Global Scientific JOURNALS

GSJ: Volume 7, Issue 11, November 2019, Online: ISSN 2320-9186
www.globalscientificjournal.com

KNOWLEDGE OF AND COMPLAINCE WITH STANDARD PRECAUTIONS AMONG STUDENT NURSES

Muhazma Habib
Lahore School of Nursing,
The University of Lahore
Lahore, Pakistan
mohazmahabib@gmail.com

Jawad Khaliq
Lahore School of Nursing,
The University of Lahore
Lahore, Pakistan
Jawadbsn005@lsn.uol.edu.pk

Maaz Siraj
Lahore School of Nursing
The University of Lahore
Maazu756@gmail.com

Waqas Khan
Lahore school of Nursing
The University of Lahore
iamwaqas643@gmail.com

Muhammad Afzal
Lahore School of Nursing
The University of Lahore
Lahore, Pakistan
Muhammad.afzal@lsn.uol.edu.pk

Prof. Dr Amir Gaillani
Dean of Allied Health Sciences
The University of Lahore
Lahore, Pakistan
Profgilani@gmail.com

Abstract

Introduction: Health care professionals are constantly exposed to microorganisms. Many of which can cause serious or even lethal infections. Nurses in particular are often exposed to various infections during the course of carrying out their nursing activities,

Aim of the study;

This investigation assessed the knowledge and degree of compliance regarding standard precautions among student nurses.

Methodology;

A cross-sectional study was adopted for this investigation. Cross-sectional studies involve a single examination like a snapshot of a cross-section of a population at a given time.

Result; There were 58 respondents in the study. There were 10 (17.2%) male and 48 (82.8%) female respondents. Majority of the respondents or 53 (91.4%) were within the age bracket of 21 to 23 years old with mean age of 21.5 years. Almost all of the respondents 56 (96.6%) were single while only 2 (3.5%) were married.

Conclusion;

From this investigation that the level of knowledge and compliance of standard precautions among the study population is rather high. However, teaching must be strengthened, particularly with respect to the concepts of nosocomial infection and hand hygiene where students scored less. Future educational strategies maybe enhanced through intensive return demonstration of effective use of protective equipment's such as masks and eye goggles, requiring students to submit written journal, nursing care plans (NCP's) and anecdotal record of demonstration and integration of standard precaution practices during clinical exposure. Furthermore, nurse educators may need to provide an environment that models and promotes standard precaution practices by positive role modeling.

Keywords: Standard precautions, compliance, knowledge, hospital acquired infection.

INTRODUCTION

Knowledge of and compliance with standard precaution are vital to prevent clinical infections and shelter patients and health workers from interaction with infectious sources **(**Siegel et *al.,* 2017). Compliance by healthcare authorities with usual protections has remained recognized as an in effect incomes of avoiding and regulatory infections linked to therapeutic care in patients and healthcare professionals (Siegel 2017). Compliance with standard protections has been exposed to reduce the risk of exposure to plasma and body solutions (Garner 2014).

Altogether paid and voluntary healthcare personnel (HCP) effort in a wellbeing care situation that has possible interaction with patients or communicable materials, counting body materials that hold medical provisions and equipment, shells cloudy surroundings or vaporizers created during a therapeutic technique optimistic. In essence, all health personnel are at threat and this contains doctors, dentists, nurses, midwives, hospital helpers / health assistants, other dental staff, laboratory personnel and pharmacists. **(**Ramos et *al.,2013*). Compliance with typical protections decreases the threat of contact to blood and body solutions Gershon et al.,) He prominent that a well understanding of worldwide protections between health professionals was one of the connected (Cutter et *a.,l* 2015).

Observed the same among the doctors. Knowledge of typical protections by health professionals can be unfair by the type of instruction in Korea. Nurses working in the operational room need preparation to increase their compliance with standard protections (Taneja,2013). Compliance with typical protections decreases the threat of contact to blood and body solutions Gershon et al.,) He prominent that a well understanding of worldwide protections between health professionals was one of the connected **(**Oliveira,et *al.,* 2019).

