COLLEGE OF HEALTH SCIENCE, SCHOOL OF MEDICINE

DEPARTMENT OF EMERGENCY MEDICINE AND CRITICAL CARE

ASSESSMENT OF KNOWLEDGE, ATTITUDE, PRACTICE AND ASSOCIATED FACTORS TOWARDS INFECTION PREVENTION AMONG CLEANERS WORKING IN TIKUR ANBESSA SPECIALIZED REFERRAL HOSPITAL, ADDIS ABABA, ETHIOPIA, NOVEMBER TO JUNE 2019.

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ADVISORS:

1. DR. TIGIST WORKU (MD, EMCC)
2. ACHAMYELESH TADELE (BSC, MSC, EMCCN)

A RESEARCH THESIS SUBMITTED TO ADDISABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES, DEPARTMENT OF EMERGENCY MEDICINE AND CRITICAL CARE FOR PARTIAL FULFILLMENT OF THE DEGREE OF MASTER'S OF SCIENCE IN EMERGENCY MEDICINE AND CRITICAL CARE NURSING.

JUNE, 2019

ADDIS ABABA, ETHIOPIA

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ASSURANCE FORM

This thesis by Buna Yumura is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of master in emergency medicine and critical care Nursing

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By my signature below, I declare and affirm that this thesis is my own original work in partial fulfillment of the requirements for the degree of master in Emergency medicine and Critical care Nursing

I have followed all ethical principles of scholarship in the preparation, data collection, data analysis and completion of this thesis. All the sources of the materials used for this thesis and all people and institutions who gave support for this work are fully acknowledged. I affirm that I have cited and referenced all sources used in this document. Every effort has been made to avoid plagiarism in the preparation of this thesis. Brief quotations from this thesis may be used without special permission provided that accurate and complete acknowledgement of the source is made. Requests for permission for extended quotations from, or reproduction of, this thesis in whole or in part may be granted by the Head of the Department or all advisers of the theses when in his or her judgment the proposed use of the material is in the interest of scholarship and publication. In all other instances, however, permission must be obtained from the author of the thesis.

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Acronyms and Abbreviations

AAU – Addis Ababa University

CDC-Center for Disease Control

FMOH- Federal Ministry of health

HAIs-Hospital Acquired Infections

HBV-Hepatitis B Virus

HCV-Hepatitis C Virus

HIV-Human Immune deficiency Virus

IP-Infection Prevention

KAP-Knowledge, Attitude and Practice

LMICs-Low and Middle Income Countries

MDROs-Multi Drug Resistant Organisms

NGO-Non Governmental Organization

NHS-National Health Service

NI-Nosocomial Infection

PPE-Personal Protective Equipments

SPSS- Statistical Package for Social Science

TASH-TikurAnbessa Specialized Hospital

TB-Tuberculosis Bacteria

UK-United Kingdom

WHO-World Health Organization

Abstract

Back ground: Infection prevention and control is referred to "the measures, practices, protocols and procedures aimed at preventing and controlling infections and the transmission of infections in the health care settings". The high burden of health care associated infections is due to lack of standardized infection prevention program, which is neglected due to limited resources, poor sanitary conditions and hygiene practices.

Objective: The aim of this study is to assess knowledge, attitude and practice of cleaners towards infection prevention and associated factors at TikurAnbessa specialized hospital, Addis Ababa, Ethiopia, from November 2018-June 2019.

Methodology: An Institutional based a descriptive cross-sectional study design was carried out at TikurAnbessa specialized hospital, Addis Ababa, Ethiopia from November - June 2019 G.C. A total of 211 cleaners participated in the study with a response rate of (91%). Study participants were recruited by simple random sampling and interview was conducted with a structured questionnaire to collect data. The collected data was coded and entered in to Epi data 4.2.0 and transferred to SPSS version 21 for further analysis. Logistic regression model was used for association between independent versus out-come variables and considering the AOR, 95% CI and $p < 0.05$ cutoff point as significant for all the independent variables.

Result: The knowledge scores of participants had a mean value of 9.4 (SD = 1.81) out of 18. The mean score of attitude was 10.7(SD =1.76) out of 17 and the mean score for the cleaners level practices was found to be 9.8 (SD =2.20) out of 21 possible maximum score. There was a significant relationship between cleaners' knowledge scores and the level of work experience, attitude, and level of practice and attitude was significantly associated with inadequate knowledge. Finally, cleaners' inadequate knowledge was factor for poor infection prevention practices.

Conclusion and Recommendation: Results showed that cleaners had poor performance and inadequate knowledge towards infection prevention. However, majority of cleaners had favorable attitude towards infection prevention. The hospital's administrative bodies should provide convenient training program regarding infection prevention to hospital cleaners.

Key words: Cleaners, Knowledge, Attitudes, Practices, Infection prevention

CHAPTER-ONE

1. INTRODUCTION

1.1 Background

Infection is the invasion and multiplication of microorganisms such as bacteria, viruses, and parasites that are not normally present within the body. An infection may cause no symptoms and be subclinical, or it may cause symptoms and be clinically apparent. It may remain localized, or it may spread through the blood or lymphatic vessels to become systemic (1).

Infection prevention and control is referred to "the measures, practices, protocols and procedures aimed at preventing and controlling infections and the transmission of infections in the health care settings" (2).Nosocomial infection is the global problem necessitates a more stringent implementation of infection control measures (3).

Detection of risk groups and infection sources, knowing the routes of transmission of infections, and educating patients and the staff in the hospital who are responsible for the patients' health care are important for the prevention of NI (4).

Cleaners are non-medical personnel, responsible for cleaning the wards and operating theatres, sorting and washing of linen and disposing of waste. Cleaners play a critical role in infection control as they work in areas where they are in close contact with both patients and medical waste (2). The high burden of health care associated infections (HCAIs) is due to lack of standardized infection prevention program, which was neglected due to limited resources, poor sanitary conditions and hygiene practices (5).

Cleaning is a form of decontamination that renders the environmental surface safe to handle or use by removing organic matter, chemicals and visible soils, all of which interfere with microbial inactivation and failure to do this can lead to health facility acquired infections to the patient, staff and community as whole through cross contamination via directly or indirectly(6).As stated by WHO from 35 million health facility workers, 3 million of them experience needle stick and sharp injuries annually worldwide (7).In the United Kingdom alone over 100,000 cases of needle stick and sharps injuries are reported annually, this calls for concern and transmission possibilities of about 20 various blood borne pathogens which includes HIV, Hepatitis B and Hepatitis C viruses (8). Implementation of infection control

guidelines translates knowledge into action. Implementation includes the development and maintenance of an attitude and an awareness of infection control with an acceptance of individual and collective responsibility to prevent infection (9).

Today's rapidly changing health care environment makes it difficult to protect patients and health facility workers from the transmission of pathogens. That mean the over crowdness, increasing in numbers of emergency cases and lack of adequate resources and supplies' to manage patients and health facility workers (10). This may lead to Nosocomial infections, for which the hospital can be held responsible. Harris and Samore (2000) support the view that hospital acquired infections pose a threat to hospital workers, patients and the community and represent a major cause of morbidity and mortality in hospitalized patients (11).

Hospitals generate both medical and general waste. Waste generation depends on numerous factors such as established waste management methods, type of health care establishment, hospital specialization, and proportions of patients treated on a day care basis (12).

Environmental cleaning is important for reducing microbial contamination of surfaces and subsequent risk for hospital acquired infections (HAIs). Environmental cleaning is a complex, multifaceted process and involves the physical action of cleaning surfaces to remove organic and inorganic material, followed by application of a disinfectant, as well as monitoring strategies to ensure the appropriateness of these practices. In addition, contextual factors, such as management tools and organizational structure, and culture can affect the implementation and effectiveness of cleaning, disinfecting, and monitoring strategies (14).

An estimated 10% of hospitalized patients in developed countries and 25% in developing countries develop HAIs and subsequently results in adverse healthcare outcomes as increased hospital stay, economic burden, significant morbidity, and mortality. It is an unevenly distributed in developing countries, more than 90% of these infections occurred (15).

The Ethiopian ministry of Health formulated a policy and strategy on infection control.The purpose of this policy is "to set minimum national standards for the effective prevention and management of health care associated infections, so that hazards associated with biological agents are minimized for patients, visitors and health care personnel in health care establishment" (2).

1.2 Statement of the Problem

A Nosocomial infection (NIs) cause serious morbidity, mortality and increase health costs throughout the world (3).Globally, it is estimated that more than 1.4 million people are suffering from infections acquired in hospitals. More over annually in the United States, approximately 2 million patients develop HAI, and nearly 90,000 of these patients are estimated to die; this ranks HAI as the fifth leading cause of death in acute care hospitals (16).

Cleaning of healthcare facilities is performed for medical and cultural reasons. Maintaining an environment with a low pathogenic burden is essential for avoiding complications during the care and recuperation of patients. A healthy, safe, and aesthetically pleasing space with clean surfaces is comforting to patients and their families by giving an impression of good quality care without additional health hazards. (17)

Worldwide, it is estimated that about 2.5% of HIV cases and 40% of HBV and HCV cases among healthcare facility workers occur as a result of these occupational exposure (18).Each year as a consequence of occupational exposure, an estimated 66,000 Hepatitis B, 16,000 Hepatitis C and up-to 1,000 HIV infections occur among health facility workers (4). These infections are preventable through infection control measures which significantly reduce the risk of HIV and Hepatitis transmission among health facility workers (19). Health facility workers in developing countries are particularly at increased risk of infections from blood-borne pathogens because of the high prevalence of such pathogens in their communities as well as the lack of basic personal protective equipment like gloves, gowns and goggles (20). Despite following 'universal precautions', accidental needle-stick injuries and Mucocutaneous blood exposure still occurs while handling high risk fluids (21). As a result exposed workers experience significant fear, anxiety and emotional distress that can result in occupational and behavioral changes (22).

As a research conducted in south Asia indicated out of 100 cleaners only 68% respondents had benefitted by the infection prevention training (23). As a research conducted in Tanzania shows that out of 18 cleaners (93.3%) of them were not trained on issues related to infection prevention and occupational risk reduction. Due to lack of knowledge through training (31.9%) of cleaners disposes wastes improperly and (7.2%) sustained needle-stick injuries from needles concealed in bed linen (24).

There is an available low-cost intervention for infection prevention. Even though, the proportion of HCAIs is much higher in sub-Saharan Africa. Data available show that, 3.4 - 10.9% of hospital-associated infections often result to mortality in most developed countries though these figures are suspected to be higher in developing countries of sub-Saharan Africa including Ethiopia. This burden of preventable infectious diseases indicates that infection control should be a priority programme in the health setting. Cleaners work in areas where the transmission of infection occurs handily. Therefore, it is crucial that they adopt certain principles of infection control when executing their duties (25).

As different literatures shows that Cleaners need to be taken cognizance as part of health care workers in terms of infection control. Due to their level of education they might be less considered when dealing with issues of infection control such as training and monitoring compliance. The low levels of adherence could have been exposing both cleaners and patients to HAIs'such as hepatitis B, HIV and TB. Currently, a number of cleaners are suffering with needle stick injury and other hospital acquired infections (18, 19). Cleaners employed from the agency to the hospital and have no continued training and awareness towards infection prevention.

Even the burden of preventable infectious diseases is high prevalence in worldwide and in Africa, there is no research conducted in Ethiopia among cleaners to assess their KAP towards infection prevention. For this, improving the knowledge, attitude and practice of hospital cleaners towards infection prevention is paramount to reduce the burden of HAIs. It is important to carry out this study so as to identify barriers to achieving the expected standards so as to minimize the risk of transmission of these infections.

The research question is:

- What is the level of knowledge, attitude and practice of occupation safety towards infection prevention among cleaners in health facilities?
- What is the associated factor towards infection prevention among hospital cleaners?

1.3 Significance of the study

This study aims to identify any gaps in the knowledge and attitudes of cleaners about infection control and to determine if their infection control practices are in line with guidelines.

In investigating the practices of hospital cleaners, the institution will be assisted to identify gaps in knowledge and try to strengthen practices.

Findings of this study will also contribute to:

Cleaners practice: The findings of this study will create awareness to cleaners in safe handling of infectious wastes and towards infection prevention by helping the institution in developing safe environmental cleaning guide lines, other quality improvement projects as study finding will any the gaps. This may lead to the eventual improvement in the quality of infection prevention in the hospital.

TikurAnbessa hospital and cleaners administration: This may be first research on the knowledge, attitude and practice of infection prevention area of cleaners in TikurAnbessa hospital and the findings of this study can be a milestone for future planning and policy making at the local levels of cleaners administration in TikurAnbessa hospital.

Researcher and other nongovernmental organizations: The result of this study will be used as a reference for other researchers who have interest in the area for further investigation and will help to develop specific programs that could enhance cleaners' knowledge, attitude and practice of infection prevention.

The hospitals managers will benefit from this research because it will assist them to develop a code of good conducts and policies that will protect cleaners in their various hospitals and also guide employers to provide protective tools and safety wear for their workers.

CHAPTER- TWO

2 LITERATURE REVIEW

2.1 Introduction

Health care associated infections are major burdens for patients, society and health care management. The emergence of life-threatening infections such as severe acute respiratory syndrome(SARS) and re emerging infectious disease like plague and tuberculosis have highlighted the need for efficient infection control programmes in all health care settings and capacity building for health care facility workers so they can implement them(26) .

WHO estimate contaminated needles and syringes are responsible for 16 million hepatitis B Virus (HBV) transmissions, 4.7 million hepatitis C virus (HCV) infections and the transmission of 160,000 human immunodeficiency virus (HIV) transmissions recorded. If the needles and syringes used in hospitals were disposed and managed properly/safely, most of these infections could have been avoided (27).

