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Occupational Health and Safety Readiness of Health Care Workers at Kapsabet County and Referral Hospital during Coronavirus Disease-19 Era

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Abstract

Hospitals have many unique hazards that can potentially affect the health of employees and thereby affect their efficiency at work. It was noted that Kapsabet County and Referral hospital (KCRH) did not have a department that deals with Occupational safety and health (OSH). There was a lack of system for recording hazardous exposures and poor servicing of fire extinguishers in the wards. The purpose of the study was to assess occupational health and safety readiness of health care workers at Kapsabet County and Referral hospital during COVID-19 pandemic period. The study adopted cross sectional descriptive research design. A sample size of 40 was selected using non-probabilistic convenient sampling technique. Quantitative data was collected using questionnaire while qualitative data was gathered using observation schedule. Data was analyzed using frequencies and percentages. Most (80%) were aware about OSH and the OSH preventive measures. Majority (82%) were aware of hazards they were exposed to. Almost two-thirds (70%) washed their hands after every procedure and majority were provided with PPEs. Most (88%) had not received any training on OSH at work, while 67% reported that they did not know any OSH policy in the hospital. About 80% reported not being aware of anyone in charge of OSH activities in the hospital. The OSH checklist score was an average of 2.5 which was rated as poor. The hospital should improve on measures of occupational health and safety which would build on a good background of OSH awareness the health care workers of KCRH already have.

Key words: Occupational health, safety readiness, health care workers

1. INTRODUCTION

Occupational health is an area in public health that promotes and maintains the highest level of physical, mental and social well-being of workers in all occupations (International Labour Organisation(ILO), 2021). The main objectives of occupational health and safety(OSH) is to main and promote workers' health and working capacity, to improve the working conditions and the working environment; to develop work organization and work cultures that reflect essential value systems in order to improve OSH (World Health Organization & International Labour Organization, 2021).

Hospitals have many unique hazards that can potentially affect the health and life of employees (Gorman et al., 2013). These hazards may increase accidents at work, negatively influence security of both patients and health staff, and decrease efficiency and work performance. An estimated 100,000 people die from occupational illnesses, while about 400,000 new cases of occupational diseases are diagnosed every year(Aluko et al., 2016).

The Kenya Occupational Safety and Health Act (OSHA) obligate employers to ensure the provision of OSH information and training to all persons in their workplaces. However, the risk of occupational health among the healthcare workers (HCWs) remains high. A fundamental principle in the Kenyan Occupational Health and Safety Act 2007 is that an employer such as the board of a public hospital, should provide and maintain a working environment that is safe to the health of workers (Occupational Safety & Health Act, 2007).

OSH should be a priority in the hospital in order to ensure a safe work environment for HCWs and in turn enhance service delivery.

During the attachment at KCRH, the researcher was able to note a number of occupational health and safety issues. There was no specific person/department to deal with OHS in the hospital which could potentially result to a lot of unreported hazards, near misses and injuries in the workplace. There was poor waste disposal in the wards which posed a risk to those working in this area. The fire extinguishers installed in the wards had not been serviced since the year 2014 yet it is mandatory requirement that they be serviced annually.

It is on the basis of the safety practices that the study sought to assess OSH awareness, practices and to explore OSH measures at KCRH during the COVID-19 era.

Research Objectives

1. To establish the level of awareness of healthcare workers on OSH measures during COVID-19 era in Kapsabet County Referral Hospital wards in Nandi County, Kenya.

2. To assess healthcare workers OSH practices during COVID 19-era in Kapsabet County Referral Hospital wards in Nandi County, Kenya.
3. To determine the availability of OSH measures for health care workers during COVID 19-era in Kapsabet County Referral Hospital wards in Nandi County, Kenya.

2. METHODOLOGY

Study Design

The study adopted cross-sectional descriptive research design to describe characteristics of HCWs on OSH compliance in the wards at KCRH.

Study Population

The study population comprised all health workers in the wards at KCRH. This study excluded from participation HCW working in other sections other than wards in the hospital and participants who did not give consent to participate in the study.

Sampling

Researcher sampled from among available HCWs working at the wards of KCRH during the study period. Non-probabilistic sampling technique was used to conveniently sample any HCWs available and willing to participate within the study wards. The calculated study sample size was 150. However, due to time and financial constraints, the researcher managed to gather data from 40 study participants.