Usual protection is a set of procedures planned to avoid the transmission of blood borne diseases when providing medical care. Then medical past and bodily inspection cannot dependably text patients with these pathogens, the Centers for Illness Control suggested that all patients income usual precautions, irrespective of their knowledge of their impurity status. Healthcare workers are at risk of numerous workplace intimidations in the hospital, including contact with blood-borne infections, such as human immunity virus and hepatitis B and C viruses, due to injuries of sharp objects and contact with body liquids. Due to inadequate knowledge and the level of consciousness of wellbeing specialists about usual shelters, this study suggests a capability of health specialists to rise their level of knowledge on the topic. Steady training should include initial management of biological risk, safety strategies, safety practices, protection in the handling of equipment or materials, monitoring of possible revelations and risks.

Level of knowledge and application of the usual protection in this study is acceptably standard to ensure the shelter of the infection in the healthcare professionals and patients. This study is requires the need to develop the capacity of health professionals with the standard precaution, either through the continuing education program or regular training or the sponsor of workshops and seminars. This is the most effective and lasting means to improve the knowledge of the health professionals and encourage compliance with usual precautionary procedures

Furthermore, research to identify factors that can potentially influence the compliance and attitudes of nurses towards SP should be made as changes to current practices require prior knowledge of these factors. In addition to the individual factors, organizational factors have also been involved in reducing compliance (Tavolacci, 2017).

AIMS OF THE STUDY

The aim of the study was to assess the knowledge and degree of agreement with standard defenses among nursing students, Lahore school of nursing.

LITERATURE SEARCH

Forty-eight of the 50 nurses interviewed had received formal training compared to the SP, while 49 expressed a good knowledge of the SPs. A high degree of compliance (97%) was observed with hand washing, while low compliance (65%) was observed with the use of gloves. A high percentage (72% of nurses) considered the SP as idealistic, waste of resources and interference in work and 84% agreed to ignore the fulfillment of the SP when they were subjected to a heavy workload. Almost all respondents considered the institutional provision of containers for sharp objects, masks, gloves and antiseptic fluids to be acceptable, but more than half described the availability and / or accessibility of surgical gloves, glasses and unsatisfactory plastic aprons. Most nurses (> 80%) adequately perceive occupational health risks, but the practice of post-exposure detection and prophylactic vaccination was observed in less than 35% of nurses (Tavolacci,2016).

In total, 98 nurses (97.0%) had heard of standard precautions; He wasn't there, even though he In total, 98 nurses (97.0%) had heard of standard precautions; He wasn't there, even though he was in daily practice; Everyone had professional experience <5 years. The remaining knowledge questions were answered by those who were aware of the standard precautions. Among these, 51 (52.0%) obtained information on the standard precaution concept in seminars and workshops, 31 (31.6%) of classroom lessons given by their teachers and only 16 (16.3%) obtained that their knowledge of the standard precautions (MeloDde. et.*al.,* 2011).Infections associated with medical treatment (HAI) can be considered the most frequent adverse event that occurs when providing medical care worldwide. It is estimated that over 4 million patients in Europe and 1.7

million in the United States develop HAIs every year, with a greater prevalence in developing countries **(**Ofili,et *al.*, 2017). Still, about half of the students did not talk to any of the injuries or performed blood tests after the incidence of incidence. Most NSI cases occurred in emergency units and medical surgery units. Omer et al. (2015) presented that NSIs are the most mutual exposure modality in 189 (75.9%) of health personnel while Salman zadeh et al. (2015) showed that the highest frequency of INE was observed among medical staff (79.7%) (79.7%) **(**Ofili,et *al.*, 2017).

Study conducted by Ask Arian and Malekmakan in (2006) reported of the study that 71.1% (489/688) of the students had experience of nine that mostly occurred in patients' rooms (43.6%); while 82% (401/489) of nine were not stated. Likewise, a study by Shiao et al. (2002), revealed that the incidence of nine throughout the years of training represented 61.9% (438/708) of students, 14.2% (62/438) of which it made a formal relationship and the part dominant (70.1). %) No NSI events are stated in the patient's room. Furthermore, dull needles were added to the center (219/438) of nine s, of which 86.8% were syringe needles. Only more than half (53.2%) of the necessary fundamentals in the nine and had been used in patients and, therefore, nine were informed and non-national NSA reports were very common among patients. (Akyol et *al.*, 2017).

