

Health Personnel's Compliance with the World Health Organization (WHO) Precautionary Measures

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ABSTRACT

The study determined the level of compliance with the WHO precautionary measures of health personnel in selected Municipal Health Offices (MHOs) in the First District of Ilocos Sur. It described the profile of the respondents and the MHOs, as well as the respondents' level of compliance along handwashing, use of personal protective equipment, handling and discarding of sharps, and other protective practices. The relationship between the profile of the respondents and their level of compliance was also looked into. This study utilized a descriptive correlation research design. Total enumeration was employed in the selection of the 83 respondents. A constructed and validated questionnaire checklist coupled with interview, was used in gathering data. Frequency and percentage, mean and simple linear correlation analysis were used in treating and interpreting the data. Based on the findings, the majority of the respondents are young, female, contractual, in their early years in the service, and have attended one to nine trainings/seminar workshops. A great number of the respondents are single, under the Nurse Deployment Program, and not a member of any organization. Hand sanitizer, mask for patients, goggles, apron, hub cutter, UV light, and linen hamper are unavailable in the five MHOs. The respondents showed a "very high" level of compliance with the WHO precautionary measures. Their age, status of appointment, length of service, and membership in an organization are determinants of their compliance.

Keywords: *handwashing, healthcare, infection, implementation, personal protective equipment*

INTRODUCTION

The role of a healthcare worker is diverse and complex. Occupational accidents and injuries and healthcare-associated infections have been some of the causes of healthcare worker morbidity and mortality. Good hygiene practice and other safety measures are mandatory to minimize such situations.

According to Famorca, Nies & McEwen (2013), it is the government's task to protect healthcare workers who must be guided by standards, code of ethics, research, and laws that govern occupational practice to minimize work-related

infection incidents. The authors likewise state that based on the Department of Health, infection prevention and control are required to prevent the transmission of infectious diseases in all healthcare settings. These demand a basic understanding of the epidemiology of diseases, risk factors, susceptibility to infection, practices, procedures, and treatments that may lead to infection.

Furthermore, patients/clients expect to be treated and cared for in clean conditions and not be exposed to the risks of acquiring an infection by poor practice of healthcare workers. Precautionary measures are paramount in controlling the spread of infection in any healthcare facility. Such measures play a significant role in reducing healthcare-associated infections that can be transferred from the healthcare practitioner to the patient, the patient's environment, or from patient to patient.

As accentuated by the WHO (2007), standard precautions are essential measures to be utilized to a minimum in controlling infections. They are meant to reduce the dangers of bloodborne and other pathogenic transmissions that arise from both familiar and unfamiliar causes. They are the minimum infection prevention practices that apply to all patient care where healthcare is delivered in any setting, regardless of suspected or confirmed infection status of the patient (Centers for Disease Control and Prevention, 2018).

Concerning healthcare, hand hygiene is the most effective method to prevent transmission of infections. Alongside traditional washing of soap and water is alcohol-based hand rub (Vernaz, S. et al. 2008). The WHO, together with the CDC guidelines, advocates the use of soap and water for hand wash; however, they recommend the use of alcohol-based hand hygiene for all other opportunities as they considered it as an effective alternative to standard soap and water (Karaaslan et al., 2014). Despite the uncomplicated procedure of hand hygiene, the study of Karaaslan et al. (2014) revealed low compliance among healthcare workers. The authors mentioned that the result could not easily be explained or changed; however, they believe that workload and lack of motivation may cause poor compliance.

Added to hand hygiene is the use of personal protective equipment (PPE) that should be guided by risk assessment and the degree of anticipated contact with blood, body fluids, or pathogens (WHO, 2007). Appropriate PPE should be available for various types of patient interactions. It should effectively cover personal clothing and skin likely to be soiled with blood and other body fluids or other potentially infectious materials. These include wearing gloves, wearing face masks, eye and face shields, and protective clothing such as reusable or disposable gown, jacket, and laboratory coat (CDC, 2018). Failure to follow the use of PPE guidelines and policies may threaten the safety of both the healthcare workers and the patient.