Data Collection Tool and Technique

This study utilized respondents structured questionnaire and a checklist. Both were developed through collating questions from various former studies on the same subject and available from online sources. The questions were adapted and customized to the setting and fitting to the study objectives. The questionnaire used had both open ended and closed questions.

The checklist had indicators adapted from previously used tool and available from various online sources. Adapted indicators were those judged by the researcher to be fitting to answer the prospective study objectives.

Questionnaire data were collected through interviewer administered interviewing while checklist data were collected through walkthrough observations accompanied by asking of questions to various available respondents. These data were all captured in paper-based data capture tools.

Data in paper-based tools were later abstracted by the researcher into an electronic platform-Google Forms. This was aimed at supporting seamless data access by the researcher as well as providing data security and storage.

Data Analysis

Data was imported to Microsoft Excel and R Software. The data was then cleaned, prepared and analyzed using both Microsoft Excel and R software. R software was used in producing summaries while Microsoft Excel was used to produce graphical visualizations generated from data summaries. Data was presented in tables, bar charts and pie charts in the form of frequencies and percentages.

Ethical Considerations

Approval to conduct the study was given by the medical superintendent in charge of KCRH before commencing the study. Written informed consent was sought from the respondents and they took part only after reading the consent form and being informed about the purpose of the study, agreeing to the terms and signing the form. The study respondents were assured of confidentiality and personal identifiers were not collected in the study.

3. RESULTS

3.1Sociodemographic characteristics of HCWs

The table contains socio demographics results of the 40 respondents.

Table 1: Socio demographic characteristics

Characteristic	**Frequency**	**Percentage%**
Age		
20-29	14	35
30-39	15	37.5
40-49	8	20
50-59	3	7.5
Sex		
Female	15	62.5
Male	25	37.5
Education level		
Certificate	1	2.5

Diploma	19	47.5
Degree	14	35
Post graduate diploma	3	7.5
Masters	3	7.5
Staff category		
Clinical officer	10	25
Nurse	18	45
Medical Officer	6	15
Health records officer	2	5
Nutritionist	1	2.5
Pharmacist	3	7.5

3.2 Awareness of HCWs on occupational health and safety

Results indicated that out of 40 respondents who participated in the study, 32(80%) were aware of OSH while 8(20%) did not know what OSH is.

Majority 34(85%) of the respondents learnt about OSH during school training, 5(12%) during employment seminars and training, 1(3%) said there was no specific place where they learnt about OSH. There was no one who got their information from media, friends nor colleagues.

Most 33(82%) of the respondents were aware of the Occupational hazards they were exposed to at work while 7(18%) were not aware.

Majority 32(80%) of the respondents were aware of the preventive measures they can take to minimize exposure to hazards while the least at 8(20%) were not aware.

3.3 Occupational Health and Safety practices

Most (24) of the respondents had experienced needle stick injuries, followed by contact with body fluids and blood (22), slips/trip/falls (15), allergic reactions (10) and cuts (8). The least injuries included backaches (3) and violence at work (1). There were no injuries from burns. Only one respondent had not experienced any injury at work. This is summarized in the figure below.