According to the Centers for Disease Control of a United States. UU. More than 2 million infections begin each year in a hospital, nursing facility or other health facility: 70,000 people die each year following an infection in a hospital, nursing facility or in another health facility. : All infections detected in a hospital, nursing home or other healthcare environment. Nosocomial infections are the most often reported adversative events in medical caution provision. As the rate of nosocomial contagions has increased worldwide, ended 1.4 million people worldwide acquire infectious complications in hospitals every year. et. *Al.*, 2011).

METHODS . SETTING

The current study was conducted in department of Lahore School of Nursing, University of Lahore new campus 1-km of defense road, Lahore.

RESEARCH DESIGN

A cross-sectional study was adopted to assess knowledge of and compliance with standard precaution among student nurses.

*TARGET POPULATION***:** The target population of the study was all the students of department of Lahore School of Nursing, University of Lahore new campus 1-km of defense road, Lahore..

SAMPLING TECHNIQUE. A simple Random sample technique was used in this research study.

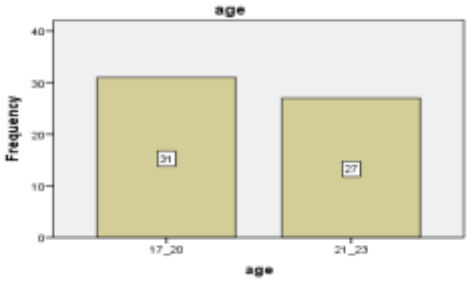
DATA GATHERING PROCEDURE Questionnaire adopted from (Labrague, Rosales & Tizon, 2012) was used to collect data from the students' nurses. Questionnaires consist of two sections, (Section A) is contain of demographic data that include Name Age, Sex, & Marital status. Questions regarding the knowledge of and compliance with standard precautions among student nurses 17 questions, the participants can answer these questions by providing five options After floating Questionnaire among the members the data was analyzed through SPSS version21 for Descriptive statistics and finding mean, frequencies, validity and reliability. Approval was occupied from all the members and free needle were given to the members to take portion in the study or rejected to participate**.**

STUDY TIMELINE. The data was collected from Febrauary, 2019 to April, 2019.

ETHICAL CONSIDERATION. The rules and regulations set by the ethical committee of university of Lahore will be followed while conducting the research and the rights of the research participants will be respected.

RESULTS

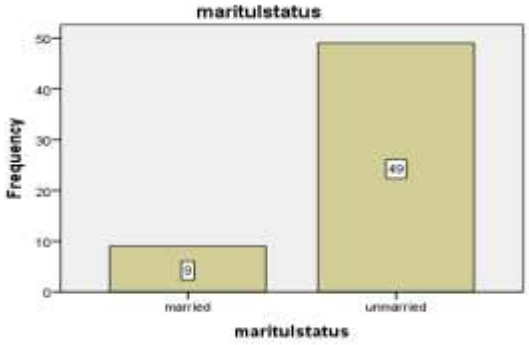
There were 58 participants in my study. There were 53.4% from age 17-20 46.6%participants were between age 21-23.



GENDER

There were 58 participants in my study. 34.5% were male participant and 66.5% participants were female.

MARITAL STATUS



There were 58 participants in my study. 15.5% participants were married and 84.5% participants were unmarried

TABLE.2 Responses to Questions Regarding Knowledge on Standard Precautions

Statements	Correct Answer	Frequency	Percentage
1. Nosocomial infection…			
The environment (air, water, inert surfaces) is the major source of bacteria responsible for nosocomial infection.	No	6	10.34
b. Advanced age or very young age increases the risk of nosocomial infection.	Yes	47	81.03
Invasive procedures increase the risk of nosocomial infection.	Yes	51	91.07
2. Precaution standards…			
Include the recommendations to protect only the patients.	No	53	51.38
Include the recommendations to protect the patients and the healthcare workers.	Yes	58	100
Apply for all the patients.	Yes	49	84.48
Apply for only healthcare workers who have contact with body fluid.	No	45	77.58
3. When is hand hygiene r ecommended ?			
Before or after a contact with (or care of) a patient.	No	29	50
Before and after a contact with (or care of) a patient.	Yes	56	96.55
Between patient contacts.	Yes	37	63.79
After the removal of gloves.	Yes	49	63.79
4. The standard precautions reco mmend use of gloves.			
For each procedure	**No**	**6**	10.34
When there is a risk of contact with the blood or body fluid.	Yes	58	100
When there is a risk of a cut.	Yes	57	98.27
When healthcare workers have a cutaneous lesion.	Yes	54	93.10
5. When there is a risk of splashes or spray of b lood and body fluids, the healthcare workers must w ear.			
Only mask	.No	54	93.10
Only eye protection.	No	56	96.55
Only a gown.	No	55	94.83
Mask, goggles, and gown.	Yes	**57**	98.27