According to the World Health Organization (WHO) fact sheet of 2011, 20% of health care activities general waste is hazardous and may be infectious, toxic or radioactive. Improvements in the health and environmental impacts of cleaning must be considered along with concerns for infection prevention and control. Health care settings are engaged in a battle against healthcare associated infections (HAIs) (28). The importance of infection prevention and control is increasing due to rapidly developing strains of multi-drug resistant organisms (MDROs) that can result in serious illness and even death in workers and patients.

In 2002, US hospitals reported about 1.7 million HAIs, associated with almost 99,000 deaths (29). The proportion of S. aureus bloodstream infections due to MRSA increased significantly from 27% in the period of 1990-1994 to 54% during 2000-2004 ($P > .001$).(12) Studies have estimated that antimicrobial drug-resistant infections have increased direct costs to society by 30%-100%. The excess cost of a single MRSA infection compared with a methicillin-sensitive S. aureus infection was estimated to range from $3,000 to $25,000. This suggests that MRSA costs the healthcare system (patients, health care workers and healthcare facilities) an estimated additional $830 million to $9.7 billion in 2005 excluding the indirect costs related to psychological suffering of patients and their family members as well as lost work time spent in the hospital (30).

As the Centre for Disease Control (CDC) defines health care personnel as "all paid and unpaid persons working in health care setting who have the potential to exposure to infectious materials including body substances, contaminated medical equipment, contaminated environmental surfaces and contaminated air", literature on different groups of health care facility workers such as nurses, doctors, attendants, general assistants and cleaners were reviewed (31).

2.2 Sources of Hospital Acquired Infections and their Mode of Transmission

According to Duse (2005), in order to develop infection control interventions, there is a need to understand the sources of health care infections and their mode of transmission (32).

In the hospital environment or any health facility, there are numerous sources of infection and general assistants are exposed to a number of these sources of infections, resulting in nosocomial infections. Prüss, Kay, Fewtrell, and Bartram (2002) explain that the main sources of infections in hospital are personnel, patients and fomites such as doctors' white coats, nurses' uniforms, hospital garments, privacy curtains, stethoscopes, bed rails and common hospital surfaces (33).

Nosocomial infections are transmitted in three different ways, namely through contact, droplet spread, and air bone spread (33).

Contact - The transmission occurs through skin to skin contact or where microorganism through touching the patient the health care worker transfers infection from one patient to another. This happens mostly through contaminated hands of health care workers.

Droplet spread - This type of spread occurs during coughing, sneezing, talking and during procedures such as bronchoscopy. Larger droplets do not suspend in the air as such they fall in contact with the patient.

Airborne spread - This occurs similar to droplet i.e. through coughing, sneezing, talking.

Here the droplets are smaller such that they suspend in the air for a longer period and able to travel for a longer distance to infect the person who is far from its origin.

In addition to the above three, there are other methods of spread of infection like contaminated water supply, equipment needles and solutions (33).

2.3 Knowledge

Prüss et al (1999) stress the importance of health workers knowledge of infection control, in particular those responsible for cleaning health facilities (12). Knowledge plays a critical role in ensuring that employees adhere to the rules that will lead to the elimination of health care associated infections. Prüss et al., (1999) further state that knowledge about infection control depends on various factors: training, having a positive attitude and commitment (12).

The study conducted on 50 ward general assistants or cleaners show that the correlation of work experience and knowledge was p-value(<0.001)(39).

2.3.1 Factors influencing knowledge

There are several factors influencing knowledge, such as age, educational level and training.

2.3.1.1 Age

The study was conducted by Saini, Singh, Singh and Jairus (2011) in their study on infection control amongst health care assistants. They concluded that there is no difference in the knowledge of ward assistants of different ages towards infection control (34).

2.3.1.2 Training

Training is critical for mitigating against the spread of infections in hospitals Training plays a critical role in ensuring that employees are made aware of the importance of infection control. This awareness will assist general assistants to comply with requirements for infection control whilst carrying out their responsibilities. The overall aim of training should be to develop awareness of health, safety, and environmental issues, and how these can affect employees in their daily work (12). This awareness can be achieved through sustained training programmes.

There is also a lack of information on how to structure an infection control training programme for ward attendants/ general assistants (35). This could be achieved through employer initiated training programmes. Due to lack of creating possible training programmes and failure to provide these will result in employees being exposed to HAI due to failure to observe required practices.

2.3.1.3 Education

In addressing the above mentioned problem, the infection control programme in public hospitals must use creative strategies in teaching infection control principles especially as most employees in public hospitals are illiterate in terms of English as a language. In most

cases they cannot read English or cannot read at all. Based on the above, it is important that various methods of teaching such as the use of comic books, posters and different languages are used (36).

Dalin, Danielson, and Sinclair, (2008) argue that training should be conducted soon after appointment and also provided on an on-going basis, in the form of in-service education (37).

A research conducted in south Asia and data were collected from 100 general assistants or cleaners in Chit wan Medical College Teaching Hospital. Out of 100 respondents, majority (84%) were working in inpatient departments (wards). Forty percent respondents had working experience for more than 2 years. However, 31% respondents had less than 6 months' working experience. More than fifty percent (51%) respondents reported that they had received primary level education. Similarly, 36% respondents had secondary level and above education. However, 8% respondents were found illiterate. Regarding exposure to infection prevention training, about two thirds (68%) respondents were exposed to training on Infection Prevention. Out of 68 respondents, ,79.41% received training on infection prevention for only 1 day 10 respondents reported that they had training for 2 days and 5.88% respondents received same training for 3 days and more. Also the data indicated that only 68% respondents were benefitted by the infection prevention training and proper use of cleaning solution to disinfect the equipment's was found unsatisfactory. The findings of the study revealed that attendants (supporting staffs) do not have sufficient knowledge on Infection Prevention (38).

Education has a positive impact on retention of knowledge, attitude and practice for cleaners (39). Therefore, education and training will further enhance comprehension on applicable and acceptable practices on infection control.

2.4 Attitude

The study conducted on 50 ward general assistants or cleaners show that most of them found universal precautions as expensive(74%),cumbersome(26%),protective(12%) and compulsory(6%).Also most of them(76.7%),(adjusted wald 95%CI=58.8-88.48) were compliant to hand washing practices(39).

Davidson and Gillies (1993) assessed the knowledge, attitude and perception of health care facility workers regarding risk of occupational HIV transmission in the hospitals even with the existing guidelines put in place to help protect health care facility workers. Few cases of

blood borne pathogen transmission among health care facility workers are due to sharps and needle stick injuries. It was also realized well trained nurses and doctors had better perception, attitude and knowledge of occupational hazard and prevention when compared to general workers in the hospitals which include hospital attendants, assistants and cleaners. This calls for more training on safe working practices needed in the hospitals especially for general assistant or cleaning staff other than doctors and nurses who are better trained. It was concluded health care facility workers needed policy guidelines for safe working environment in the hospitals and a proper training on HIV transmission routes to avoid negative attitudes being expressed on HIV, HBV and HCV patients by health care facility workers caring them having a wrong perception about virus transmission (40).

In summary, although there is limited literature on infection control and cleaners/general assistant, the literature has highlighted gaps in hand washing. There are several reasons for poor hand washing which includes attitudes.

2.5 Practices

Out of 18 general assistants or cleaners who with work experience of ≤5 years (98.6%) and among those who were not trained on issues related to infection prevention and occupational risk reduction (93.3%).Improper disposal of the sharps occurred in 44 (31.9%) cleaners. The remaining 10 (7.2%) workers sustained needle-stick injuries from needles concealed in bed linen. Cleaners with splash exposure occurred 4(28.6 %), Not exposed 11(78.6%), OR (0.88)95%CI (0.22-3.66) and P-value(0.443).Also cleaners with needle stick- injuries and splash exposures, Exposed 2(66.7),Not exposed 1(33.3),OR(0.81),95%CI(0.22-3.63) (41).

In a study conducted in India to assess knowledge and practice towards infection prevention revealed that knowledge on hand washing, gloving and personal accessories for Infection Prevention, majority of the respondents (94%) reported that hand washing is necessary before and after any procedure. 100% of the respondent reported gloving is necessary while touching dirty materials. 85% respondent reported it is necessary to take out gloves before handling doors, windows and other materials. All respondents reported gloving is necessary while attending to cleaning process. Similarly, 93% of the respondent reported gloves should be changed for other procedure when they are in cleaning process of the wards and the majority of the respondents did not give correct answer for frequency of floor cleaning (39).

This poor practice will affect other employees in the health chain. It could also be argued that if this category of employees can manage to ignore infection control practice, it will be worse

for cleaners. Inadequate infection control favors the spread of microorganisms in healthcare facilities that might cause healthcare-associated infections (HAIs) (42).

HAIs aggravate the patient's general health status, resulting in additional prescription of antibiotics, leading to increased costs for patients and the healthcare system, as well as antibiotic resistance (43). In Europe, it is estimated that HAIs contribute to 37,000 excess deaths and approximately €7 billion additional direct costs each year. Data are scarce from low- and middle-income countries (LMICs), where the situation is likely worse with more devastating impacts (44).

In health facility, staff practice, which is driven by their knowledge and attitudes, plays a decisive role in the success of infection control programmers' (45). A review concluded that "compliance to infection control precautions is internationally suboptimal" (46).

Research conducted at state university in the Turkey among hospital cleaning staff showed that; Out of 290 hospital cleaning staff, 240 (82.7%, 122 male, 118 female, aged 36.2±8.7) were included in the study. When evaluated according to their educational status, 55.4% had graduated from primary school. Fifty-four percent of the staff had been working in the hospital for more than three years. Mean knowledge level was 18.15±3.97 (maximum 24). Their knowledge level was not associated with gender, educational status, duration of employment or receipt of formal education about hospital-acquired infections before starting their jobs ($P > 0.05$); however, mean knowledge level of the staff working in the clinics was found higher than that of the staff working in administrative sections ($P < 0.05$)(47).

A cross-sectional study of 249 hospital cleaning staff was conducted in Nigeria. A semi-structured interviewer administered questionnaires were used to obtain information on socio-demographic characteristics and work place related hazards. Descriptive statistics were done and associations were explored with the chi square test at 5% level of significance. Result: The mean age of respondent was 34 ± 7 years, (range 20 - 60 years), 142(57.0%) attended secondary school. In all, 67.7% of the cleaners spent < 8 hours at work daily. Chemical hazards affected 79.1% females compared to 57.9% of the males (p=0.03). Also, 60% of those with primary education had mechanical hazards compared to 39.1% of those with tertiary education. (p=0.02). Mechanical hazards occur in 53.8% cleaners sitting for < 5hours compared to 38.1% sitting ≥ 5hours at work daily (p=0.03). Respondents were exposed to physical, chemical, mechanical, and biological hazards (48).

The descriptive cross-sectional study was conducted on KAP of infection prevention among 97 hospital cleaners in south Africa at Letaba hospital and this study revealed that over 50% of cleaners at Letaba hospital have only moderate knowledge about infection control. 57% of cleaners reported moderately good infection control practices, while 23% practice infection control poorly. The majority (75%) of cleaners at Letaba hospital reported positive attitudes towards infection control. The results also show that the moderate score in knowledge affected the practice of infection control (49).

2.6. Conceptual framework

The proposed conceptual framework builds on existing evidence that addresses factors that affect knowledge, attitude and practice among hospital cleaners towards infection prevention.

It shows how dependent and independent variables are related each other. The dependent variables are knowledge, attitude and practice of infection prevention.

The dependent variables are affected by socio demographic conditions of the cleaner which include age, educational status and work experience of cleaners. Other factors such as health system or environmental related including training, standardized tools and guide lines of infection prevention.

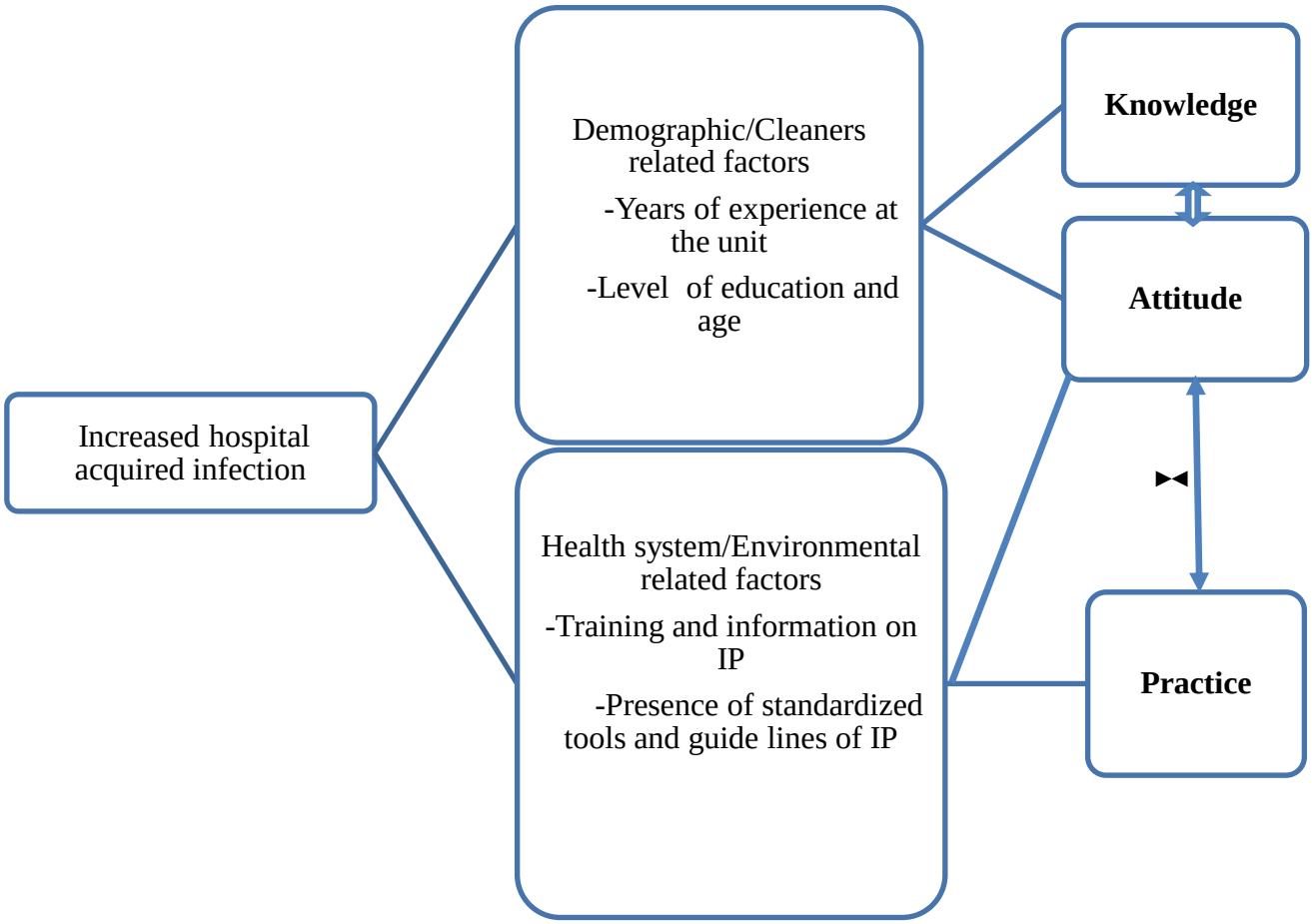

Figure 1: Conceptual frame work:-Reflects relationship between KAP and associated factors with infection prevention among cleaners.