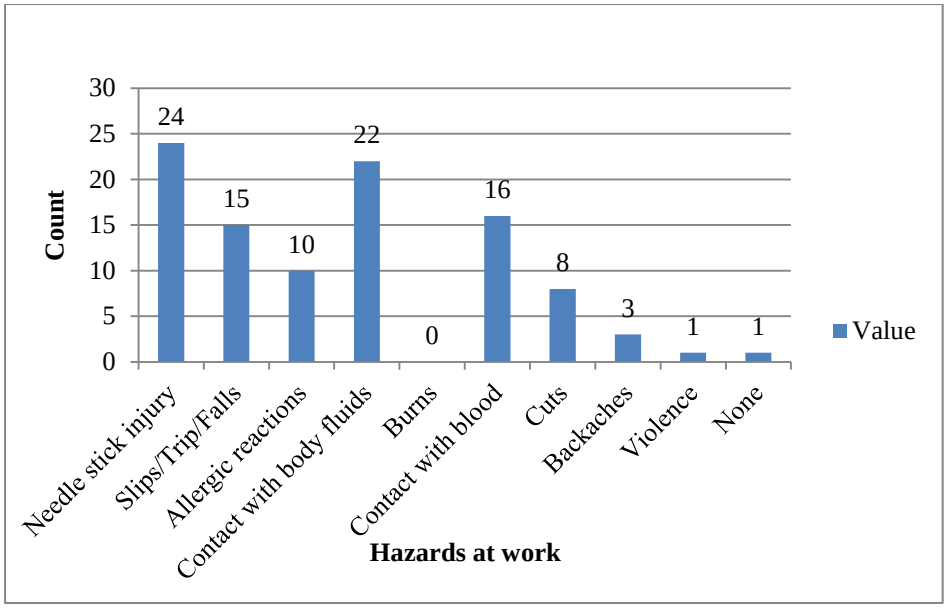

Figure 1: Hazards experienced at work

Majority 28(70%) washed their hands after every procedure followed by 7(18 %) who washed their hands sometimes and the least 5(12%) did not wash their hands after every procedure.

Majority 31(77%) of the respondents were provided with PPE at work while 5(13%) were provided with PPEs sometimes while the remaining 4(10 %) were not provided with PPES at work place. Most of the respondents were provided with facemasks and gloves while the least were provided with faceshields.

3.4 Availability of occupational health and safety measures

Over half 27(67%) said that there was no OSH policy in the hospital, followed by 8(20%) who said there was an OSH policy while 5(13%) did not know if there was an OSH policy in the hospital. Most of the HCWs 35(88%) did not receive any training /education at work about OSH while the least 5(12%) received some training about OSH at work. Most 28(70%) of the respondents said there was no person/department responsible for OSH in the hospital followed by 8(20%) who said there was someone responsible while the least 4(10%) did not know if there was anyone/department responsible for OHS in the hospital. Majority 33(83%) indicated that there was no system for HCWs in the wards to report hazardous exposures and safety concerns in the work place while 7(17%) said there was a system for reporting hazardous exposures and safety concerns.

3.5 OHS checklist

Data obtained from the checklists was organized into tables per data category (flooring, ventilation and lighting, office areas, waste disposal, fire and evacuation). An average from each category was recorded. 1, 2-Poor 3,4- Satisfactory 5- Good. From the checklist it scored an average of 2.5 which was rated as poor.

Table 2: Occupational health and safety measures in the wards

Category	1	2	3	4	5
Floors				□	
Lighting			□		
Windows			□		
Office areas		□			
Waste disposal	□				
Fire& evacuation	□				
Equipment				□	

4. DISCUSSION

4.1 Socio demographic factors

In this study, most respondents were nurses, females and married. This was in agreement with similar study findings by Aluko et al., (2016). Majority of the respondents were between 30-39 years followed by those between 20-29 years. This was in agreement with a similar study by Aluko et al., (2016) where majority of the respondents were between 30-39 years.

4.2 Awareness of HCWs on OSH

From the findings, most 32(80%) of the HCW were aware what OSH was. This was in agreement with a study conducted in Malaysia where the level of OSH awareness and knowledge among HCWs was high (75%) (Lugah et al., 2010).Other studies also recorded high awareness on OSH (Aluko et al., 2016; Kinyanjui Njogu, 2019). This means that majority of health service providers are aware of the critical importance of OSH in a hospital environment. Most (85%) of the respondents learnt about OSH during school training and 12% during employment seminars and training. There was no one who got their information from media, friends nor colleagues.

Most 33(82%) of the respondents were aware of the Occupational health hazards they were exposed to at work. This concurred with other studies where more than 80% of the respondents were aware about occupational health hazards at work (Kinyanjui Njogu, 2019);(Alhassan & Poku, 2018). Majority 32(80%) of the respondents were aware of the

preventive measures they can take to minimize exposure to hazards. This was not in agreement with a study by Aluko et al., (2016) where almost all the respondents 99.7 % were aware of safety precautions against occupational hazards.

4.3 OSH practices of healthcare workers

It was noted that most of the respondents had experienced needle stick injuries, followed by contact with body fluids and blood, slips/trip/falls, allergic reactions and cuts. The least injuries included backaches and violence at work. There were no injuries from burns. This was in agreement with a study by Che Huei et al., (2020) who identified a wide range of OSH hazards included biological hazards and physical hazards. This was also in agreement with a study by Aluko et al., (2016) where the most common hazards experienced were: physical hazards, biological hazards and the least being ergonomic hazards.