The table presents the participant's collective votes in the questionnaires on standard precautions. Almost half (46.6%) of respondents obtained a score between 12 and 15, interpreted as "Good knowledge", while 43.1% obtained a score between 16 and 19, which is interpreted as "Ottima knowledge". In general, nursing students have "great knowledge" of standard precautions with a weighted average of 14.45

Knowledge of Student Nurses on Standard Precautions

Marks Range	Frequency (n=58)	Percentage (%)
16 – 19	25	43.10
12 – 15	27	46.55
8 – 11	5	8.62
0 – 7	1	1.72
Average Score	14.45	

The results show that most respondents (n = 54, 93.1%) wash their hands immediately after contact with blood, body fluids, secretions, excretion and dirty substances, and more than half Wash their hands when they enter in contact with different patients. and after taking gloves with 65.5% and 56.9% respectively.

Regarding the use of gloves, the vast majority of participants used gloves for stool disposal and urine (n = 47, 81.0%), during the patient's mucosal manipulation (n = 54, 93.1%) , saliva and spit culture (n = 53, 91.4%) and when it comes into contact with blood (n = 55, 94.8%). However, a lower degree of compliance (12.1%, rarely, 17.2%, ever) was observed when wearing gloves during parenteral injection of drugs.

Most respondents adhere to the use of a face mask and protective gown or when performing procedures that can induce blood sputtering, body fluids, secretions and excretions with compliance rates of 94.8% (n = 55) and 93.1 % (n = 54), however, a significant percentage of non-compliance (n = 11, 18.9%) was observed with the use of plasters and protective glasses.

Regarding the care of used needles, 82.8% (n = 48) discarded needles and blades in a waste box or sharp container after use, and almost three quarters (n = 43, 74.14%) did not become cover the syringe after using it

In general, student nurses have a standard precaution of "high compliance" with an average of 3.59.

5 shows the standard precautions components. When the elements were grouped into the 6 components, an average was calculated for all the elements of each component for each respondent. The global averages were then calculated based on the respondents' average scores for each item. The data indicate that the use of the mask has the highest degree of compliance with a weighted average of 3.95 which is interpreted as "High compliance". On the other hand, the use of glasses has the lowest degree of compliance with a weighted average of 3.19, which is interpreted as "average compliance".

DISCUSSION

This survey of this study explored the knowledge and degree of compliance with standard precautions among nursing students in a private nursing school a.

The results of this study indicated that student nurses were aware of standard precautions. Kim et al. He also reported that knowledge of standard precautions was better among nursing students than among medical students. This completely disagrees with the Bamigboye and Adesanya study, where only 46.2% of student nurses had very good knowledge. Studies among the nursing population also showed a similar result to this study. Vaz et al. He also reported that 90.0% of nurses were aware of standard precautions. Good knowledge of standard precautions among nursing students may be due to the inclusion of standard precautionary concepts in the Philippines nursing curriculum. It is worth noting this result, since a previous study suggests that one of the factors influencing compliance with standard precautions in any hospital environment is a solid understanding of concepts and principles. Sax et al. reported that lack of knowledge is the main reason for not complying with standard precautions and isolation. However, the result of this investigation does not agree with previous studies conducted between nurses and other doctors on knowledge of aseptic techniques and standard precautions in the hospital setting. Melo et al. They examined nurses in a hospital in Goiania, Brazil, and found that only 75.6% understood standard precautions as protective measures. In the survey by Luo et al of 1444 nurses, only half (n = 722) whose were aware of all the standard precautions, while Abdul Raheem et al. noted that half (50%) of health workers were not aware of universal precautions. The results of this study also showed that knowledge of nosocomial infection was the lowest of the five components of standard precautions. The students did not know exactly what or who were the main sources of bacteria responsible for nosocomial infection, since most of them thought that the environment was the main source of bacteria. This reinforces the need to intensify and reinforce the teachings on standard prudence in the classroom