CHAPTER THREE

3. OBJECTIVES

3.1. General objective:-

To assess knowledge, attitude and practice of cleaners towards infection prevention and associated factors at TikurAnbessa specialized hospital, Addis Ababa, Ethiopia, from November 2018-June 2019.

3.2 Specific objectives:-

- ✓ To determine the knowledge of cleaners working at TikurAnbessa specialized hospital about infection prevention from November 2018- June 2019;
- ✓ To identify the attitude level of cleaners towards infection prevention at patient care units;
- ✓ To assess the practice of cleaners with regard to infection prevention in different wards.
- ✓ To identify factors that affects the KAP of cleaners towards infection prevention.

CHAPTER-FOUR

4. METHODS AND MATERIALS

4.1. Study area and period

The study was conducted at TASH, the largest referral hospital in the country, with 800 beds, which was transferred to the AAU by the Federal Ministry of Health, and it has since become a University teaching hospital. The TikurAnbessa Specialized Hospital is now the main teaching hospital for both clinical and preclinical training of most disciplines. It is also an institution where specialized clinical services that are not available in other public or private institutions are rendered to the whole nation.

The TASH has 436 physicians, 680 nurses, 368 cleaners and 115 other health professionals dedicated to providing health care services. The various departments, faculties and residents under specialty training in the School of Medicine provide patient care in the hospital. The hospital also has 950 permanent and contract administrative staff to support the hospital activities. In addition, almost all regional and federal hospitals in Addis Ababa are affiliated to the School of Medicine as clinical services and training sites and serves as a training center for undergraduate and postgraduate medical students, dentists, nurses, midwives, pharmacists, medical laboratory technologists, radiology technologists, and others who shoulder the responsibilities to solve the health problems of the community and the country at large. The hospital gives diagnostic and treatment service for about 370,000–400,000 patients per year (50).

The study was conducted from November to June 2019 at TikurAnbessa specialized hospital, in Addis Ababa, Ethiopia.

4.2. Study Design

An Institutional based a descriptive cross-sectional study design was employed to evaluate the knowledge, attitude, practice and associated factors with infection prevention among cleaners working in TikurAnbessa specialized hospital, Addis Ababa, Ethiopia from November to June 2019

4.3. Populations

4.3.1. Source population

All cleaners working in TikurAnbessa specialized hospital, Addis Ababa, Ethiopia.

4.3.2. Study population

All cleaners working at patient care sites or units in TikurAnbessa specialized hospital.

4.3.3. Study Unit

Individual cleaners working at patient care sites or units in TikurAnbessa specialized hospital that fulfill the inclusion criteria.

4.4 Eligibility criteria

4.4.1. Inclusion criteria

All cleaners who were working at patient care site or units in TikurAnbessa specialized hospital during data collection period were included in the study.

4.4.2. Exclusion criteria

Cleaners who were working at other sites rather than patient care sites or units. Also cleaners who were on sick leave and annual leave were excluded from the study.

4.5. Study variable

4.5.1. Dependent variables

- ✓ Knowledge related to infection prevention
- ✓ Attitude related to infection prevention
- ✓ Practices related to infection prevention

4.5.2. Independent variables

- Demographic characteristics: Age, Gender, Level of education, Years of working experience on cleaning
- Health system/Organizational factors: Protocols of the hospital about IP, Infection prevention guidelines, Availability of PPE, training and information on IP

4.6. Sample size and sampling procedure

4.6.1 Sample size determination

The sample size for this study is determined by using single population proportion formula by considering 50% proportion of cleaners have adequate KAP towards infection prevention, since there is no previous related study and 95% confidence interval and 5% margin of error.

n= (Za/2)2 p (1-p)/ d2

Where n is sample size

Za/2- with 95 % confidence interval equal to 1.96

P- Estimation of population proportion which is 50%

d –margin of error which is 1-confidence level=1-0.95=0.05

Then, n= (1.96)2(0.5) (0.5)/ 0.052 = 384

Since the total population (cleaners working in the hospital) was 368 cleaners, which was less than 10,000 and correction formula was used: nf =ni/1+ni/N

Where

nf= final sample size

ni= initial sample size

N = total population

Nf=384/1+384/368=192

By taking 10% none response rate, the final sample size was 211 cleaners.

4.6.2 Sampling procedure

Simple random sampling method was used to obtain the study units.

4.7 Operational Definitions

Health care workers: As the Centre for Disease Control (CDC) defines health care personnel as "all paid and unpaid persons working in health care setting who have the potential to exposure to infectious materials including body substances, contaminated medical equipment, contaminated environmental surfaces and contaminated air", literature on different groups of health facility workers such as nurses, doctors, general assistants and cleaners was reviewed (31).

General assistant/cleaners: A non-medical general worker working in the wards, operating theatres and laundry responsible for cleaning the floors, sorting linen and waste management.

Nosocomial infection/HAI: An infection that is acquired while the patient is in the hospital which was not present or incubating at the time of admission (51).

Medical waste: a by-product of health care, which includes sharps, non-sharps, blood, body fluids, pharmaceuticals, medical devices and radioactive material (52).

Knowledge: Facts, information and skills acquired through experience or education, the theoretical or practical understanding of a subject (53).

Out of ten knowledge questions, the maximum possible score is (0-18).For every question score (0-5) was given and "0" mark was given for a wrong and don't know answer. Classification is based on likert scale scoring method developed by Horn by (2000) (53).Respondents is then classified into one of two groups according to their knowledge mean score.

1. Score < 9.4 Inadequate knowledge
2. Score > 9.4 Adequate knowledge

Practice: Performance or a way of doing something which is carried out usually or regularly, often as a habit, tradition or custom (53). Out of thirteen practice questions, the maximum possible score is (0-21). For every correct answer a score (1-5) was given and a score of "0" was given for a wrong answer. Classification is based on likert scale scoring method developed by Horn by (2000) (53).

According to their practice mean score cleaners are grouped into one of two categories.

1. Score < 10.5 poor practice
2. Score >10.5 good practice

Attitude: A way of behaving towards something that shows how you feel and think about it (53). Out of thirteen attitude questions, (0-5) was given for each question which contains six yes/no questions; one point was given for a correct yes (positive attitudes) or no (negative attitudes) question. The maximum possible score is (0-17). Classification is based on likert scale scoring method developed by Horn by (2000) (53).

The cleaners are then categorized into one of two groups depending on their attitude mean score:

1. Score < 8.5 unfavorable attitude
2. Score >8.5 favorable attitude

4.8 Data collection instrument

An interviewer administered questionnaire which developed from related literature review, World health organization standard infection prevention guidelines and Federal ministry of health infection prevention and patient safety guide lines for hospitals' is used to collect data. The reason for using this method of collecting data is to accommodate the general assistants/cleaners who had difficulty reading and writing. Data collectors were trained before assigning them into data collection site. At the beginning of the data collection period participants were informed about the project and the research process also was explained to them by the researcher. Interviews were conducted by translating questionnaire into Amharic version.

4.9. Data entry and analysis

The collected data was cleaned for completeness and consistencies before data entry. Responses in each question were coded for simplicity of data entry. The coded data was entered in to Epi data 4.2.0 and SPSS version 21 statistical software was used for data analysis. In the first step the descriptive analysis, such as, percentages, frequency distribution and measures of central tendency was computed. Both bivariate and multivariate logistic regression models were computed to see the association between independent versus out-come variable. The assumptions of, interaction, and multi co-linearity effect was also

considered. Then factors with p- value <0.25 in bivariete analysis were entered into multivariate logistic regression models in order to control the effect of confounding factors and p < 0.05 cutoff point was considered as statistical significant for all the independent variables. Then the result was presented with text, graphs, figures and tables.

4.10. Quality control

The data collecting sheet was standardized by testing it in 5% of the sample size at Aabet Emergency and Trauma specialized hospital before the study to make sure that the data collecting sheet is capable of yielding the required data for the study and some modifications was done according to the results found. The collected data was checked for completeness, consistency and clarity. Before the actual data collection and the questionnaire was checked for its clarity, understandability and simplicity. After pre-test, the questionnaires was reviewed and reformatted based on the inputs and comments generated by seniors.

The filled questionnaires were presented to the principal investigator and checked for its completeness to assure the quality of data.

4.11. Ethical consideration

Ethical clearance was obtained from departmental research and ethical review committee of the department of emergency medicine and critical care and from the department of environmental health and faculty of public health Addis Ababa University.

All the collected data was kept confidential and no one except the members of the research team had access to the collected data.

All paper and computer records of the study is kept in a secured place under lock and the name and/or other personal information is not notified in any report.

4.12. Dissemination of the result

The finding of the study will be presented to the department of Emergency Medicine and Critical Care / AAU and cleaners hiring Agency known as kinde birtu. It will also be disseminated through presentations in different professional association meetings and annual conferences. The paper will also be submitted to national or International peer reviewed scientific journals for possible publication.

CHAPTER-5 RESULT

5.1 Socio- demographic characteristics

A total of 192 with response rate (91%) cleaners were participated in this study. The analysis of socio-demographic profile of cleaner population showed that there were 192(100%) female with the total respondents mean age of 27 years (Range= 15 - 56) years with (SD= +/- 8.818) age group. Most of them 160(83.3%) were youth with age group of 15-35 years.

More than half of the participants 99(51.6) had attended primary level of education, 49(25.5%)secondary,10(5.2%)certificate,15(7.8%) diploma level of education and 19(9.9%) were not attended formal education.. And out of all participants, majorities 174(90.6%) were contract staff and 18(9.4%) were hospital employees. Out of the total participants 73(38.0%) had less than 1 year of cleaning experience,33(17.2%) had 1 year,29(15.1%) had 2 year and 57(29.7%) had 3 and more years cleaning experience. The majorities of the participants 178(92.7%) spent 8 and more hours and 14(7.3%) spent less than 8 hours at work daily. Also all most all of them 176(91.7%) stand for 5 hours and more and 16(8.3%) stand less than 5 hours and 176(91.7%) sit for less than 5 hours and 16(8.3%) sit 5 and more hours at work daily. Among all participants only 51(26.6%) know their HIV, HepB and HepC status for last three months with negative test result and majorities 141(73.4%) did not know their HIV, HepB and HepC status. And also majorities 172(89.6%) were not vaccinated for hepatitis virus and 20(10.4%) were vaccinated (table-3).Majority 90(46.9%) of the participants from ward and 14(7.3%) of them from operation room (figure-2)

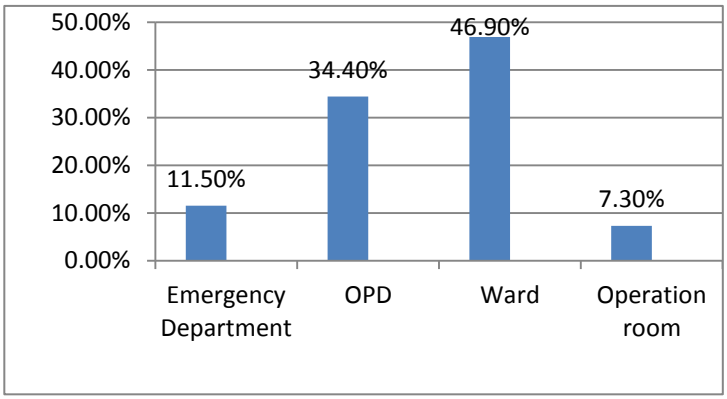

Figure 2 Percentage distribution of participants by current working unit in TikurAnbessa specialized hospital, Addis Ababa, Ethiopia, 2019

Table 1: Distribution of socio-demographic characteristics of cleaners in TikurAnbessa apecialized hospital,AddisAbaba,Ethiopia,2019(n=192)

		Frequency	Percent(%
	15-25	96	50.0
	26-35	64	33.3
Age in years	36-45	23	12.0
Mean(27.64,SD=8.818)	46-55	8	4.2
	56-65	1	.5
Sex	Female	192	100.0
Religion	Protestant	31	16.1
	Muslim	25	13.0
	Orthodox	136	70.8
	Amhara	89	46.4
Ethnicity	Oromo	51	26.6
	Tigri	6	3.1
	Other	46	24.0
	Primary school	99	51.6
Educational status	secondary school	49	25.5
	Certificate	10	5.2
	Diploma and above	15	7.8
	No formal education	19	9.9
Marital status	Single	95	49.5
	Married	81	42.2
	Divorced	14	7.3
	Widowed	2	1.0

5.2 Training on infection prevention

Table 2. indicates that 25 % of participants had been trained on infection control and among trained participants all most all 99% trained by health worker and 1% by agency manager and 13% of those trained had been trained in the past more than twenty four months ago.