Williams and Carnahan, as cited by Alsmeyer (2014), emphasized that reduction and destruction of the PPE's intended effects due to healthcare workers' error in the technique and lack of knowledge of correct, necessary PPE are most likely the cause of increased rates of infection in the healthcare settings.

Moreover, proper handling and disposal of sharps is one essential duty of a healthcare worker to prevent injury and contamination from bloodborne pathogens. Safety-engineered devices such as sharps disposal containers, needleless systems, and sharps-engineered injury protection must be considered to avoid hazards of injury and infections in the workplace. As cited by Tayaben (2015), to facilitate the immediate disposal of sharps, CDC endorsed a movable sharps disposal container placed near a point-of-use. In his study, nurses adhere to safe working practices involving sharps or needles before and during the procedures but adhere less after, including disposal of used sharps or needles. On the other hand, Tayaben (2015) suggested that policies and guidelines, education and training, and resources are factors that significantly influence nurses' compliance with sharps injury prevention guidelines.

Besides the precautionary measures practiced by the healthcare workers, all individuals in the healthcare settings should likewise observe the transmission of infection practices. They should be particular with respiratory hygiene/cough etiquette as source control measures. Such control from the source is fundamental to prevent the spread of pathogens. Respiratory hygiene/cough etiquette is designed to limit the transmission of respiratory pathogens spread by droplet or airborne routes. Furthermore, policies and procedures related to handling, transporting, and disposal of contaminated equipment and supplies should be in place and must appropriately be observed. Cleaning, disinfection, and sterilization must be included as part of the infection prevention plan to ensure a patient can safely use environmental surfaces, equipment, and supplies or devices (CDC 2018).

Some similarities are seen in the studies of Karaaslan et al. (2014), Alsmeyer (2014), and Tayaben (2015) that delved into compliance of healthcare workers, particularly nurses, with standard precautions. However, the above authors focus only on a specific measure. The researchers in this study dealt with the compliance of MHO health personnel on handwashing, use of PPE, handling and discarding of sharps, and other protective practices following the precautionary measures advocated by the WHO (2007).

Some studies reported that non-compliance with standard precautions are related to lack of knowledge, time, and means, forgetfulness, the negative influence of the equipment on nursing skills, skin irritation, lack of training, a conflict between the need to provide care and self-protection, and distance to necessary equipment or facility (Efstathiou, Papastavrou, Raftopoulos & Merkouris, 2011). The

researchers likewise observed such factors. Despite the knowledge regarding the potential and danger of infection and the mechanisms to prevent such, healthcare workers are not as compliant as they need to be.

This study generally aimed to determine whether health personnel in selected MHOs in the first district of Ilocos Sur are compliant with WHO precautionary measures to control infection and assess whether they complied with these precautions in their daily health care delivery activities. Specifically, it determined the MHO healthcare personnel profile and the MHOs regarding the availability of budget, supplies/equipment, adequacy of water supply, and availability of hazardous containers. It likewise correlated the level of compliance of the respondents to their profile.

The study would serve as a basis for healthcare workers to understand the risk of exposure to infection, non-compliance, and safety to health workers and patients when one complies with the precautionary measures. Moreover, it hopes to assist the MHOs in developing policies on strict compliance with the precautionary measures and implementing routine monitoring and sanctioning personnel for policy violation.

METHODOLOGY

This study made use of descriptive–correlational method of research. It aimed to provide information on the respondents’ level of compliance with the WHO’s precautionary measures and correlated them to some variables.

The population of this study is the health personnel currently employed in the MHOs in the first District of Ilocos Sur presented in Table 1.

