconsin.gov > precautions) (Retrieved on 8/02/2022).

Precautions knowledge and implementation of standard precautions are vital to limiting the spread of infectious diseases (Porto and Marziale, 2016).

All healthcare workers including nurse practitioners are responsible for the prevention of infectious disorders. In 1996, the CDC Guideline for Isolation Precautions in Hospitals, prepared by the Healthcare Infection Control Practices Advisory Committee (HICPAC), combined the major features for Universal Precautions and Body Substances Isolation into what is now referred to as Standard Precautions. These guidelines also introduced three transmission-based precautions: airborne, droplet and contact. All transmission-based precautions are to be used in conjunction with standard precautions. Every hospital has an inter-professional team that ensures proper adoption of the universal guidelines. Audits should randomly be performed, and healthcare workers who do not follow the guidelines should be reprimanded and sent for remedial education on infection prevention (HAD, 2003; Peponis, *et al;* 2017

RESEARCH METHODOLOGY

INTRODUCTION:

The research work intends to find out the Knowledge, Attitude and Practice of standard precautions among health care workers: a Study of General Hospital Babura. In this chapter, the methodology is presented under the following sub-heading; Research Design, Area of the study, Population of the study, Sample size and sampling techniques, Instrumentation, Validity of the instrument, Pilot study reliability of the instrument, Procedure for Data collection, and Method of Data analysis.

RESEARCH DESIGN:

The research design adopted in this study is descriptive survey. The researcher adopted descriptive survey design because data is collected from a large number of respondents through representatives (samples) and form the participants for the study, which represent the entire population.

AREA OF THE STUDY:

The area of the study is General Hospital Babura and is located in Babura metropolitan, Babura LGA of Jigawa state.

DEMOGRAPHY:

The Hausa people (sometimes grouped with the Fulani as Hausa-Fulani) are the largest ethnic group.

POPULATION OF THE STUDY:

The population of this study composes 288 staffs, all of Health workers in General Hospital Babura. The sample size was determined by Using Taro Yamane formula to calculate the sample size, the sample size was 167.

SAMPLE SIZE AND SAMPLING TECHNIQUES:

The study employed the Taro Yamane sample size formula in determining the appropriate sample size to be used for the study.

The formula is presented below

$$n = \frac{N}{(1 + N (e)^2)}$$

Where

n = is the sample size

N = is the total population

e = sample error term at $(0.05)^2$ interval.

1 = is constant value.

Hence, $n = \frac{288}{(1 + 288 (0.05)^2)}$

$$n = \frac{288}{(1+288x0.0025)}$$

$$n = \frac{288}{1 + 0.72}$$

$$n = \frac{288}{}$$

1.72

n = 167.4

n ~ 167

INSTRUMENTS FOR DATA COLLECTIONS:

Instrumentation refers to the tools or means by which a researcher attempt to measure variables or items of interest in the data collection process. The instrument used to collect data in this research is a ten (10) items structured questionnaire. The instrument is made up of two sections A & B respectively. Section A covers the personal data of the respondents such as gender, age, marital status, occupation, and educational background while section B is based on the substantive issues of the research objectives aimed at answering the research questions.

VALIDITY OF THE INSTRUMENT:

Validity indicates the degree to which an instrument measures what it is intended to measure. The instrument was submitted to my Supervisor, and another lecturer experience lecturer for validation. The validator has been requested to critically examine and assess all the items of the instrument based on the following.

Whether the questions are clear, precise and free from ambiguity

Whether the question match with the ability of the respondents.

Whether the language of expression is simple and unambiguous. The experts made constructive criticism and corrections on the basis of face and contents validity of the instrument.

RELIABILITY OF THE INSTRUMENT:

An instrument is said to be reliable only if it provides consistent result on repeated trials. In determine the reliability of this instrument; a pilot study was conducted in hospital environment using 10 health workers. The questionnaire items were administered and the data collected are analyzed, where the reliability coefficient value was ($r = 0.75$) was determined. This shows that the instrument is reliable and could be used for the study.

METHOD OF DATA COLLECTION:

The researcher administered the research instrument with a support of research assistance. Copies of the questionnaires were distributed proportionally to the randomly selected Health workers including health attendants of the study area of Babura General Hospital.

METHOD OF DATA ANALYSIS:

Data analysis is the process of bringing meaning to a raw data collected. The collected data on the Knowledge, Attitude and Practice of standard precautions among health care workers in General Hospital Babura, was analyzed and organized to ease identification, interpretation and comprehension. The statistical tools used in answering research questions were a frequency and table of percentage.

ETHICAL CONSIDERATION:

Ethical approval to carry-on the study was sought from the general hospital. And written consent form was signed by all the participants who agreed to participate in the study, through the questionnaire, after explanation of the study and the voluntary nature of participation. Both the questionnaire and the inform consent were explained using both local language (Hausa) and English to the respondents.

Confidentiality was guaranteed, names were not disclosed or appeared in the questionnaire form, and participants were not identified by any means. Data were keep under lock and key for safe keeping and protection.