Table 2: Training of cleaners on infection prevention

Received training on infection control		48(25.0%)
Training given by	Health worker	190(99.0%)
	Agency manager	2(1.0%)
Time since last training	1-6 months ago	16(8.3%)
	7-12 months ago	3(1.6%)
	12-24 months ago	3(1.6%)
	over 24 months ago	25(13.0%)
Number of days trained	One day	13%
	Two days	2.6%
	Three days	8.3%
	Five days	1%
Not trained		75%

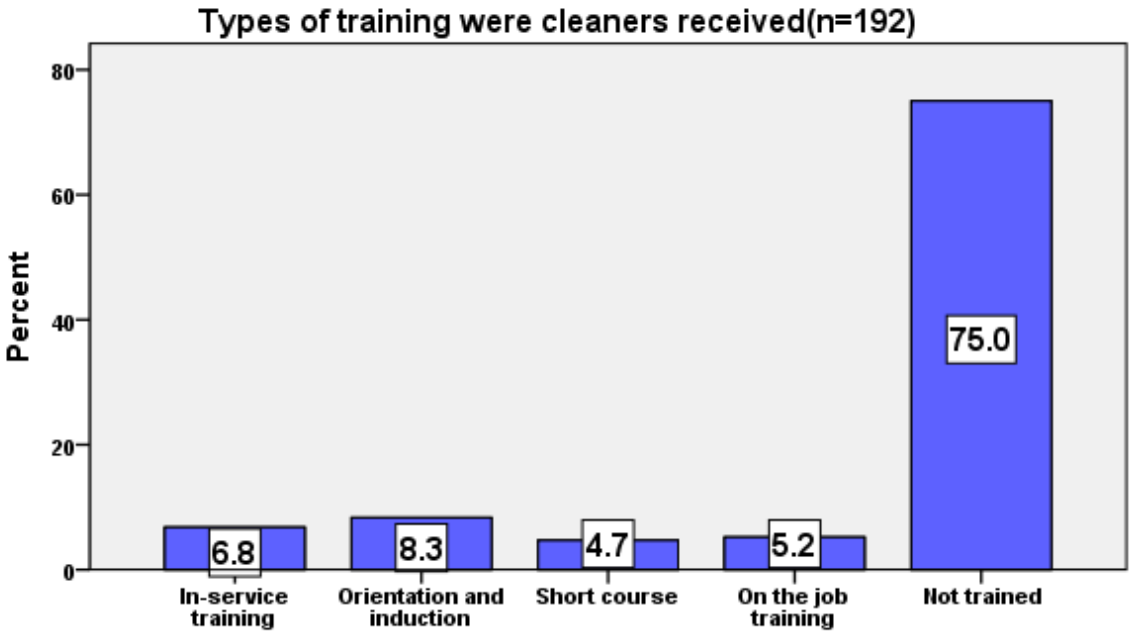

Figure 3: Types of training received by cleaners

5.3 Knowledge of Infection prevention

Table 3. Below outlines the knowledge of infection control by cleaners. It is highlighted that majorities 74.5% of participants not heard about the hospital infection control policy. Out of those who heard about the policy 3% heard from the infection control nurse, 5% from a doctor and 41% from other health care workers.

Table 3: Knowledge of cleaners with regard to infection prevention policy

N=192	Yes (%)	No (%)
Heard about hospital infection control policy	49(25.5)	143(74.5)
Heard about policy from infection control nurse	3(1.6)	
Heard about policy from doctor	5(2.6)	
Heard about policy from other health worker	41(21.4)	

According to the self evaluative questionnaires assessment of knowledge of the study participants, the overall mean score was 9.4 (SD, 1.81) with median score 9.00%; and 3 and 15 was the minimum and the maximum results observed in this study. All most more than half 98(51.04%) of the participants knowledge is inadequate (figure-4)

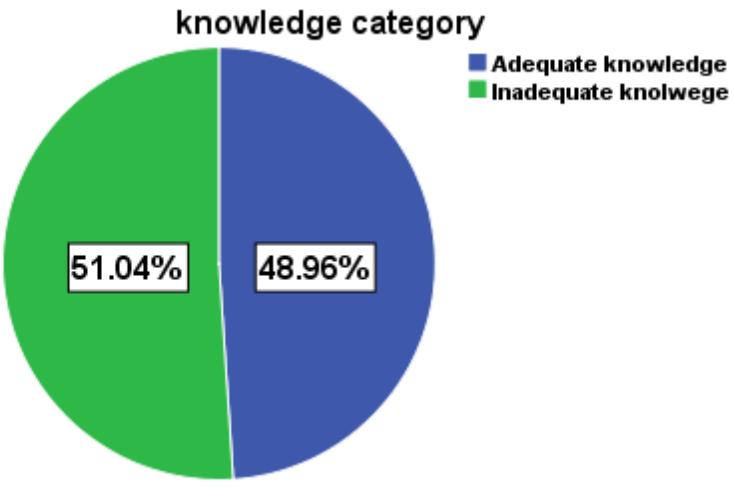

Figure 4: Knowledge category of cleaners based on knowledge score

Questions that most participants answered correctly included questions on hand washing, the disposal of sharps and use of gloves in Figure 5.

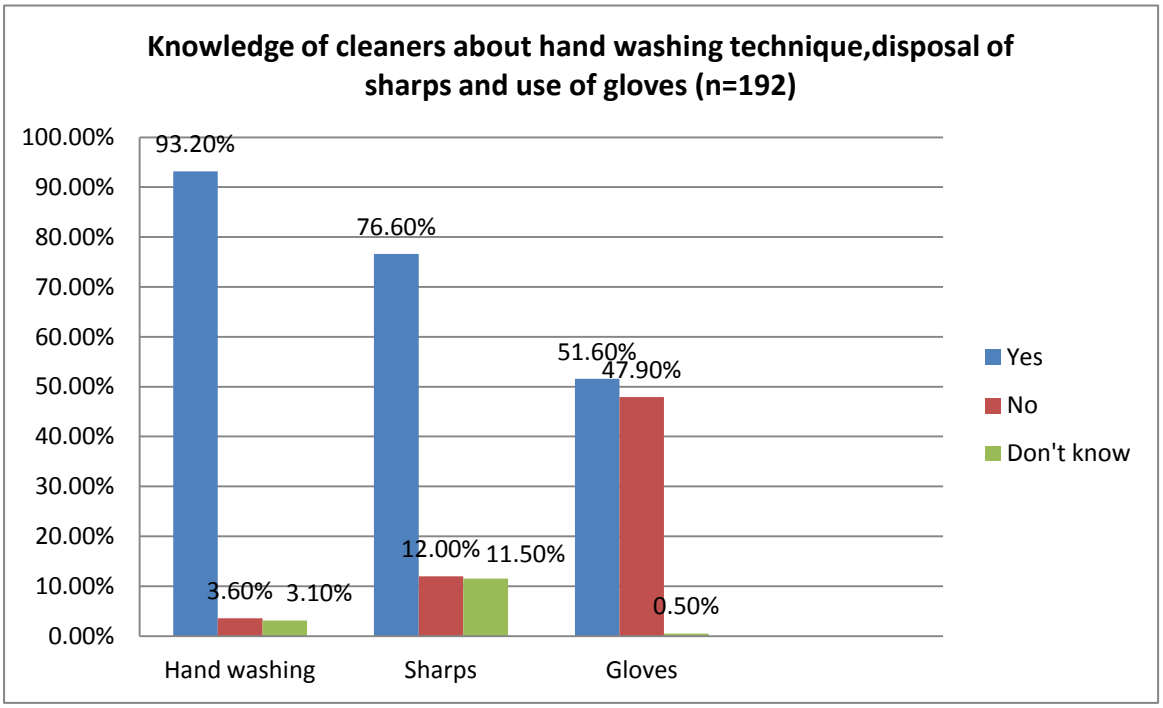

Figure 5: Knowledge of cleaners about hand washing technique, disposal of sharps and use of gloves

Figure-6 below represents (82.3%) of the study participants responded all three choices correctly in steps taken in case of needle stick injury and (64%) of them not did not know about use of color coded cleaning mops and (67.7%) of them responded all three options out of three about solutions used for cleaning floors.

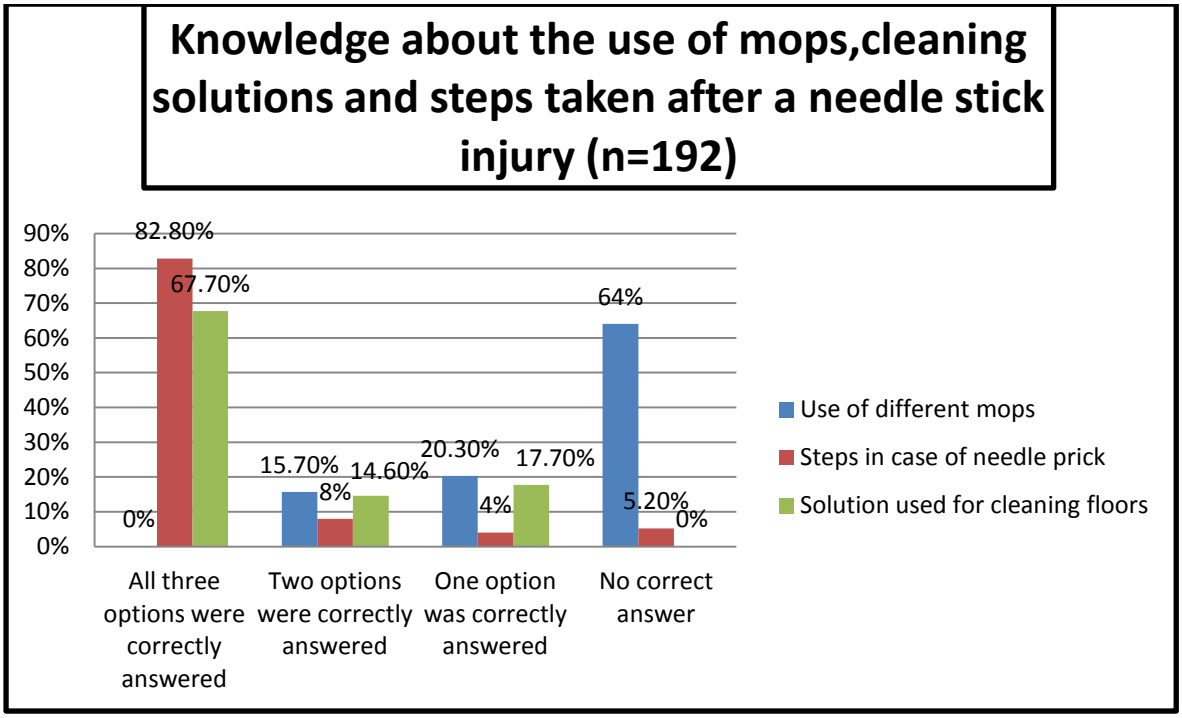

Figure 6. Knowledge of cleaners about the use of different mops, cleaning solutions and steps taken in case of needle stick injury

Figure 7 Indicates majorities 59(30.7%) of participants answered three possibilities correctly on source of infection questions and 11(5.7%) answered five or all possibilities and only 4(2%) of cleaners gave no correct answer at all.

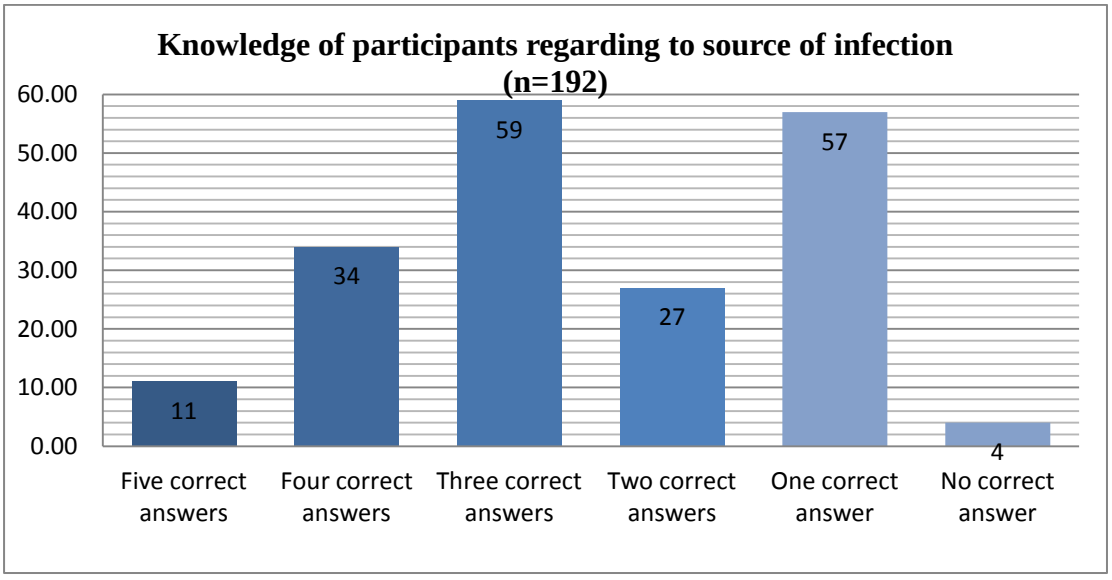

Figure 7: Knowledge of cleaners regarding to possible or likely source of infection

5.4 Attitudes towards Infection Control

Figure -8 show that most cleaners (78.13%) reported a positive or favorable attitude towards infection control. Mean score of attitude was 10.7(SD =1.76).