A structured survey questionnaire–checklist that was constructed by the researchers and validated by a pool of experts was used to gather data. The researchers based the questionnaire on “The Health-care Facility Recommendations for Standard Precautions by the WHO (2007). It consisted of two parts: Part I - profile of the health personnel and MHOs. Part II- information regarding the respondents’ compliance with the WHO precautionary measures. The permission from the

Table 1
Distribution of the respondents

Rural Health Units	N
Bantay	21
Caoayan	7
San Vicente	11
Santa Catalina	15
Sto. Domingo	29
Total	83

Municipal Mayor of the MHOs was secured prior to the administration of the questionnaire-checklist to the respondents. Personal interview was also done to ascertain response contained in the questionnaire. The respondents' level of compliance with the WHO precautionary measures were interpreted using the following four-point scale as norms:

Scale	Descriptive Rating	Level of Compliance
3.26 – 4.00	Always	Very High
2.60 – 3.25	Often	High
1.76 – 2.50	Rarely	Low
1.00 – 1.75	Never	Very Low

In the conduct of the study, a protocol was observed before data gathering. A letter of permission was forwarded to the Municipal Mayors of the five MHOs, and the researchers explained the purpose and benefits of the study. Informed consent was sought from the respondents before answering the questionnaire-checklist. Privacy and confidentiality are maintained by assigning the code name for the respondents. Researchers placed all documents bearing the data in a locker. After the research, these documents were destroyed by shredding them to ensure that the forms will not be read or used for other purposes. The respondents were also assured that they could withdraw their participation at any time. No risk or harm was posted, and confidentiality of information was observed during the conduct of the study. Likewise, the researchers did not compromise respect for dignity, autonomy, and the respondents' voluntariness. Furthermore, respondents were informed about the benefits of the study. The result would serve as basis of healthcare workers in understanding the risk of exposure to infection and its safety when one complies with the precautionary measures.

The following statistical techniques were used to treat the data gathered in this study: Frequency and percentage described the profile of the health personnel and the MHOs; Mean described the health personnel's level of compliance with the WHO precautionary measures; and Simple linear correlation analysis determined the relationship between the profile of the respondents and their compliance with the WHO precautionary measures.

RESULTS AND DISCUSSION

Profile of the Respondents

Table 2 presents the profile of the health personnel from the MHO in the First District of Ilocos Sur. The majority of the respondents (55 or 66.3%) are 20 – 29 years of age and the least are 60 years old and above (3 or 3.6%). The majority of them (60 or 72.3%) are female, and only 23 (27.7%) are male.

Table 2
Profile of the respondents

Personal-Related Factors	Frequency	Percentage
a. Age		
60 years and above	3	3.6
50 – 59 years	11	13.3
40 – 49 years	6	7.2
30 – 39 years	8	9.6
20 – 29 years	55	66.3
Total	83	100.0
b. Sex		
Female	60	72.3
Male	23	27.7
Total	83	100.0
c. Civil Status		
Single	40	48.2
Married	39	47.0
Widow/er	4	4.8
Total	83	100.0
d. Status of Appointment		
Contractual	45	54.22
Permanent	38	45.78
Total	83	100.0
e. Position/Designation		
Municipal Health Officer (MHO)	3	3.6
Nurses	5	6.02
Dentist	3	3.6
Municipal Health Midwife (MHM)	25	30.1
Medical Technologist	2	2.4
Under Nurse Deployment Program (NDP)	38	45.78
Laboratory Aide	7	8.4
Total	83	100.0
f. Length of Service		
30 years and above	4	4.8
20 – 29 years	7	8.4
10 – 19 years	7	8.4
1 – 9 years	62	74.7
Below 1 year	3	3.6
Total	83	100.0
g. Number of Training/Seminar Workshop Attended		
40 and above	2	2.4
30 – 39	0	0.0
20 – 29	1	1.2
10 – 19	10	12.0
1 – 9	70	84.34
Total	83	100.0
h. Number of Membership in Organization		
6	1	1.2
5	2	2.4
4	2	2.4
3	22	26.5
2	1	1.2
1	16	19.3
0	39	47.0
Total	83	100.0

A great number of the respondents 40 (48.2%) are single, and four (4.8%) are widow/widower. The majority of the respondents 45 (54.22%) are contractual and 38 (45.78%) are permanent. A great number of the respondents 38 (45.78%) are under the Nurse Deployment Program, and only two (2.4%) are medical technologists. The majority of the respondents 62 (74.7%) are still young in their work as evidenced by their one to nine years’ length of service while three (3.6%) have served for less than one year. The majority 70 (84.34%) attended 1-9 training/seminar workshop, however, one of the respondents (1.2%) attended 20 – 29, a great number of the respondents 39 (47%) are not members of any health-related organization, and only one (1.2%) has two memberships.

