ATTITUDINAL AND PRACTICAL DIFFERENCES BETWEEN MALE AND FEMALE PRIMARY HEALTHCARE WORKERS TOWARDS PREVENTION OF HEALTHCARE-ASSOCIATED INFECTION IN KWARA-NORTH SENATORIAL DISTRICT

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Abstract

This study examined Attitudinal and Practical Differences between Male and Female Primary Healthcare Workers (PHCWs) towards Prevention of Healthcare-Associated Infections (HAIs) in Kwara-North Senatorial District. The objectives of this research were to examine the attitudinal and practical differences between male and female primary healthcare workers towards prevention of healthcare-associated infections in Kwara-North Senatorial District. The study adopted a descriptive research design of the survey type, using a multi stage random sampling technique to select 760 PHCWs in Kwara North Senatorial District. Pretested semi structured questionnaire was used to collect data from selected PHCWs, while Mean and standard deviations *as well as* one sample t- test statistics *were used to analyze the data on research questions and hypotheses respectively. Level of*

significance used was set at P. value < 0.05. It was observed that there were more female PHCWs that had better attitude towards prevention of infections than their male counterparts. More so, higher number of the -female PHCWs had good practice of preventive measures during healthcare delivery process than their male counterparts (calculated t-value of 11.102 is greater than 1.972 t critical at df 758). It was therefore concluded that there was good attitude and practice among female PHCWs on preventive measures against HAIs in Kwara-North Senatorial District (calculated t-value of 20.313 is greater than 1.972 t critical at df 758). It was recommended that there is need to intensify refresher trainings on the importance of safety measures towards improving the attitudes and practices of preventing HAIs among PHCWs in Kwara-North Senatorial District.

Key words: *Attitudinal, Practical, Kwara North, PHCWs.*

INTRODUCTION

Healthcare Associated Infections (HAIs) formerly known as hospital acquired infections are those infections contracted by health care workers due to occupational hazards resulting from non-compliance with safety measures during handling of patients in healthcare facilities (Biberaj, Gega & Bimi, 2014). Hospitals provide a suitable transmission path-way for the spread of these infections, owing partly to poor knowledge, attitude and practices of infection control among health care workers on one hand and overcrowded patients in most clinical settings. Preserving the optimum health of health care workers (HCWs) has now become one of the main concerns across countries affected by the coronavirus in the world. Maintaining the health of the health care workers, especially the medical staff and cleaners, requires knowledge and awareness, followed by proper attitude for disease prevention and transmission (Maleki, 2020).

Okafor (2010) described attitude as the outward manifestation of one's inner values and believes that develop over a long time. As one grow, he/she watch a significant people around behaving in a particular way, while being told to accept certain things over others and learn from teachers and peers and come to value certain things over others as well, thus forming one's own value system. These in turn give rise to development of a person's attitudes. Attitude in this study refers to the manners by which primary healthcare workers take safety measures (positively or negatively) in the prevention of HAIs. Attitude is a complex behavioural change process that involves multiple interplay of factors that could either reinforce or deter the preventive behavioural change process in health workers(WHO/Safe Injection Global Network, 2003). Maleki (2020), reported from the evaluation of HCWs attitudes that some workers believed that protective and preventive measures should only be applied when managing people with severe symptoms of infectious diseases. Such attitudes are however not too good for effective prevention of Health Care Associated infections particularly among health workers.

Globally, unsafe injection practices are responsible for 5% Human immune-deficiency virus infection, 32% Hepatitis B virus infection, 40% Hepatitis C virus infection, viral hemorrhagic fever, abscesses, malaria, tetanus and possibility of emergence of other diseases in the future (Hauri, Armstrong & Hutin, (2003) and Miller & Pisani,1999). The current global burden due to past and present unsafe preventive practices reached 501,000 deaths, with the majority of deaths occurring in Asia and Africa and among persons aged ≥15 years (Miller & Pisani,1999). While there are data on prevalence of injection safety in some developed countries, there is no specific data of the burden in Africa due to poor reporting. In Africa, the awareness of healthcare safety among health care workers is poor.