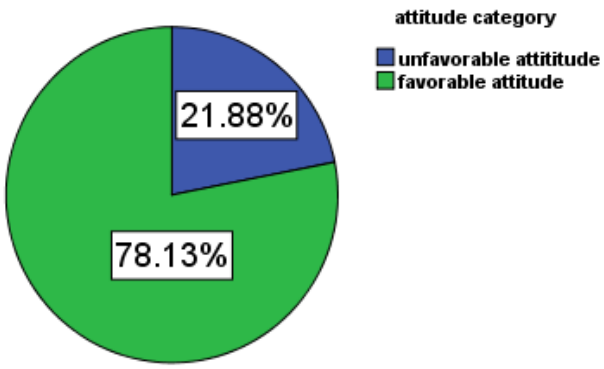

Figure 8Attitude score of cleaners

Table 4 outlines that almost all the questions with regard to infection control were answered positively. Almost all 190(99%) of the participants have positive attitudes towards the responsibilities of the lining bins. Nearly all 191(99.5%) of the respondents have positive attitudes towards importance of the segregation of the wastes.

Table 4: Responses to questions on attitude towards infection prevention

Statement on infection prevention task	**Positive%**	**Negative%**
Role in infection control	81.3	18.8
Feeling about infection prevention role	76%	24%
Responsible for lining bins after they are emptied	99%	1%
View on cleaning sluice room by cleaners	79.2%	20.8%
View on practicing infection control at home	85.4%	14.6%
Feeling towards wearing of mask	34.9%	65.1%
Importance of washing of hands after every activity	91.1%	8.9%
Segregation of waste	99.5%	0.5%
Reason for waste segregation	81.3%	18.8%
Reason for practicing infection control	47.2%	52.8%
Washing hands after touching bloody item	93.8%	6.3%
About universal precautions	49.2%	50.8%

Although cleaners had positive attitudes towards infection control, there are some areas where there is worrying percentage of poor attitudes towards infection control. Sixty five percent of respondents had poor attitudes towards wearing mask, 52.8% about reason for practicing infection control,50% about universal precautions,24% feeling about infection prevention role and 20.8% had poor attitudes towards view on cleaning sluice room by cleaners.

5.5 Reported Infection Control Practices

Infection control practice of cleaners working at TASH is presented in Figure 9. The study revealed that 76.04% of the cleaners were found to have poor infection prevention practices and 23.96% of them have good infection prevention practices. Mean score of practice was 9.8(SD =2.20)

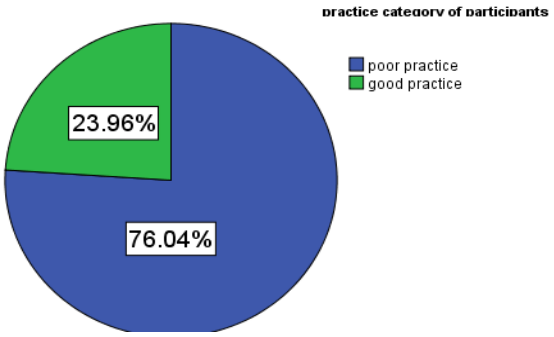

Figure 9. Practice score of cleaners on infection prevention

Table 5. Responses to questions on practice of infection control

Questions		% of participants who answered questions correctly (n=192)	
When cleaning the unit where do you start		42.7%	
Reason given for starting area when cleaning		27%	
Frequency of emptying bins		39.85%	
Disposal of general waste		72.9%	
Disposal of infectious waste		25.2%	
Method for disposal of sharps		69.3%	
Use of aprons		96.9%	
Use of mask		27.1%	
Reasons given for use of mask		58.9%	
Hand washing technique		80.2%	
How do you dilute the solution for cleaning the floor		14.6%	
Measure to prevent infection in isolation rooms		91.1%	
Measures taken after exposed to splashes		92.2%	
Exposure status of the cleaners		Frequency	Percent
Exposed to occupational related hazard	Yes	50	26.0%
	No	142	74%
Blood		28	14.6%
Needle prick		10	5.2%
Radiation		5	2.6%
Other		7	3.6%

5.6 Factors related to knowledge of cleaners towards infection prevention

Bi-variate logistic regression was used among different variables to determine the set of Predictor variables which predicted knowledge of infection prevention. Work experience, age, educational status, training taken time, infection prevention policy, attitude and practice of cleaners towards infection prevention had association with cleaner's knowledge on infection prevention in bivariate logistic regression analysis ($p< 0.25$).

All variables that have association with the outcome variables in bivariate logistic regression analyses were included in the multiple logistic regression models. After controlling for the effects of potentially confounding variables using multiple logistic regression; work experience, attitude and their practice towards infection prevention remained significantly associated with cleaners' knowledge towards infection prevention ($p< 0.05$).

The cleaners who had one year work experience were 17.18% [AOR=0.336; 95% CI :(0.117, 0.964) and (P=0.042) less likely to know about infection prevention than those who had

greater work experience. Additionally cleaners who had unfavorable attitude towards infection prevention were 21.8% [AOR= 0.29; 95% CI: (0.120, 0.725) and (P=0.008) less likely to know about infection prevention compared to those cleaners with favorable attitude.

Finally cleaners who had poor infection prevention practice were 76% t [AOR=0.173; 95% CI: (0.070, 0.424) and (P=0.000) less likely knowledgeable than those who had good practice on infection prevention. (Table 6).

Table 6 Socio-demographic and other determinant variables on knowledge of cleaners towards infection prevention in TikurAnbessa specialized hospital, 2019(n=192)

Variable		Knowledge category		**Logistic regression (95% CI)**			
		Inadequate	Adequate	COR(p<0.25)	P-value	AOR(p<0.05)	P-value
Age group	15-25	6	2	1	0.199*	1	0.615
	26-35	55	41	1.961(1.032,3.726)	0.04*	1	1.00
Educational status	Primary	8	2	1	0.082*	1	0.175
	secondary	12	7	2.327(0.844,6.412)	0.103*	2.493(0.753,8.252)	0.135
Years of employment	<1 year	47	26	1	0.031*	1	0.187
	1 year	16	17	0.402(0.198,0.819)	0.012*	0.336(0.117,0.964)	0.042**
Heard about IP policy	Yes	29	20	0.643(0.333,1.241)	0.188*	0.724(0.268,1.956)	0.525
	No	69	74	1	0.676		
Training taken time	7-12 months	72	73	0.448(0.148,1.355)	0.155*	0.593(0.126,2.790)	0.509
Attitude category	Unfavorable	33	9	0.209(0.093,0.466)	0.000*	0.295(0.120,0.725)	0.008**
	Favorable	65	85	1	0.104*	1	
Practice category	Poor	90	56	0.131(0.057,0.301)	0.000*	0.173(0.070,0.424	0.000**
	Good	8	38	1	0.000*	1	

*p < 0.25, CI- 95 %(Confidence Interval), COD- crude odds ratio, AOD-adjusted odds ratio

** Remained statistically significant (p< 0.05) in adjusted odds ratio

5.7 Factors related to attitude of cleaners towards infection prevention.

Logistic Regression was used to determine the set of predictor variables which predicted cleaners' attitude towards infection prevention. Variables that entered into bivariate logistic regression and that showed significant association (p<=0.25) were; age, work experience, information about IP, training, knowledge and practice towards infection prevention. Those

variables that have association with the outcome variables in bivariate logistic regression analysis were entered in to multiple logistic regression models.

After controlling for the effects of potentially confounding variables using multiple logistic regressions, finally knowledge towards infection prevention remained significant in the multivariate analysis (p<=0.05). Logistic Regression revealed that cleaners with inadequate level of knowledge in infection prevention were 3 times [AOR=3.508; 95% CI: (1.425, 8.636) and (P=0.006) more likely have unfavorable attitude towards infection prevention than those have adequate knowledge in infection prevention.

Table 7 Socio-demographic and other determinant variables on attitude of cleaners towards infection prevention at TikurAnbessa specialized hospital, 2019(n=192)

	Variable	**Attitude category**		**Logistic regression(95%CI)**			
		Unfavorable	Favorable	COR(P<0.25)	P-value	AOR(P<0.05)	P-value
Years of employment	<1 year	25	48	1	0.012*	1	0.556
	1 year	7	26	0.269(0.106,0.679)	0.005*	0.523(0.136,2.011)	0.345
	2 year	7	50	0.520(0.165,1.642)	0.265	0.996(0.238,4.169)	0.996
	>=3 year	3	26	1.213(0.289,5.086)	0.791	1.235(0.239,6.380)	0.801
Heard about IP policy	Yes	32	111	1.124(0.506,2.498)	0.774	1.311(0.424,4.052)	0.638
	No	10	39	1	0.000*		
Trained on IP policy	Yes	32	112	1.086(0.488,2.416)	0.840	1.311(0.424,4.052)	0.638
	No	10	38	1	0.000*	1	
Knowledge category	Inadequate	33	65	4.795(2.144,10.721)	0.00*	3.508(1.425,8.636)	0.006**
	Adequate	9	85	1	0.00*	1	
Practice category	Poor	39	107	0.191(0.056,0.653)	0.00*	0.337(0.089,1.276)	0.109
	Good	3	43	1	0.000*	1	

*p < 0.25, CI- 95 %(Confidence Interval), COD- crude odds ratio, AOD-adjusted odds ratio

** Remained statistically significant (p< 0.05) in adjusted odds ratio

5.8 Associated factors related to infection prevention practices

Logistic Regression was used to determine the set of predictor variables which predicted Practice of infection prevention. Variables that entered in to bivariate logistic regression and that showed significant association (p<=0.25) were; age, work experience, knowledge and attitude towards infection prevention. Those variables that have association with the outcome variables in bivariate logistic regression analysis were entered in to multiple logistic

regression models. After controlling for the effects of potentially confounding variables using multiple logistic regressions, finally knowledge towards infection prevention remained significant in the multivariate analysis (p<=0.05).Those respondents who had inadequate knowledge were practice poorly towards infection prevention by nearly 6 times [AOR= 5.974; 95% CI :(2.371, 15.053)] than those who had adequate knowledge towards infection prevention.

Table 8 Socio-demographic and other determinant variables on practice of cleaners towards infection prevention in TikurAnbessa specialized hospital, 2019(n=192)

Variable		Practice category		Logistic regression(95%CI)			
		Poor	Good	COR(p<0.25)	p-value	AOR(p<0.05)	p-value
Age group	26-35	78	18	1.830(0.871,3.842)	0.110*	1	0.999
	36-45	45	19	2.786(1.044,7.436)	0.041*	1	0.999
Years of employment	<1 year	62	11	1	0.085*	1	0.875
	1 year	26	7	0.355(0.152,0.826)	0.016*	0.690(0.213,2.233)	0.535
	2 year	20	9	0.538(0.198,1.464)	0.225*	0.603(0.171,2.127)	0.432
	>=3 year	38	19	0.900(0.345,2.351)	0.830	0.851(0.267,2.712)	0.786
Training	Did not trained			1.909(0.773,4.715)	0.161*	1	1.000
Knowledge category	Inadequate	90	8	7.634(3.321,17.546)	0.000*	5.974(2.371,15.053)	0.000**
	Adequate	56	38	1		1	
Attitude category	Unfavorable	39	3	0.191(0.056,0.653)	0.008*	0.295(0.075,1.163)	0.081
	Favorable	107	43	1		1	

*p < 0.25, CI- 95 %(Confidence Interval), COD- crude odds ratio, AOD-adjusted odds ratio

** Remained statistically significant (p< 0.05) in adjusted odds ratio

5.6 Suggested Recommendations for Improved Infection Control by the study participants

Majority of study participants (63.5%) had suggested that lack of training, anti-hepatitis vaccine and inadequate cleaning and personal protective equipments.

Table 9 Suggestion of cleaners regarding to infection prevention at TikurAnbessa specialized hospital, 2019

Suggestion or comment	Frequency	Percent
No training,HepB vaccine and inadequate cleaning and personal protective equipments	122	63.5
No free medical service for cleaners	19	9.9
Hospital has good infection prevention policy	17	8.9
I have no suggestion	34	17.7

CHAPTER-6

DISCUSSION

This study shows that overall the cleaners at TikurAnbessa Hospital display inadequate knowledge and practices with regard to infection prevention. Their attitude towards infection prevention is favorable. It is, however, noted that some areas of infection control still need more attention.

A total of 192 with response rate (91%) cleaners were participated in this study. The analysis of socio-demographic profile of cleaner population showed that there were 192(100%) female with the total respondents mean age of 27 years (Range= 15 - 56) years with (SD= +/- 8.818) age group. Most of them 160(83.3%) were youth with age group of 15-35 years. This study relatively similar with a cross-sectional study which was conducted among hospital cleaning staff in Nigeria with the mean age of respondent was 34 ± 7 years, (range 20 - 60 years) (48).

According to the self evaluative questionnaires assessment of knowledge of the study participants this study revealed that almost more than half 98(51.04%) of the participants scored that their knowledge is inadequate and 94(48.96%) that is adequate for infection prevention that the gaps need considerations. The result is relatively consistent with descriptive cross-sectional study which was conducted on KAP of infection prevention among 97 hospital cleaners in south Africa at Letaba hospital and this study revealed that over 50% of cleaners at Letaba hospital have only moderate knowledge about infection control which is not optimal(49).

The results of this study revealed the significance association between knowledge and cleaners with year of work experience. Cleaners with shorter work experience have inadequate infection prevention knowlede than cleaners with longer work experience. Relatively similar study conducted at Chitwan Medical College on ward general assistants or cleaners show that the correlation of work experience and knowledge(38).

Also there was significant association between knowledge, attitude ($p = 0.008$) and practice ($p = 0.000$).But no significant association between level of knowledge and age, level of education and training. Research conducted at state university in the Turkey among hospital cleaning staff also showed similar finding with this study (47).