Profile of the Municipal Health Offices

Table 3 presents the profile of the MHO in the First District of Ilocos Sur.

Table 3
Profile of the Municipal Health Offices

	MHOs									
	Bantay		Caoayan		San Vicente		Sta. Catalina		Sto. Domingo	
A. Yearly Budget	3,000,000.00		100,000.00		800,000.00		2,247,591.55		128,626.25	
B. Availability of Equipment or Supplies	Availa- ble	Not Availa- ble	Availa- ble	Not Availa- ble	Availa- ble	Not Availa- ble	Avail- a-ble	Not Availa- ble	Availa- ble	Not Availa- ble
Soap	✓		✓		✓		✓		✓	
Water	✓		✓		✓		✓		✓	
Alcohol	✓		✓		✓		✓		✓	
Hand Sanitizer for Personnel	✓		✓		✓		✓		✓	
Hand Sanitizer for Patients		x	✓			x	✓		✓	
Masks for Personnel	✓		✓		✓		✓		✓	
Masks for Patients	✓		✓			x	✓		✓	
Bonnet	✓		✓		✓		✓		✓	
Goggles		x	✓			x	✓		✓	
Lab Gown	✓		✓		✓		✓		✓	
Apron		x	✓		✓		✓		✓	
Clean Gloves	✓		✓		✓		✓		✓	
Sterile Gloves	✓		✓		✓		✓		✓	
Forceps	✓		✓		✓		✓		✓	
Needle Canister	✓		✓		✓		✓		✓	
Hub Cutter	✓			x	✓		✓		✓	
Tissue Paper	✓		✓		✓		✓		✓	
Disinfectant Solutions	✓		✓		✓		✓		✓	
UV Light		x		x	✓			x	✓	
Curtains	✓		✓		✓		✓			x
Linen Hamper		x	✓		✓		✓		✓	
Trash Container	✓		✓		✓		✓		✓	
Sterilizing Solution	✓		✓		✓		✓		✓	
Sterile Drapes	✓		✓		✓		✓		✓	
Gauze Pads	✓		✓		✓		✓		✓	

Table 4
Level of compliance of the respondents with the WHO
precautionary measures along handwashing

	Item	Mean	DR
A. Handwashing			
1.	Wash hands before any direct patient contact whether or not gloves are worn.	3.80	Always
2.	Wash hands between any direct patient contact whether or not gloves are worn.	3.63	Always
3.	Wash hands after any direct patient contact whether or not gloves are worn.	3.84	Always
4.	Wash hands immediately after gloves are removed.	3.88	Always
5.	Wash hands before handling an invasive device.	3.83	Always
6.	Wash hands after touching blood, body fluids, secretions, excretions, non-intact skin and contaminated items even if gloves are worn.	3.90	Always
7.	Wash hands during patient care when moving from a contaminated to a clean body site of the patient.	3.87	Always
8.	Wash hands after contact with objects in the immediate vicinity of the patient.	3.71	Always
	Overall	3.81	Very High

Table 4 shows the MHO of Bantay, Caoayan, San Vicente, Sta. Catalina and Sto. Domingo have an allotted yearly budget of Php 3,000,000.00, Php 100,000.00, Php 800,000.00, Php 2,247,591.55, and Php 128,626.25, respectively. This budget suffices their equipment and supplies need making them compliant with the precautionary measures. The majority of the equipment and supplies are readily available. However, hand sanitizer, masks for patients, goggles, apron, hub cutter, UV light, and linen hamper are unavailable. In the absence of such equipment and supplies, possible injuries, the transmission of infection between healthcare practitioners to the patient and vice versa, or between patient to a patient would increase.