Most 28(70%) washed their hands after every procedure. This was in agreement with a study done in Uganda where most(79.5%) of the health care workers practiced handwashing (Ndejjo et al., 2015). This however contrasted with a study by Aluko et al., (2016) where all respondents washed their hand washing after each and every clinical procedure. Hand washing is an essential practice in preventing cross infection. Majority of the respondents were provided with PPE at work place. Most of the respondents were provided with facemasks and gloves while the least were provided with face shields. This is in agreement with the labor code of Kenya which requires employers to provide free PPEs to workers whose work entails some form of hazardous exposures. The utilization of PPEs has been recognized as important infection control measure in the healthcare sector which minimize exposure to occupational health hazards(WHO, 2020).

4.4 Availability of OSH measures

Over half 27(67%) said that there was no OSH policy in the hospital. This was contrary to the recommendations by ILO (2021) that requires organizations to have their own safety policy. The OSH policy is the basis of the OSH management system and it should be guided by the existing laws and policies on OSH.

It was noted that most of the HCWs 35(88%) did not receive any training/education at work about OSH. This was not in agreement with the MOH, (2020) which recommends that all HCWs should be trained on OSH guidelines and be taken through a safety orientation of the facility during employment exercises. According to Winnie., (2011) training is the most

effective approach to dealing with occupational health management issues and the cornerstone of preventive care and should be a priority by any employer. In many cases, trained employees are more likely to be keen of the existing risk and ways to minimize these risks.

Most of the respondents said there was no person/department responsible for OSH in the hospital. This was in agreement with a study by Lugah et al., (2010) where most of the respondents agreed that there was no person in charge of OSH in the hospital.

Majority 33(83%) indicated that there was no system for HCWs in the wards to report hazardous exposures and safety concerns in the work place. This was not in agreement with Michaels and Wagner (2020) who stated that employees should have a good-clarified route of communication in work places to report work-related injuries and illnesses. This also concurred with a study by Fagan and Hodgson (2017) who noted that many cases of work-related injuries always go unrecognized at workplaces. Report of the injuries and illnesses is important for actions to be taken to improve the situation and prevent future occurrences.

From the checklist it scored an average of 2.5 which was poor. The lighting and ventilation score was satisfactory. This was in agreement with the MOH, (2020**)** that requires each workstation to have circulation of fresh air with adequate ventilation such as cross and through ventilation. There should also be enough and suitable lighting whether natural or artificial in every part of the workplace (Che Huei et al., 2020).

The floors had a good score. This was in agreement with the recommendations by the MOH OSH guidelines, (2014) where floors should be drained to ensure they are dry to avoid slips and falls and easily washable. The fire fighting and evacuation category had a poor score. There was absence of fire extinguishers at some points and the servicing of the fire extinguishers was long overdue. This was not in agreement with OSH guidelines (2014) which recommends that all work rooms should be provided with appropriate firefighting appliances and adequate means of escape, in case of fire for employees(MOH, 2014).

Waste management had a poor score. Some of the bins were full and required to be emptied. The waste disposal liners used were of the same color codes. This was not in line with the color codes for hospitals as recommended by National Environmental Management Authority which are; yellow for infectious and sharps waste, black for non-infectious and the WHO recommends red for pathological and/or highly infectious waste (MOH, 2020). Waste segregation reduces the incidence of occupational health hazards. Proper waste bags which are colored or labeled in accordance with the policies or regulations should be provided.

5. CONCLUSION

From this study, it was concluded that there was high awareness on OHS among the HCWs at KCRH. Most of them were aware of the OSH hazards they are exposed to and the preventive measures they can take. However, more seminars and workshop are required to bridge the gap identified from HCWs who were not aware of OSH.

OSH practices of healthcare workers in the wards of KCRH was fair. Most still experienced needle stick injuries, followed by contact with body fluids and blood. The impact of such hazards on HCWs posed a serious public health issue in KCRH; therefore, controlling, eliminating, or reducing exposure could contribute to a stronger healthcare workforce with great potential to improve patient care and the healthcare system in KCRH. The OHS measures in the wards of KCRH was poor. There was no OHS policy and majority indicated that there was no system to report injuries and hazards at work. From the checklist it scored an average of 2.5 which was poor. Having proper OSH measures in the hospital is therefore important to reduce the incidence of occupational health hazards.

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