This study shows that out of all participants only 48(25%) of participants had been trained on infection prevention for 1 day 25 participants, 2 day 5 participants,3 day 16 participants and 5 day 2 participants were trained and 144(75%) were not trained. This is not similar with research conducted in south Asia among cleaners which reveals 79.41% received training on infection prevention for only 1 day 10 respondents reported that they had training for 2 days and 5.88% respondents received same training for 3 days and more. Also the data indicated that only 68% respondents were benefitted by the infection prevention training and proper use of cleaning solution to disinfect the equipment's was found unsatisfactory. The findings of the study revealed that attendants (supporting staffs) do not have sufficient knowledge on Infection Prevention (38).

Also study result shows that majorities 143(74.5%) of participants not heard about the hospital infection control policy. As different literature indicates training and health information must be needed and provided to health facility staffs to improve infection prevention quality in the hospital (12, 37).

It is encouraging that some of the questions were answered well such as the question on hand washing technique, the disposal of sharps and the use of gloves. Despite that there are some specific and important areas where there is a lack of knowledge, such as the use of different colored mops and potential sources of infection. The study conducted in south Africa among hospital cleaners relatively shows similar result with this study (49).

In addition, it is also possible that the concepts of using different cleaning materials in preventing infection may be hard to grasp by the general assistants. Correct knowledge of the main sources of infection is vital to preventing the spread of infection (12). However in this study the knowledge of sources of infection generally was not good. The fact that so few respondents fully understood these risks is a major concern because of the increased risk for both staff and patients who could be exposed to infection. Generally, it is important to provide training at the beginning of the employment period.This is congruent with a research conducted in south Asia among general assistants or cleaners in Chit wan Medical College Teaching Hospital (38).

Generally, most cleaners in this study (78.13%) reported a positive or favorable attitude towards infection prevention and (21.88%) reported negative or unfavorable attitude. Other study conducted at Letaba hospital among ward cleaners majority (75%) of them reported positive attitude towards infection prevention indicates relatively consistent result (49).

Almost all 190(99%) of the participants have positive attitudes towards the responsibilities of the lining bins and only 2(1%) have negative attitudes. Nearly all 191(99.5%) of the respondents have positive attitudes towards importance of the segregation of the wastes and 1(0.5%) has negative attitude. Majorities 175(91.1%) of the respondents have positive attitudes towards the importance of washing hands after each activity and 17(8.9%) of the respondents have negative attitudes. Also almost all respondents 180(93.8%) have positive attitudes towards washing hands only after touching bloody items and 12(6.3%) have negative attitudes. Also among all participants responded about universal precautions are, as cumbersome 50(26%), protective142 (74%), expensive 20(10.4%) and compulsory 166(86.5%).A study conducted in India on impact of education on knowledge,attitude and practice among health care setting workers on Nosocomial infections shows different result compared with our study(39).

Also there was found significant association between attitude and knowledge with($p=0.006$).But there was no significant association with age,level of education, work experience,training and practice.

The study revealed that 76.04% of the cleaners were found to have poor infection prevention practices. This is not congruent with the descriptive cross-sectional study conducted on KAP of infection prevention in South Africa at Letaba hospital which showed that over 57% of cleaners reported moderately good infection control practices, while 23% practice infection control poorly (49).

Regarding the cleaning procedures the study participants responded correctly in some areas such as where do they start when cleaning 82(42.7%) and 52(27%), reason given for starting area when cleaning, 52(27%) about use of mask,48(25.2) about proper disposal of infectious waste and 28(14.6%) of respondents about diluting the cleaning solution. Also cleaners with splash exposure occurred 50(26%),not exposed 142(74%) and among exposed types of exposure 28(14.6%) blood,10(5.2%) needle prick,5(2.6%) radiation and 7(3.6%) other. This study is in line with research conducted among cleaners at Catholic university in Buganda, Mwanza, Tanzania (41). Also there was significant association between inadequate knowledge and practice with ($p=0.000$) which implies poor knowledge of the cleaners could lead to poor practice. This poor practice will affect other employees in the health chain. It could also be argued that if this category of employees can manage to ignore infection control practice, it will be worse for cleaners. Inadequate infection control favors the spread of

microorganisms in healthcare facilities that might cause healthcare-associated infections (HAIs) (42)

When asked for any suggestions to improve infection control, cleaners made some recommendations. Among all participants majorities 122(63.5%) suggested that the hospital management should supply more personal protective equipments, cleaning materials, training and hepatitisvaccine,19(9.9%)suggested no free medical service for cleaners,17(8.9%) commented as hospital has good infection prevention policy and 34(17.7%) have no suggestion.This is in line with study conducted at south Africa which reveals Forty nine (51%) of study participants suggested that the hospital management should supply more protective clothing and cleaning materials. Fourteen (14%) requested more training (49).

CHAPTER-7

STRENGTH AND LIMITATIONS OF THE STUDY

7.1 Strength of the study

The study tries to dig out information about knowledge, attitude, practice and some of the associated factors regarding infection prevention of cleaners; this in return can offer clues and may forward important message for further researchers.

7.2 Limitations of the Study

- The practice scores were calculated using self-reported data rather than observations. This may have influenced the results obtained regarding practice of infection control. However, the data collection was done by one person and thus there was consistency in asking and interpreting the answers obtained.
- Some cleaners cannot speak Amharic language and translator assisted and this may influence the participants' response.
- Since the similar study was not conducted in the country and inadequate literature was related from international research.

CHAPTER-8

CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

Since good infection prevention can contain the majority of infections in the institution including Nosocomial infections, the personnel implementing effective infection control need to be knowledgeable, practice infection control and have positive attitudes towards the programme. Generally, the knowledge and practice of infection prevention at TikurAnbessa hospital is not optimal. It is, however, noted that the attitude of cleaners is good and thus with appropriate supplies, training, supervision and encouragement the scope for improving practice by cleaners is promising. Since most of the cleaners attended primary level of education and some of them did not attend formal education and majority of them cannot read and understand English so training and short course education is mandatory to improve quality of infection prevention in the hospital.Finally, cleaners inadequate knowledge was factor for infection prevention practices.

8.2 Recommendations

As results of this study, the following are recommended in order to improve infection prevention at TikurAnbessa Hospital:

8.2.1 Hospital management:

1) Ensure that all units in the institution understand their roles and responsibilities with regard to infection prevention

2) Develop plan for purchasing of equipment to address infection prevention

3) Ensure that the requirements for the appropriate equipment, cleaning materials and personal protective equipment (PPE) are met by the hospital supply management team

4) Development of training proposal for periodic on job training to cleaners or general assistants which considers their scope of work, level of education and specific risks attached to their work environment

8.2.2 Infection control committee:

- Design training and materials congruent with the tasks and education level of general assistants or cleaners and facilitation of opportunities for general assistants to learn to read and write.

8.2.3 Agencies providing cleaner employees to the hospital:

- Since cleaners employed from nongovernmental organization or agency they should have to communicate with hospital infection prevention committee and gave training at the beginning of the work and care about safety and health of cleaners.
- As cleaners complained mostly agency should have to prepare free medical services, supply Personal protective equipments and cleaning materials as needed and accordingly with the hospital infection prevention committee.
- Since cleaners are front line worker and prone to infectious disease they need Hepatitis vaccine as other hospital staff.

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Appendices

Annex I information sheet

Dear respondent,My Name is Buna Yumura, currently I am a graduate student at Department of Emergency Medicine and Critical Care Nursing, Collage of Health Sciences Addis Ababa University. I am conducting a study to assess the knowledge, attitude, practices and associated factors with infection prevention among cleaners working in Tikur Anbessa Specialized hospital from October 2018-June 2019,Addis Ababa,Ethiopia.

Research objective the aim of this study is to asses the knowledge,attitude,practice and associated factors among hospital cleaners at Tikur Anbessa Specialized hospital from October 2018-June 2019

Confidentiality the collected information will be kept confidential and used only for research purpose. No one except the members of the research team will have access to the information collected. The name and/or other personal information of cleaners will not be notified in any report. You do not need to write your name or any special identification that might disclose who you are, on anyof the questionnaire page.

Person to contact if the data collectors or other hospital administrative staffs have any question regarding the study they are free to contact me in person or by the following addresses

Buna Yumura Cell phone: 0916812424 Email: yumurabuna@gmail.com

You have a full right not to participate in this study.

Are you Volunteer to participate?

1. If yes continue

2. If no stop

Name_____Signature_____Date_____

Supervisor,Name_____Signature_____Date_____

Annex II. Consent form

In signing this document, I am giving my consent to participate in the study entitled Assessment of Knowledge, Attitude, Practice and associated factors with infection prevention among cleaners Tikur Anbessa specialized hospital,Addis Ababa, Ethiopia. I have been informed that the purpose of this research project and I understand that I am selected to participate in this study randomly. I have been informed that my participation in this study is willing full and voluntary even I have right to refuse or interrupt the responding of questionnaire and my name will not be mentioned on the questionnaire. I, undersigned, have understood the purpose of the study& fully agree to participate in the study.

Signature of the participant---------- Date ----------

Thank you has a nice day!

Name of investigator: Buna Yumura

Address of investigator: phone no- +251916812424

Email: yumurabuna@gmail.com

ANNEXIII: DATA COLLECTION INSTRUMENTS

Interviewer administered questionnaire on knowledge, attitude, practice and associated factors on infection prevention among cleaners at TikurAnbessa specialized hospital

Results from the responses will serve as the basis to describe the knowledge, attitudes and practices of infection control amongst the cleaners.

If any of the questions have different choices, I will give you the list and then please tell me which one you think is correct

Date_____ unit code _____

Part I. DEMOGRAPHY

1. Age: How old are you?
2. Gender

   Male

   Female

3. Religion

   Protestant Muslim

   Other Orthodox

4. Ethnicity

   A. Amharic C. Tigray
   B. Oromo D. Others

5. Educational status: What standard did you finish at school?

   A. Primary school
   B. Secondary school D. Diploma and above
   C. Certificate E. No formal education

6. Marital status

   A. Single C. Divorced E. Widowed
   B. Married D. Separated

7. Are you employed by the health facility? YES { } NO { }
8. Are you a contract staff? YES { } NO { }
9. Years of employment: how long have you worked as a general assistant/cleaner?

   ≤11month 1year

   2year ≥3year

10. How much time you spent at work daily? < 8 hrs ≥ 8 hrs
11. How much time spent standing at work daily? < 5 hrs ≥ 5 hrs

12. How much time spent sitting at work daily? < 5 hrs ≥ 5 hrs

13. Where is your working unit currently?

EOPD	Oncology	Toilet area
OPD	Radiology	Procedure
Ward-Medical/surgical	Laboratory	Sterilization/Instrument processing room
ICU	Oby/Gyn	Operation room
Causality/Pedi	Orthopedics	Laundry

14. Do you know your HIV, HepB and HepC status for the last 3 months?

Yes If yes, what was the result?.....

No

15. Are you vaccinated for HepatitisB virus?

Part II. KNOWLEDGE

1. Have you heard anything about TikurAnbessa specialized hospital policy on infection control? Yes No
2. From who did you heard about it?
   a. Nurse
   b. Doctor
   c. Any other health worker
3. Did you receive any training about the policy on infection control?
   a. Yes No
4. When were you trained on infection control policy?
   a. 1-6 months ago d.Over 24 months ago
   b. 7-12 months ago e I did not trained
   c. 12-24 months ago
5. How were you trained? (If the responded does not know, the list will be given)

A. In-service training
B. Orientation and induction
C. Short course
D. On the job training
E. Other

6. For how many days were you trained?.....
7. Who trained you?.....
8. Do you know hand washing with soap reduce the spread of infection?

Yes No Don't know

9. Where do you use the following color coding of cleaning mops?

White……

Red……

Green……

10. Must the sharps containers be closed before you take them away?

Yes No Don't know

11. What solution do you use for cleaning the floor? ----------

12. How many times do you clean the floor in one day?

a. Frequently c.As needed

b.Daily d.Other

13. Do gloves protect you from needle pricks?

Ye No Don't know

14. What are the five main sources of infection in the hospital?

1. Patient 4.Environment(Contaminated food,water,shower,…..etc
2. Employees 5.Animal(cats,rodents,dog…….etc)
3. Persons 6.Other

15. In case of needle prick injury what would you do? ----------

16. Do you know personal protective equipments?

a. Yes b.No c.Don't know

17. If yes, which of the following personal protective equipments do you know?

Glove Face mask Face shield other……..

Eye goggle/Glasses Apron/ Mackintosh

Closed boots/shoes Caps Gown/Scrub

Part III. PRACTICES

1. When cleaning the unit where do you start and why?----------
2. How often do you empty the bins?

A).As needed D).When visibly soiled G).Other

B).Daily C).Weekly E).Monthly F).According to the routine schedule

3. Which color of bag/bin do you use to dispose of the following health care waste? (Red, Yellow, Black and Brown)

A. General/Noninfectious wastes such as paper, plastic, food and food products, cartons, plastic bottles and office waste……

B.Infectious wastes such as gloves,dressings,blood and blood products, body fluids, blood soaked bandages,cultures,swabs and food residues from highly infectious patients…….

C.Highly infectious wastes such as human tissues, body parts, biopsies, carcasses and organs……..

D.Hazardous wastes like chemotherapy, chemicals such as solvents, mercury in thermometers, formaldehyde and pathologic chemicals……

E.Radio active and sharp wastes such as radioactive therapies, nuclear medicine to treat certain cancers, needles, needle of IV set,scalpels,knives,blades,lancets and broken glass and syringes……..