On Handwashing. Generally, there is a “very high” level of compliance of the respondents with the WHO precautionary measures along handwashing as supported by the overall mean rating of 3.81.

The respondents claimed that they “always” wash their hands after touching blood, body fluids, secretions, excretions, mucus membranes and non-intact skin and contaminated items even if gloves are worn ($\bar{x}=3.90$). Furthermore, they “always” wash hands immediately after gloves are removed ($\bar{x}=3.88$), and during patient care when moving from a contaminated to a clean body site of the patient ($\bar{x}=3.87$).

The findings are consistent with the study of Pasay, Robles, Awa and Enguito (2015), revealing very high compliance with handwashing protocol. It also supports

Table 5
Compliance of the respondents with the WHO precautionary measures along use of personal protective equipment (PPE)

Items	Mean	DR
A. Use of Personal Protective Equipment (PPE)		
1. Wear gloves when touching blood, body fluids, secretions, excretions, mucus membranes and non-intact skin.	3.94	Always
2. Change gloves between tasks and procedures on the same patient after contact with the potentially infectious material.	3.87	Always
3. Remove gloves after use, before touching non-contaminated items and surfaces, and before going to another patient.	3.86	Always
4. Wear a surgical or procedure mask and eye protection to protect mucus membrane of the eyes, nose and mouth during activities that are likely to generate splashes or sprays of blood, body fluid, secretions, and excretions.	3.52	Always
5. Wear a gown to protect skin and prevent soiling of clothing during activities that are likely to generate splashes or sprays of blood, body fluid, secretions, and excretions.	3.47	Always
6. Remove soiled gown as soon as possible.	3.69	Always
Overall	3.72	Very High

Mathur's (2011), statement that "proper hand hygiene is the single most important, simplest, and least expensive means to reduce the prevalence and spread of infections." His study suggested that a significant reduction in the rates of acquiring pathogens on hands and ultimately reduced infection is evident through good hand hygiene practice and compliance. However, he likewise mentioned that adherence to recommended handwashing practices in most health care institutions remains inappropriately low due to one's attitudes, behaviors, and beliefs. Status, forgetfulness, and lack of role model are observed or self-reported factors that affect hand hygiene behaviors.

On Use of Personal Protective Equipment (PPE). Overall, the respondents have a "very high" level of compliance to the WHO precautionary measure along the use of PPE with a mean rating of 3.72.

The respondents "always" wear gloves when touching blood, body fluids, secretions, excretions, mucus membranes and non-intact skin" ($\bar{x}=3.94$). They "always" change gloves between tasks and procedures on the same patient after contact with the potentially infectious material ($\bar{x}=3.87$), and remove gloves after use, before touching non-contaminated items and surfaces, and before going to another patient ($\bar{x}=3.86$).

The result supports the mandatory practice in the utilization of PPE in industrial work situations. A specific type of PPE is always required whenever a particular job/task is performed. Likewise, it is related to the study of Pasay et al.

Table 6
Compliance of the respondents to the WHO precautionary measures along handling and discarding sharps

Items	Mean	DR
B. Handling and Discarding Sharps		
1. Do not break contaminated needles.	3.84	Always
2. Recap a contaminated needle only when no alternative is reasonable for the medical procedure.	3.41	Always
3. Recap needle using a one-handed recapping method or forceps in a safe manner.	3.66	Always
4. Immediately report to the employee health nurse, nurse manager, or supervisor should an accidental needle puncture occur	3.54	Always
5. Do not place sharps container into a bag of any kind.	3.84	Always
6. Do not overfill sharps container. It is tightly closed and placed upright in the regulated trash area when the container is $\frac{3}{4}$ full.	3.77	Always
Overall	3.68	Very High

(2015) that presented very high compliance of nurses on the wearing of gloves and face masks in protecting them against highly infectious diseases. On the other hand, based on their findings, the majority of their respondents did not yield high compliance in terms of wearing the eye patch, goggles, gown, cap, and shoe shade.

On Handling and Discarding Sharps. Table 6 shows mean responses on the level of compliance with the WHO precautionary measures practiced by the respondents along handling and discarding of sharps.