DATA ANALYSIS:

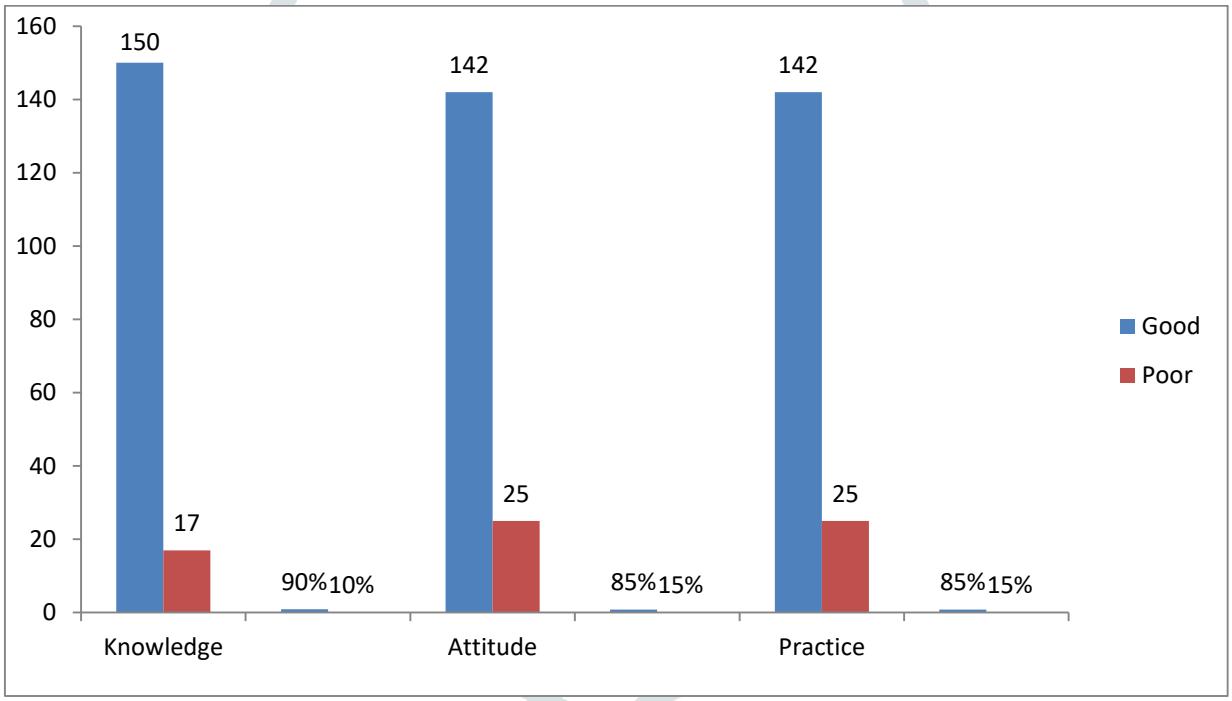
A total of one hundred and sixty seven (167) completely filled questionnaires were analyzed. Half 86(51.5%) of the respondents were between the ages of 36 – 50 years, while majority 95(57%) were male and two third 120(73%) were married. Furthermore, less than one third 43(26%) of the respondents have been in service between 11 – 20 years and 43(25%) were nurses and Midwives, while 117(70%) and 150(90%) had their source of information on standard precaution from seminar/workshop and medical school respectively In addition, more than one third 75(45%) believes sterilization is one of the method of treating working tools that comes in contact with intact mucous membrane and 56(33.5%) and 42(25.1%) affirmed HBV and HIV as disease condition for which standard precaution is compulsory.

Attitude of the respondents shows that majority 142(85%) agreed that standard precaution can prevent the spread of infectious diseases, while 142(85%) affirmed that they would report to the hospital following a needle stick injuries and 109(65%) agreed that they will screen the patient for HIV following a needle stick injury. Furthermore, majority 70% showed their willingness to perform vaginal examination procedure on an HIV and

HBV positive patient, and 150(90%) agreed to carryout delivery or assist in delivery on an HIV and HBV positive patient (Table 3).

Practice of standard precaution when managing patients. The respondents affirmed that they would recap needle after use 75(45%), detach needles from syringe after use 33(20%) and dispose needle and syringe immediately after use 150(90%). A higher proportion of respondents 133(80%) affirmed that sharps/needles should be disposed in waste bin, 150(90%) agreed that it should be disposed in a safety box and 84(50%) agreed that used needles should be burned and buried after usage.

Knowledge, Attitude and Practice of standard precaution among the respondents. As shown below, majority of the respondents demonstrated good knowledge 90%, Attitude 85% and practice 85% of standard precaution respectively.



CONCLUSION:

In conclusion, Standard Precaution as a life saving measure is more relevant in the medical field because of the increasing number of people living with HIV/AIDS, Hepatitis and other infectious diseases worldwide. The study shows the knowledge, attitude and practice of standard precautions among health care workers in General Hospital Babura, Jigawa State, was fair as majority of the health care workers have good knowledge, attitude and practice

of standard precautions respectively, and however, majority of the Healthcare workers still recapped needles, while few detach needles from syringes. The effective knowledge, attitude and practice of standard precautions among Health Care Workers in General Hospital Babura, Jigawa State, are of absolute necessity because of the rising population of HIV-infected individuals in the study area and lack of immunization of some of the respondents against HBV.

RECOMMENDATION:

Based on the findings of this study, it is recommended that:

- Both the management of the hospital, stakeholders at the state ministry of health and health workers union should strive to promote strict compliance to standard precautions in order to prevent infections from sharps, blood and body fluid pathogens.
- Hospital management to introduce or strengthening mandatory hand hygiene within the hospital management for all technical and non-technical staff, patient/client and patient relative also included to prevent spread of infections among patients/clients, health workers and other supporting staffs.
- Training and re-training of staffs regularly on standard precautions; Hepatitis B virus immunization should be made compulsory, needle recapping should be prohibited, unsafe and unwarranted use of injections should be minimized and a post exposure prophylaxis protocol should be in place with a well-known designated focal person.

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