4. How do you dispose of sharps? ……
5. When do you use apron as measure of infection control?----------
6. . Do you wear mask all the time when you work? Yes No
7. If No, when do you wear a mask? ----------
8. How do you dispose waste from the ward? ----------
9. When washing hands where do you starts and why? ----------
10. How do you dilute the solution for cleaning the floor? ----------
11. When entering the isolation room what measures do you take to preventinfection?……
12. Have you ever had been exposed to splashes and occupational health hazards? Yes No
13. If yes, Types of splashes/hazards exposed
    Blood Droplets like cough
    Meconium/Amniotic fluid GI secretions like vomits, Sputum
    Medications like chemotherapy Laboratory chemicals
    Radiation Needle prick other
14. What measures do you take after exposed to splashes?

Part IV. ATTITUDES

1. Do you think you have a role in infection control?
   a. Yes b. No
2. If the answer above is yes, how do you feel about your role in infection control? ……
3. Do you think lining the bin after it is emptied is your responsibility?……

4. What is your view about cleaning of the sluice room by general assistants?……
5. What do you think about practicing infection control at home? ----------
6. What is your feeling about wearing of mask?_____
7. Do you think washing of hands is necessary after every activity as it can irritate the skin? Yes No
8. Do you think segregation of waste is necessary even when all waste is to be disposed? ……
9. Give reason for your answer…----------
10. Why do you practice infection control?

A. To avoid disciplinary actions against me
B. To decreasing risk to patients
C. To be given awards for my performance
D. Other reason given: …----------

11. Do you think washing of hands must be done only after touching items with blood?
    Yes No Don't know
12. Do you think universal precautions are?

    a. Cumbersome c.Expensive e.Other

    b. Protective d.Compulsory

13. Is there anything else you would like to tell me about or any suggestions about infection prevention at TikurAnbessa specialized hospital or is there anything that you would like to learn about?……

Thank you for your participation, when my research is finished, I shall come back to TASH and tell you all about what I found out.

Amharic version of information sheet

ጥናቱን የሚያካሂደው ሰው ቡና ዩሙራ(የመጀመሪያ ዲግሪ ምሩቅና የሁለተኛ ዲግሪ ተማሪ)

የጥናቱ ርዕስ

የጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል የፅዳት ሠራተኞች በሽታ መከላከልን በተመለከተ ያላቸዉን እዉቀት፣አመለካከት፣ ልምድ እና ተያያዥ ችግሮች ለማወቅ የሚደረግ ጥናት

የጥናቱ አላማ

ጥናቱ ለኢትዮጵያ መንግስትና አጋር ድርጅቶች እንዲሁም ጤና ጥበቃና ሆስፒታል በሽታ መከላከል ላይ ያሉ ችግሮችን በመረዳት መፍትሄ ለመፈለግና በሽታ የመከላከልን ጥራት ለማዳበር ይጠቅማል ተብሎ የተዘጋጀ ነዉ፡፡

ሚስጥር አጠባበቅ

በዚህ ጥናት ሊይ የሚሰበስበው መረጃ በሙለ ሚስጥራዊ በሆን መንገድ የሚቀመጥ ሲሆን የተገኙት መረጃዎች በሙሉ ለጥናቱ አላማ ብቻ የሚዉሉ ይሆናሉ ፡፡ የፅዳት ሠራተኞች ስም ወይም ሌላ የግል መረጃ በማንኛውም ሪፖርት ላይ አይጠቀስም ፡፡ ከጥናቱ ተመራማሪዎች ውጪ ማንም ስው የፅዳት ሠራተኞችን ስም ወይም ሌላ የግል ታሪክ በማንኛውም መንገድ በቀጥታ ልያገኝ አይችልም፡፡ለጥናቱ ተብለው በወረቀት ወይም በኮምፒውተር የሚሰፍሩ መረጃዎች በማንጠቀምባቸው ጊዜ ተቆልፈው ይቀመጣሉ፡፡

ግኑኝነት

መረጃ ሰብሳቢዎች እንዲሁም የተለያዩ የሆስፒታሉ አስተዳደር ስራተኞች ተጨማሪ መረጃ ማግኘት ከፍለጉና ጥያቄ ካላቸው የሚከተሉትን ሰዎች በአካልም ሆነ በስልክ ማግኘት ይችላሉ፡፡

ቡና ዩሙራ ስልክ 09 16 81 24 24

Email: yumurabuna@gmail.com

Amharic version of hospital consent form

የሆስፒታል ስምምነት ቅጽ

ይህ ጥናት የሚካሄደው ጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል ሲሆን የጥናቱ ዋና አላማ ጥናቱ ለኢትዮጵያ መንግስትና አጋር ድርጅቶች እንዲሁም ጤና ጥበቃና ሆስፒታል በሽታ መከላከል ላይ ያሉ ችግሮችን በመረዳት መፍትሄ ለመፈለግና በሽታ የመከላከልን ጥራት ለማዳበር ይጠቅማል ተብሎ የተዘጋጀ ነዉ፡፡

ይህ አይነቱ ዳሰሳ በአድስ አበባ እንዲሁም በሀገር አቀፍ ደረጃ የፅዳት ሠራተኞች በሽታ መከላከልን በተመለከተ ያላቸዉን እዉቀት፣አመለካከት፣ ልምድ እና ተያያዥ ችግሮችን በማወቅ ፅዳት ሠራተኞች፣ታካሚዎች እና ሌሎች የሆስፒታሉ ሠራተኞች ላይ የሚከሰተዉን ተላላፊ በሽታ እና ተያያዥ ችግሮችን ለመቀነስ ይረዳል፡፡ ከሌሎች አደጋዎች አንጻር ሲታይ በሀገራችን በፅዳት ሠራተኞች ላይ ስለሚደርስ የተላላፊ በሽታ አደጋ ብዙ መረጃ አይገኝም፡፡ ስለሆነም ሆስፒታሉ ለዚህ ጥናት የሚያስፈልጉ መረጃዎችን እንድንሰበስብ መፍቀዱ ለጥናቱ መከናወን ከፍተኛ የሆነ አሥተዋጸ ያበረክታል ፡፡

ለጥናቱ የሚፈለገው መረጃ የሚሰበስበው ከእያንዳንዱ የሆስፒታሉ ፅዳት ሠራተኞች ሲሆን የሠራተኛዉ ስም ወይም ሌሎች ግላዊ መረጃዎች አይወሰዱም፡፡ በተጨማሪም ለጥናቱ ተብሎ የተሰበሰበው መረጃ በሚስጥር የሚጠበቅና ከጥናቱ ተመራማሪዎች ውጪ ማንም ሰው ሊያግኘው አይችልም ፡፡

ይህ ጥናት በፍቃደኝነት ላይ የተመሰረተ እንደመሆኑ መጠን ሆስፒታሉ በማንኛውም ወቅት ከጥናቱ መውጣት ይችላል ፡፡ ከጥናቱ ጋር በተያያዘ ጥያቄ ወይም ተጨማሪ መረጃ ካስፈለገ በሚከተለው አድራሻ ጥያቄዎን ማቅረብና ማብራሪያ ማግኘት ይችላሉ፡፡ ፡

ቡና ዩሙራ (ዋና ተመራማሪ) ስልክ 0916812424

በዚህ ጥናት ለመሳተፍ ሆስፒታሉ ፍቃደኛ ከሆነ እባክዎ በፊርማዎ ያረጋግጡልን፡፡

እናመሰግናለን

ተሳታፊው ሆሰፒታል.....

ዋና ተመራማሪ.....

Amharic version questionnaire

አዲስ አበባ ዩኒቨርሲቲ

ጤና ሳይንስ ኮሌጅ ድንገተኛና ፅኑ ህሙማን ትምህርት ክፍል

ለታካሚዎች አገልግሎት የሚሰጥበት አከባቢ ለሚሠሩ ለዕዳት ሠራተኞች የተዘጋጀ ቃለ መጠይቅ

የጥናቱ ርዕስ የዕዳት ሠራተኞች በሽታ መከላከልን በተመለከተ ያላቸዉን እዉቀት፣አመለካከት፣ ልምድ እና ተያያዥ ችግሮች በጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል አድስ አበባ ኢትዮጵያ

ቃለ መጠይቅ አቅራቢ ስምና ፊርማ.....

የተጠያቂ መለያ ቁጥር.....

የተቆጣጣሪዉ ስምና ፊርማ.....

መግቢያ እና የፈቃደኝነት ስምምነት ቅጽ

ጤና ይስጥልኝ እኔ ስሜ..... ይባላል።በአድስ አበባ ዩኒቨርስቲ ጤና ሳይንስ ኮሌጅ ድንገተኛና ፅኑ ህሙማን ትምህርት ክፍል ተመራቅ ተማሪ የሆነዉ ተማሪ ቡና ዩሙራ yዕዳት ሠራተኞች በሽታ መከላከልን በተመለከተ ያላቸዉን እዉቀት፣አመለካከት፣ ልምድ እና ተያያዥ ችግሮች በሚል ምርምር በማካሄድ ላይ ናቸዉ። ጥናቱ ለኢትዮጵያ መንግስትና አጋር ድርጅቶች እንዲሁም ጤና ጥበቃና ሆስፒታል በሽታ መከላከል ላይ ያሉ ችግሮች በመረዳት መፍትሄ ለመፈለግና በሽታ የመከላከልን ጥራት ለማዳበር ይጠቅማል ተብሎ የተዘጋጀ ነዉ።እርሶ በዚህ ጥናት እንዲሳተፍ በዚህ ክፍል ዉስጥ ካሉት በጥናቱ ጠቃሚ የተባሉትን መረጃዎች ለማግኘት የሚከተሉትንና ተመሣሣይ ጥያቄዎችን አቀርብሎታለሁ፡-በሽታ መከላከልን በተመለከተ ያለዎትን እዉቀት፣አመለካከትና ልምድ ምን ይመስላል? ይህ ቃለ መጠይቅ 20 ደቂቃ ያክል ይፈጃል ከጥያቄዎቹ መካከል ለመመለስ የማይፈልጉት ካለ ሊነግሩን ይችላሉ እንዲሁም በማንኛዉም ሰአት ያለምንም ቅድመ ሁኔታ ቃለ መጠይቁን ማቆም ይችላሉ።በዚህ ቃለ መጠይቅ የተገኙ ማናቸዉንም መረጃዎች ከጥናቱ ባልደረባዎች ዉጪ በፍፁም ለማንም የማይገለፅ መሆናቸዉንና በሪፖርቱም ላይ የተሣታፊዎች ስም የማይገለፅ መሆኑን እና መረጃዎችን ለዚህ ጥናት አገልግሎት ከሚዉል ሳጥን እና በኮምፒዉተር ዉስጥ በጥንቃቄ የሚቀመጡ መሆናቸዉን ከወዲሁ ለማስረዳት እንፈልጋለን። በጥናቱ ላይ ማንሣት የሚፈልጋቸዉን ማናቸዉንም ጥያቄ ካለዎት በሚከተለዉ አድራሻ ለአቶ ቡና ዩሙራ ብለዉ በስልክ ቁጥር፡- 09 16-81-24-24. መደወል ይችላሉ።

ቃለ መጠይቁን መጀመር እንችላለን? አዎ.....አንችልም..... አመሰግናለዉ

የዛሬ ቀን.....የጀመሩበት ሰአት.....የጨረሱበት ሰአት .....

ክፍል አንድ፡ ማህበራዊ እና ስነ ህዝብ መረጃ

1. 101. እድሜ---------- 2. 102. ፆታ----------

3. 103. ሀይማኖትዎ ምንድን ነዉ? 1.ኦርቶዶክስ 2.ፕሮቴስታንት 3.ሙስሊም 4.ካቶሊክ 5.ሌላ ካለ----------

4. 104. ብሄርዎ ምንድን ነዉ? 1.ኦሮሞ 2.አማራ 3.ትግራይ 4. ሌላ ካለ ይግለጹ ----------

5. 105. የትምህርት ደረጃዎ? 1. የመጀመሪያ ደረጃ 2. ሁለተኛ ደረጃ 3. የምስክር ወረቀት/ሠርትፊኬት

4. ዲፕሎማ እና ከዚያ በላይ 5. ያልተማረ/ መደበኛ ትምህርት አልተማርኩም

6.106.የትዳር ሁኔታዎ ምንድን ነዉ? 1.ያላገባ/ች 2.ያገባ/ች 3.የተፋታ/ች 4.የተለያዩ 5.የሞተባት/የሞተችበት

7. 107. የሆስፒታሉ ቋሚ ቅጥረኛ ነዎት? 1. አዎ 2. አይደለሁም

8. 108. የሆስፒታሉ ኮንትራት ሰራተኛ ነዎት? 1. አዎ 2. አይደለሁም

9. 109. በፅዳት ስራ ምን ያህል ጊዜ አገልግለህል/ሻል? 1. ≤11 ወር 2. 1 ዐመት 3. 2 ዐመት 4. ≥3 ዐመት

10. 110. በየቀኑ ስራ ላይ የምታሳልፈዉ/ፊዉ ለስንት ሰአት ያህል ነዉ?

1. 8 ሰዐት በታች 2. 8 ሰዐት እና ከዚያ በላይ

11. 111. በየቀኑ ስራ ቦታ በመቆም የምታሳልፈዉ/ፊዉ ሰአት ስንት ነዉ?

1. 5 ሰዐት በታች 2. 5 ሰዐት እና ከዚያ በላይ

12. 112. በየቀኑ ስራ ቦታ በመቀመጥ የምታሳልፈዉ/ፊዉ ሰአት ስንት ነዉ?