The overall mean of 3.68 reveals that the level of compliance with the WHO precautionary measures practiced by the MHO health personnel along handling and discarding of sharps is “very high.” The result shows that the respondents do not “always” break contaminated needles ($\bar{x}=3.84$), place sharps container into a bag of any kind ($\bar{x}=3.84$), and overfill sharp container ($\bar{x}=3.77$).

The result implies that health personnel adheres to the Needlestick Safety and Prevention Act. The regulation necessitates the use of safety-engineered devices by all healthcare workers (Harris & Handelman, 2011). Utilization of safety devices and safer working practices combined with training can prevent more than 80% of sharp-related injuries (National Health Service, 2015).

On Other Protective Practices. Table 7 presents the level of compliance with the WHO precautionary measures practiced by the respondents along other protective practices.

Table 7
Compliance of the respondents with the WHO precautionary measures along other protective practices

Items	Mean	DR
B. Other Protective Practices		
Respiratory Hygiene	3.75	Always
1. Instruct clients to cover their nose and mouth when coughing/sneezing with tissue or mask, dispose of used tissues, and masks and perform hand hygiene after contact with respiratory secretions.		
2. Place acute febrile respiratory symptomatic patients at least 1 meter (3 feet) away from others in common waiting areas.	3.45	Always
3. Consider making hand hygiene resources, tissues, and masks available in common areas and areas used for the evaluation of patients with respiratory illnesses.	3.42	Always
Environmental Cleaning	3.69	Always
4. Use adequate procedures for the routine cleaning and disinfection of environmental and other frequently touched surfaces.		
5. Use UV light after the discharge of the patient from lying-in	2.67	Often
Handling Linens	3.77	Always
6. Prevent skin and mucus membrane exposures and contamination of clothing.		
7. Avoid transfer of pathogens to other patients and or the environment by observing proper handwashing.	3.80	Always
Waste Disposal	3.80	Always
8. Ensure safe waste management		
9. Treat waste contaminated with blood, body fluids, secretions and excretions as clinical waste, in accordance with local regulations.	3.73	Always
10. Treated human tissues and laboratory waste that is directly associated with specimen processing as clinical waste.	3.75	Always
11. Discard single use items properly.	3.81	Always
Patient Care Equipment	3.82	Always
12. Handle equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of pathogens to other patients or the environment		
13. Clean, disinfect, and reprocess reusable equipment appropriately before use with another patient.	3.78	Always
Overall	3.63	Very High

The data shows the level of compliance with the WHO precautionary measures practiced by the respondents along other protective practices is “very high” as indicated by the mean rating of 3.63. In terms of respiratory hygiene, they “always” instruct clients to cover their nose and mouth when coughing/sneezing with tissue or mask, dispose used tissues and masks and perform hand hygiene after contact with respiratory secretions ($\bar{X}=3.75$) Regarding environmental cleaning, the respondents “always” use adequate procedures for the routine cleaning and disinfection of environmental and other frequently touched surfaces ($\bar{X}=3.69$). In handling linens, the respondents “always” avoid transfer of pathogens to other patients and the environment ($\bar{X}=3.80$) Relative to waste disposal, they “always”

Table 8
Summary of the Level of Compliance of the Respondents to WHO
precautionary measures

Items	Mean	DR
A. Handwashing	3.81	Very High
B. Use of Personal Protective Equipment (PPE)	3.72	Very High
C. Handling and Discarding of Sharps	3.68	Very High
D. Other Protective Practices	3.63	Very High
As a whole	3.70	Very High

discard single use items properly such as syringe, gauze pads, gloves, cotton balls ($\bar{x}=3.81$) Lastly, as to patient care equipment, the respondents “always” handle equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of pathogens to other patients or the environment ($\bar{x}=3.82$).

The above findings imply that employees comply with the policies and procedures on infection prevention and control such as respiratory/cough etiquette, environmental hygiene, safe handling, cleaning, and disposal of infectious materials (WHO, 2007; Camden and Islington NHS Foundation Trust, 2018). It also manifests that they received comprehensive training in the use of protective devices in work practices.