Dapaah (2016), reported that preventive practices among health workers in some facilities were found to be contrary to the ideals of health care profession. PHCWs who refused to practice preventive measures seriously, were labeled uncooperative or irresponsible. Such PHCWs were sometimes sanctioned or punished by their superiors for objecting to their professional instructions or advice on preventive measures. Dapaah, (2016), establishes that the good practices of health workers in the facilities positively influenced the use of protective devices, and they stood in contrast to the often-reported negative practices in earlier studies.

Practice as reported by Okafor (2010), simply implies action and that the meaning of an idea or concept is only established when it is put into practice. A person who has been exposed to health knowledge is better disposed to adopt positive health practices than an individual who is ignorant of it. It was again observed that goals of health education are positive health practices and not mere health knowledge. In this present study practice connotes the implementation or adherence to universal best practices on precautions to reduce the transmission of health care associated infections among primary health care workers in the healthcare facilities.

Adebimpe, Asekun, Bamidele, Abodunrin and Olowu (2011), found in their studies that good knowledge and attitude, but poor practices characterizes primary health workers towards the prevention of Hospital Associated Infections in Osogbo. These difficulties seems to have increased the level of poor attitudes and bad practices among health personnel to precautions against HAIs. They also reported that stress from high load of work is associated with poor practice of hand washing. This compliance here means practice towards the prevention of Hospital Associated Infections. Poor preventive practices during the care of patients in intensive care units may also be a reason for the spread of multi-drug resistant organisms causing various infections. Ade and Hidayah (2017), reported that the large number of health workers with low knowledge, poor attitudes and non-adherence in the implementation of standard precautions makes increase the number of infections acquired in hospitals.

Compliance with guidance on correct Personal Protective Equipment (PPE) use in health care has been historically poor. PHCWs sometimes do not have confidence in infection control and the stress of PPE, discourages PHCWs' preventive practices (Zelnick, Gibbs, Loveday, Padayatchi & O'Donnell, 2013). PPE for respiratory protection such as masks and respirators, compliance has been reported to be around 50% on many occasions. Due to lack of proper fittings and poor use, real field conditions almost never match laboratory standards (Coia, Ritchie, Adisesh, Makison, Booth, Bradley, Bunyan, et al., 2013). More so, reports of hand hygiene shows that there is still large room for improvement and guidelines recommended education and training in combination with other implementation measures. From reports of HCWs, it is clear that most appropriate PPE is not user friendly in tropical conditions because it is not made of breathable material. Common reasons for breach in the barrier of using PPE are the workers sweating profusely and then instinctively wiping their faces, among other discomforts. Staff are being trained by their superiors on arrival to the epidemic or treatment site by repeatedly practicing donning and doffing PPE and running through drills of what they should do if the protocol is breached while in the "red zone" (i.e. the Ebola patient area) (Verbeek, Ijaz, Mischke, Ruotsalainen, Mäkelä, Neuvonen, et al 2015).

Additionally, preventive measures (such as N95 masks, surgical masks, goggles, and protective clothing) will be useful to ensure the .safety of healthcare workers during COVID-19 outbreaks as well as in the future. Inadequate personal protection before starting work and during the treatment of patients at the onset of the epidemic period of the disease can be cited as reasons for the health care workers becoming infected with the Coronavirus. This behavior was due to a lack of knowledge and awareness about the level of virulence of the SARS-CoV-2. The second reason for the health care workers becoming infected was the prolonged exposure to the infected environment and proximity to patients infected by the virus, which increases the risk of infection in HCWs (Wu, et al, 2019). At the onset of the epidemic period of the disease in China, 15 health care workers were affected by COVID-19, which rose to 1,716 by February 11, 2020 (Maleki, 2020). In view of the above, compliance on prevention against HAIs remains a serious challenge among PHCWs. It is on this note that the researchers deemed it fit to investigate the attitudinal and practical differences between male and female PHCWs towards the prevention of HAIs in Kwara North Senatorial District.