1. 5 ሰዐት በታች 2. 5 ሰዐት እና ከዚያ በላይ

13. 113. የሚሰሩበት ክፍል የት ነዉ? 1.ድንገተኛኦፒዲ 2. ኦፒዲ/ተመላላሽ ህክምና ክፍል 3. የጨረር ህክምና ክፍል 4. ራጅ ክፍል 5. ተኝቶ ታካሚዎች ክፍል 6. ስቴራላይዜሽን/መሳሪያ ማቀነባበሪያ ክፍል 7. ፕሮሲጀሪ/የአሠራር ክፍል 8. የመጸዳጃ ቤት አከባቢ 9. ፅኑ ህሙማን ክፍል 10. ማህፀን እና ፅንስ/ስነ-ተዋልዶክፍል 11. ሕፃናትክፍል 12. ኦፕራሲዮን/ቀዶጥገናክፍል 13. አጥንትክፍል 14.ላዉንደሪ/የልብስ እጥበት

14. 114. ባለፉት ሶስት ወራት የኤችአይቪ፣ሄፕታይተስ ቢ እና ሄፕታይተስ ሲ ምሪመራ ተመሪምረዋል/ሁኔታዎን ያዉቃሉ? 1.አዎ 2. አልተመረመርኩም/አላዉቅም

15. 115. ለጥያቄ ቁጥር 114 መልስዎ አዎ ከሆነ ዉጠቱ ምን ነበር? ----------

16. 116. ሄፕታይተስ ቢ ክትባት ተከትበዉ ያዉቃሉ? 1. አዎ 2. አላዉቅም

ክፍል ሁለት፡ እዉቀት

1. 201. ስለጥቁርአንበሳ ስፔሻላይዝድ ሆስፒታል በሽታ የመከላከል ፖሊስ የሰማኸዉ/ሽዉ ነገር አለ?

1. አዎ 2. የለም

2. 202. ከማን ነዉ የሰማኸዉ/ሽዉ? 1. ነርሲ 2. ዶክተር 3. ለሎች የጤና ባለሙያዎች

3. 203. በሽታ/ኢንፌክሽን የመከላከል ፖሊሲን በተመለከተ ስልጠና ወስደዉ ያዉቃሉ?

1. አዎ 2. አላዉቅም

4. 204. በሽታ የመከላከል ፖሊሲን በተመለከተ ስልጠናዉን የሰለጠኑት መቼ ነበር?

1. 1-6 ወር በፊት 2. 7-12 ወር በፊት 3. 12-24 ወር በፊት 4. ከ24 ወር እና ከዚያ በላይ 5. አልሰለጠንኩም

5. 205. የሰለጠኑት እነዴት ነዉ?(ምላሽ ሰጪዉ የማያውቀው ከሆነ ዝርዝር ይሰጥበታል)

1.በሥራ ላይ ሥልጠና መስጠት 2. ኦሪንቴሽን/ገለፃ መስጠት እና ማበረታቻ

3. አጭር ትምህርት/ኮርስ 4. በሥራ ስልጠና ላይ 5.ሌላ ካለ ይግለጹ----------

6. 206. ስልጠናዉን የሰለጠኑት ለስንት ቀን ያህል ነዉ?----------

7. 207. ስልጠናዉን ያሰለጠነዎት ማን ነበር?----------

8. 208. እጅን በሳሙና መታጠብ የተላላፊ በሽታ ስርጭትን ይቀንሳልን?

1. አዎ 2. አይደለም 3. አላዉቅም

9. 209. ከዚህ በታች በቀለም የተከፍፈሉ መወልወያዎች/መጥረግያዎች የሚትጠቀምባቸዉ የት ነዉ?

ነጭ----------

ቀይ----------

አረንጓዴ----------

10. 210. ስለታማ መያዣዎች ከሚታስወግዳቸዉ/ከመወገዳቸዉ በፊት በግድ መዘጋት አለባቸዉ?

1. አዎ 2. አይደለም 3. አላዉቅም

11. 211. ወለሉን ለማፅዳት ምን አይነት ፈሳሽ ይጠቀማሉ? ----------

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12. 212. ወለሉን በቀን ምን ያህል ጊዜ ይወለዉላሉ?

1. በተደጋጋሚ 2. በየቀኑ 3. እነደአስፈላግነቱ 4.ሌላ ካለ ይግለጹ----------

13. 213. ጓንት በመርፌ ከመወጋት ይጠብቅኻል/ሻል? 1. አዎ 2. አይጠብቅም 3. አላዉቅም

14. 214. አምስት ዋና የሆስፒታል ተላላፊ በሽታ መነሻ/ ምንጭ የሆኑ የትኞች ናቸዉ?

1. ታካሚ/በሽተኛ 2.የሆስፒታሉ ሰራተኞች 3.ሰዎች 4. አከባቢ(የተበከለምግብ፣ዉሃ፣ሻዉር....ወዘተ)

5.እንስሳት(ድመት፣አይጥ፣ዉሻ.....ወዘተ) 6.ሌላ.....

15. 215. በመርፌ ስትወጋ/ጊ ምን ታረጋለህ/ሺ?

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16. 216. ሰዉን ከተላላፊ በሽታ የሚጠብቁ ቁሳቁሶችን ታዉቅያለሽ/ህ?

1. አዎ 2. አይደለም 3. አላዉቅም

17. 217. ለጥያቄ ቁጥር 216 መልስዎ አዎ ከሆነ ከዚህ በታች ካሉት የትኞቹን ያዉቃሉ?

1. ጓንት 2. የአይን መከላከያ /መነጽር 3. ዝግ ቡቲስ/ጫማ 4. የፊት ጭምብል

5. የፊት መከላከያ/ጋሻ 6. መከላከያ ሽርጥ/ልብስ 7.ኬፕ/ካባ 8. ጓን/ቀሚስ

9. ሌላ ካለ ይግለጹ----------

ክፍል ሶስት:ልምድ

1. 301. ክፍሎቹን ሲያፀዱ የሚጀምሩት ከየት ነዉ? እና ለምን?----------

2. 302. ቆሻሻ የያዙ ባልዲዎችን/ማጠራቀሚያዎችን ባዶ የሚታረጋቸዉ መቼ ነዉ?

   1. እንደ አስፈላግነቱ 2. በየቀኑ 3. በየሳምንቱ 4. ቆሻሻዉ ስታይ 5. በየወሩ

   6. ትናንሽ ስራዎችን ተከትሎ/ከመደበኛ ስራ ዉጭ

3. 303. ከዚህ በታች ያሉትን የህክምና ቆሻሻዎችን ለማስወገድ ምን አይነት ቀለም ባልዲ/ፕስታል ይጠቀማሉ?(ቀይ፣ቢጫ፣ጥቁር እና ቡናማ)

ጠቅላላ/በሽታን የማያስተላልፉ ቆሻሻዎች፣እነሱም፡ወረቀት፣ፕላስቲክ፣ምግብ እና የምግብ ምርቶች፣ካርቶኖች፣የፕላስቲክ ጠርሙዞች እና ከቢሮ የሚወጣ ቆሻሻ .....

በሽታን የሚያስተላልፉ ቆሻሻዎች(ጓንት፣ልብሶች፣ደም እና የደም ምርቶች፣ከሰዉነት የሚወጣ ፈሳሽ፣በደም የበሰበሰ ፋሻ፣ናሙናዎች፣የቆዳ መወልወያ/መጥረጊያ እና ከፍተኛ ደረጃ ተላላፊ በሽታ ካለበት ታማሚ የተረፉ ምግቦች)----------

በከፍተኛ ደረጃ በሽታን የሚያስተላልፉ ቆሻሻዎች(የሰዉ ሕብረ ሕዋስ፣የሰዉነትክፍሎች፣ ናሙናዎች/ባዮፕሲስ፣ሬሳዎች እና የተለያዩ የሰዉነት አካላት)----------

ለአደጋ የሚያጋልጡ ቆሻሻዎች(ኬሞቴራፒ/የካንሰር መድኃኒት፣የኬሚካል ቅመም(ማሟሙያ፣ሙቀት መለኪያ ዉስጥ የሚገኝ ባዙታ፣ሬሳ ማድረቅያና ማቆያ እና የበሽታ ጥናት ኬሚካሎች))……

ጎጂ ጨረር የሚያመጣ ንጥረ ነገር እና ስለታም ነገር የያዙ ቆሻሻዎች(የጨረር ህክምናዎች፣ካንሰር ማከሚያ የኒኩሊየር ህክምና፣መርፌዎች፣የግሉኮስ ገመድ ጫፍ መርፌ፣ኦፕራሲዮን ማድረግያ የስለት ቢላዋ፣ቢላዋ፣ምላጭ፣ለሁለት ጎን የሳለ ሹል የህኪም ቢላዋ፣የመስታወት ስብሪባሪ እና ሲሪንጆች)----------

4. 304. ስለታም ነገሮችን እንደት ታስወግዳለሽ/ህ/ትጥላለሽ/ህ?

5. 305. የበሽታ መከላከያ ሽርጥን እነደ በሽታ መከላከያ አድርገሽ/ህ የሚትጠቀመዉ መቼ ነዉ?

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6. 306. በስራ ላይ ሆነሽ/ህ ሁልጊዜ ጭምብልን ታረጋለሽ/ህ? 1. አዎ 2. አይደለም

7. 307. ለጥያቄ ቁጥር 6 መልስዎ አይደለም ከሆነ ጭምብልን መቼታረጋለሽ/ህ?

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8. 308. ከተኝቶ ታካሚ ክፍሎች ቆሻሻዉን እነዴት ታስወግዳለሽ/ህ/ትጥላለሽ/ህ?

9. 309. እጅ ስትታጠብ ከየት ትጀምራለሽ/ህ?ለምን?----------

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10. 310. ወለሉን ለማፅዳት የማፀጃ ፈሳሾችን(ኦሞ፣በረኪና እና ለሎችን)እንደት ታቀላቅያለሽ/ህ?

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11. 311. የተከለከለ ክፍል ሲገቡ በሽታን ለመከላከል ምን አይነት እርምጃ ይወስዳሉ/ምን ይጠቀማሉ?

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12. 312. የሚረጩ እና ከስራ ጋር ተያይዞ ጤንነትን ለአደጋ ለሚጥሉ ነገሮች ተጋልጠዉ ያዉቃሉ?

1. አዎ 2. አይደለም

13. 313. ለጥያቄ ቁጥር 312 መልስዎ አዎ ከሆነ ለምን አይንት የሚረጪ/ ጤንነትን ለአደጋ ለሚጥል ነገር ተጋልጠዋል? 1.ደም 2.እንሽርት ዉሃ 3.መድኃኒት(ኬሞቴራፒ/የካንሰር ህክምና መድኃኒት)

4.ጠብታ/ብናኝ(ሳል) 5. ትዉከት እና አክታ 6. መርፌ 7. ጨረር 8. ላቦራቶር/ ቤተሙከራ ኬሚካል

14. 314. በሚረጩ ነገሮች ከተጋለጡ ቦኃላ ምን አይነት እርምጃ ይወስዳሉ?

ክፍል አራት፡- አመለካከት

1. 401. በሽታ መከላከል ላይ ሚና/ድርሻ አለኝ ብለዉ ያስባሉ? 1. አዎ 2. አይደለም

2. 402. ለጥያቄ ቁጥር401 መልስዎ አዎ ከሆነ በሽታ መከላከል ላይ ላለዉ ሚና/ድርሻ ምን ይሰማዎታል?---

3. 403. ቆሻሻ ማጠራቀሚያዉን ባዶ ካደረክ/ሽ ቦኃላ ማስተካከል ኃላፊነቴ ነዉ ብለሽ/ህ ታስባለሽ/ህ?

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4. 404. የዉሃ ማገጃና መልቀቂያ/ጠቅላላ ክፍልን በፅዳት/በባጠቃላይ ረዳት ሠራተኞች ማፅዳትን በተመለከተ እንደት ታየዋለሽ/ህ/?ምን አመለካከት አለዎት?

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5. 405. በቤት ዉስጥ ተላላፊ በሽታ/ኢንፌክሽን መከላከልን ስለመለማመድ ምን ያስባሉ?

6.406. ጭምብል መልበስን በተመለከተ ምን ይሰማሻል/ህል?

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7. 407. ከእያንዳንዱ እንቅስቃሴ በኋላ እጅን መታጠብ ቆዳን የሚያበሳጭ ከመሆኑ አንፃር አስፈላጊ ነዉ ብለዉ ያስባሉ? 1. አዎ 2. አይደለም

8. 408. ሁሉም ቆሻሻ መጣል ያለበት ቢሆንም እንኳ ከመጣሉ በፊት መለየት/መበጠር አስፈላጊ ነዉ ብለዉ ያስባሉ?---

9. 409. ለጥያቄ ቁጥር 408 መልስ ምክንያትሽ/ህ ምንድን ነዉ?---

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10. 410. በሽታን ለመከላከል ለምን ልምምድ ታረጋለሽ/ህ?

1.አላግባብ የሆኑ ሥራዎች ጋር ተያይዞ የሚመጣዉን የድሲፕልን እርምጃ/ቅጣት ለመከላከል

2.ለበሽተኛ ጉዳትን/አደጋን ለመቀነስ 3. ለብቃቴ ሽልማት/ማበረታቻ እንድሰጠኝ

4.ሌላ ምክንያት ካለ ይግለጹ ---

11. 411. እጅ መታጠብ የሚያስፈልገዉ የግድ ደም የነካቸዉን ቁሳቁሶች ከነካሁት ቦኃላ ብቻ ነዉ ብለዉ ያስባሉ? 1. አዎ 2. አይደለም 3. አላዉቅም

12. 412. ባጠቃላይ ቅድመ ጥንቃቄ ቁሳቁሶችን በተመለከተ እንደት ያያሉ/ምን ያስባሉ?

1.የማይመቹ ናቸዉ 2.በሽታን የሚከላከሉ ናቸዉ 3.ዉድ ናቸዉ 4.መጠቀም ግዴታ ነዉ

13. 413. የጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል በሽታ መከላከልን በተመለከተ የሚትነግረኝ ማንኛዉንም ጥቆማ/ሀሳብ ወይም ማንኛዉንም ማወቅ የሚትፈልገዉ ነገር ካለ?

ለትብብሩዎ አመሰግናለሁ። የጥናት ዉጠቱን መጨረሻ ላይ መጥቼ አሳዉቃለሁ።