Table 8 shows the summary of the level of compliance with the WHO precautionary measures observed and practiced by the respondents.

As a whole, the health personnel of MHOs in the first district of Ilocos Sur have a “very high” ($\bar{x}=3.70$) compliance with the WHO precautionary measures. The respondents have a “very high” compliance with the WHO precautionary measures along handwashing ($\bar{x}=3.81$), use of PPE ($\bar{x}=3.72$), handling and discarding of sharps ($\bar{x}=3.68$), and other protective practices ($\bar{x}=3.63$)

Table 9 exhibits the correlation coefficient showing the relationship between the profile of the respondents and their level of compliance with the WHO precautionary measures.

Taken as a whole, there is a significant relationship between the level of compliance with the WHO precautionary measures and the respondents’ personal-related profile specifically age ($r=.363$), status of appointment ($r=.248$), length of service ($r=.249$), and membership in an organization ($r=.344$).

Table 9
Correlation coefficients between the profile of the respondents and their compliance with WHO precautionary measures

Variables	Handwashing	Use of Personal Protective Equipment	Handling and Discarding Sharps	Other Protective Practices	As a whole
Age	.096	.392**	.253*	.365**	.363**
Sex	-.087	-.041	.028	-.067	-.055
Civil Status	-.117	-.145	-.167	-.149	-.182
Status of Appointment	.173	.292**	.097	.229*	.248*
Position/Designation	.133	-.152	-.062	-.072	-.055
Length of Service	.115	.303**	.138	.232*	.249*
Number of Training/Seminar Workshop Attended	.033	-.048	.052	-.026	.000
Number of Membership to an Organization	.257*	.170	.311**	.316**	.344**

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

The result implies that the respondents are compliant with the precautionary measures to prevent or control infection. Health personnel who are older, in a permanent position, with greater years of service and membership in an organization, are known to be experienced along compliance with the precautionary measures. As stated by Pasay et al. (2015), "nurses with longer professional exposure may attribute to their better compliance." They bring know-how, motivation, and commitment. They are identified as accomplished, hardworking, long-suffering, knowledgeable, and dedicated personnel. Compared to young, they can undoubtedly recognize comfort needs related to assessment and preparation requirements in the health care setting. The older ones are more cautious and aware of the risks of exposure to infectious materials and believe that hand hygiene is a critical practice to reduce the transmission. They likewise consider that wearing of appropriate and effective barriers, proper handling and discarding of sharps and infectious materials, and engaging other protective practices can significantly reduce health risks brought about by exposure. Moreover, being a member of health-related organizations is beneficial for such organizations are emphasizing the importance of precautionary measures where health personnel can acquire more information and updates on infection control and prevention. The outcome is high compliance and protection from exposure to infectious and hazardous materials in the healthcare settings.

On the other hand, respondents' sex, civil status, position/designation, and the number of training/seminar workshops attended do not significantly influence their level of compliance with the WHO precautionary measures.

CONCLUSIONS

The health personnel of the MHOs in the first district of Ilocos Sur are predominantly young, female, contractual, still in the early years of their service, and have attended training/seminar workshops. They are single, under the Nurse Deployment Program, but have never been a member of any health-related organization. They have a considerably high level of compliance with the WHO precautionary measures along handwashing, use of PPE, handling and discarding of sharps, and other protective practices. There is a significant relationship between the respondents' level of compliance with the WHO precautionary measures and their profile specifically age, status of appointment, length of service, and membership in organization.

RECOMMENDATIONS

It is recommended that health personnel must continuously update their knowledge on infection control through attendance in training/seminars, and regular reinforcement of institutional policies regarding strict compliance with the WHO precautionary measures. Institution administrative personnel should provide sufficient equipment and supplies in their healthcare facility for consistent compliance with the precautionary measures. Moreover, each healthcare institution should have a monitoring personnel on infection control procedures and policies to determine cases related to infection. Lastly, a similar study should be conducted to examine the reasons that lead to lapses in the observance of precautionary measures.

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