Statement of Problems

Healthcare-Associated Infections (HAIs) having being known for several decades among Primary healthcare workers remained alarmingly escalating and Kwara-North Senatorial District, is not an exception. The

rising cases of these infections among PHCWs which among others include: HIV, HBV, TB, Cholera, not long ago Ebola and of recent the emergence of the dreaded Corona Virus 19 (COVID 19) pandemic across the world. Bello, Asiedu, Adegoke, Quartey, Appiah-Kubi and Owusu-Ansah (2011), posited that these HAIs among healthcare workers increase the costs of health care delivery and places a serious economic challenges for the country. This escalating trend became worrisome that one wonders if the PHCWs have positive attitude with constant practice of preventive measures against the scourge. It became pertinent to exert efforts in investigating the course of the steady trend of these infections among PHCWs by ascertaining the differences in the attitudes and practice of preventive measures between the males and females in primary healthcare facilities. It was in view of the above, that the researchers deemed it fit to examining possible differences between the male and female PHCWs towards the prevention of the scourge in Kwara-North Senatorial District.

Objectives of the study

This study examined the attitudinal and practical differences between male and female primary healthcare workers towards the prevention of Healthcare-Associated Infections in Niger State.

Research Questions

The following research questions were answered in this study:

i Is there difference between males and females primary healthcare workers' attitude towards the safety measures on the prevention of healthcare-associated infections in Kwara-North Senatorial District?

ii Is there differences between male and female primary healthcare workers' practice towards safety measures in the prevention of healthcare-associated infections in Kwara-North Senatorial District?

Hypothesis

The following research hypotheses were formulated to guide the course of this study:

i There is no significant difference between male and female primary healthcare workers' attitude on safety measures towards the prevention of healthcare-associated infections in Kwara-North Senatorial District.

ii There is no significant difference between male and female primary healthcare workers' practice towards safety measures in the prevention of healthcare-associated infections in Kwara-North Senatorial District

Methods and Materials

A descriptive research design of survey type was used for this study. The population for this study comprises of all primary healthcare workers in Kwara-North Senatorial District. A total of 190primary healthcare facilities in Kwara-North Senatorial District were sampled from where sample of seven hundred and sixty (760) Primary healthcare workers were selected as respondents by multistage sampling technique. A researcher structured

questionnaire was used for the study. The instrument is made of two sections, 1 and 2. Section 1 focuses on demographic data of the respondents while section 2 elicited information based on the stated hypotheses. Validation of the instrument was carried out by three academics in the field of health education and their comments and observations were incorporated in the final draft of instrument used for the study. Reliability coefficient of 0.82 was obtained using test-retest methods with 2 weeks interval, the result obtained revealed that the instrument is reliable for the study, when the questionnaire was administered on a similar respondent in a different location. The administered questionnaires were collected by the researchers with the help of two research assistant who were trained prior to the questionnaire administration. Chi-square statistical analysis was used to analyse all the hypotheses at 0.05 level of significance using SPSS version 20.0.

Results

Research Question One

What is the difference between male and female primary healthcare workers' attitude on safety measures towards the prevention of healthcare-associated infections in Kwara-North Senatorial District?

Table I: Mean Scores of responses on differences between male and female primary healthcare workers in their attitude towards safety measures in the prevention of healthcare-associated infections

	Gender	N	Mean	SD	Mean diff
Attitude towards safety measures	Male	296	2.82	.96091	.0078
	Female	464	2.83	1.13728	

Table above shows the differences between male and female primary healthcare workers' attitude towards safety measures. It reveal that males have a mean score of 2.82 and standard deviation of .96091 while females have a mean score of 2.83 and standard deviation of 1.13728 in favor of the females with mean differences of 0.0078. So the females showed better attitude towards safety measures in preventing HAIs.

Research Questions Two:

What are the differences between male and female primary healthcare workers' practice towards safety measures in the prevention of healthcare-associated infections in Kwara-North Senatorial District?

Table II: Mean Score on differences between male and female primary healthcare workers' practice towards safety measures in the prevention of healthcare-associated infections

Variables	Gender	N	Mean	SD	Mean diff
Practice towards safety measures	Male	296	1.91	.50266	1.30027
	Female	464	3.21	1.02530	

Table 4.2.6 above shows the differences between male and female primary healthcare workers practice towards safety measures. It revealed that males have a mean score of 1.91 and standard deviation of 0.50266 while females have a mean score of 3.21 and standard deviation of 1.02530.The positive practice is in favor of the females with mean differences of 1.30027.

Hypothesis 1

There is no significant difference between male and female primary healthcare workers' attitude on safety measures towards the prevention of healthcare-associated infections in Kwara-North Senatorial District.

Table III: Result of t-test Statistics on differences between male and female primary healthcare workers' attitude on safety measure in the prevention of healthcare-associated infections

	Gender	N	Mean	SD	Df	t-value	t.crit.	P-value
Attitude towards safety measures	Male	296	2.8233	.96091	758	11.102	1.972	0.009
	Female	464	2.8311	1.13728				

t (758) = 1.972 P<0.05 Significant.

Results of the independent t-test statistic showed that there is significant difference between male and female. This was because the calculated p value of 0.009 is less than the 0.05 alpha level of significance, while the calculated t-value of 11.102 is greater than the 1.972 t critical at df 758.This showed that female primary healthcare workers' attitude on safety measures towards preventing HAIs is more positive than their male counterparts. Therefore, the null hypothesis which states that "there is no significant difference between male and female primary healthcare workers' attitude on safety measures towards the prevention of healthcare-associated infections in Kwara-North Senatorial District", was rejected. This result show that the female PHCWs complied with the definition of attitude by Okafor (2010), .who described attitude as the outward manifestation of one's inner values and believes that develop over a long time. As one grow, he/she watch a significant people around you behaving

in a particular way, while you are being told to accept certain things over others.

Hypothesis 2

There is no significant difference between male and female primary healthcare workers' practice towards safety measures in the prevention of healthcare-associated infections in Kwara-North Senatorial District.

Table IV: t-test analysis on difference between male and female primary healthcare workers' practice of safety measures towards the prevention of healthcare-associated infections.

	Gender	N	Mean	SD	Df	t-value	t.crit.	P-value
Practice of safety measures by PHCWs	Male	296	1.9088	.50266	758	20.313	1.972	0.00
	Female	464	3.2091	1.02530				

t (758) = 1.972 P<0.05 Significant.

Results of the independent t-test statistical analysis in table 4.3.6 above showed that there is significant difference between male and female primary healthcare workers' practice of safety measures towards preventing HAIs. This was because the calculated p value of 0.00 is less than the 0.05 alpha level of significance, while the calculated t-value of 20.313 is greater than the 1.972 t critical at df 758. This showed that female primary healthcare workers practice safety measures towards preventing HAIs more than their male counterparts. Therefore, the null hypothesis which says "there is no significant differences between male and female primary healthcare workers' practice towards safety measures in the prevention of healthcare-associated infections in Kwara-North Senatorial District", was rejected. The practice of male PHCWs as found in this study, fell in the category of defaulters, reported by Dapaah (2016), who stated that PHCWs who refused to practice preventive measures seriously, were labeled uncooperative or irresponsible. Such PHCWs were sometimes sanctioned or punished by their superiors for objecting to their professional instructions or advice on preventive measures.

Conclusions

On the basis of the findings of this study, the following conclusions were drawn:

1. Female primary healthcare workers have more positive attitude towards safety measures for the prevention of healthcare-associated infections, than their male counterparts in Kwara-North Senatorial District.

2. Female primary healthcare workers practice safety measures towards the prevention of healthcare-associated infections more than their male counterparts in Kwara-North Senatorial District.

Recommendations

On the basis of the conclusions drawn from this study, the following recommendations were made:

1. The management of healthcare facilities should remind healthcare workers that infections have no respect for gender therefore, both male and female healthcare workers should be proactive in their attitude and practice towards the prevention of HAIs through task force on compliance.
2. Government in collaboration with international NGOs should ensure that adequate safety measures are available for both male and female PHCWs across healthcare facilities in Niger State, towards preventing HAIs among healthcare workers.

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