Regarding compliance with standard precautions, the results revealed that the students had high compliance. This may be due to rigorous control by the teaching staff in relation to standard precautionary practices during clinical rotation. Furthermore, the percentage of students per faculty during the clinic could also be attributed to this compliance. Due to the limited number of students compared to the number of teachers, they were able to monitor and monitor their students while performing standard precautionary practices. It is important to consider this result, since not using and applying standard precautions could be responsible for problematic and intractable infections This result, however, is not comparable to the studies carried out by previous authors.

Although most students know that health professionals should wear masks, glasses and gowns when there is a risk of splashing or splashing of blood and body fluids, surprisingly, compliance with the use of eye patches or goggles it was relatively low. This can be attributed to the lack of availability of personal protective equipment in every hospital ward where they are rotated. This result is similar to that of Luo et al. where they observed that the use of protective items such as eye shields, masks and quarantine clothing among Chinese nurses was the lowest. Sadoh et al. He also noted that less than two-thirds of health workers wore personal protective equipment, such as aprons, gowns and gloves, during surgery and deliveries.

LIMITATION

Shortage of time was the limitation of the study

CONCLUSION

From this research it is possible to deduce that the level of knowledge and respect for standard precautions among the study population is quite high. However, teaching should be strengthened, in particular with regard to the concepts of nosocomial infection and hand hygiene in which the students

obtained a lower score. Future educational strategies can be improved through intensive demonstration of the return of effective use of protective devices such as masks and glasses, which require students to present a written diary, nursing care plans (NCP) and an anecdotal demonstration record and integration of standard precautionary practices during clinical exposure. Furthermore, nursing educators may need to provide an environment that shapes and promotes standard precautionary practices through positive role models. Snow et al. reported that tutor hand hygiene practices influence student hand hygiene practices, and Feather et al. They stressed the importance of teachers who model good clinical practice.

REFERANCES

1. Garner JS (2014) Guideline for isolation precautions in hospitals. The Hospital Infection Control Pratices Advisory Commitee. Infect Control Hosp Epidemiol 17: 53-80.
2. Siegel JD, Rhinehart E, Jackson M, Chiarello L (2017) Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for isolation precautions: Preventing transmission of infectious agents in healthcare settings, June 2014. Public Health Service, US Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, Georgia.
3. Ramos-Gomez F, Ellison J, Greenspan D, Bird W, Lowe S, et al. (2013) Accidental exposures to blood and body fluids among health care workers in dental teaching clinics: a prospective study. J Am Dent Assoc 128: 1253– 1261.
4. Cutter J, Jordan S (2015) Uptake of guidelines to avoid and report exposure to blood and body fluids. J Adv Nurs46: 441-452.
5. Akyol A, Ulusoy H, Ozen I (2019) Handwashing: a simple, economical and effective method for preventing nosocomial infections in intensive care units. J Hosp Infect62: 395- 405.
6. Taneja, J. (2013). Evaluation of knowledge and practice amongst nursing staff toward infection control measures in tertiary care hospital in India. The Canadian Journal of Infection Control, 24(2), 104-107.
7. Oliveira, A. C., Marziale, M. H., Paiva, M. H., & Lopes, A. C. (2019). Knowledge and attitude regarding standard precautions in a Brazilian public emergency service: a cross sectional study. Rev Esc Enferm USP, 43(2), 313-9.
8. Tavolacci, M. P., Ladner, J., Bailly, L., Merle, V., Pitrou, I., & Czernichow, P. (2016). Prevention of Nosocomial Infection and Standard Precautions: Knowledge and Source of Information among Healthcare Students. Infection Control and Hospital Epidemiology, 29(7), 642-647.
9. MeloDde S, Silva e Souza AC, Tipple AF, das Neves ZC, Pereira MS. (2011) Nurses' understanding of standard precautions at a public hospital in Goiania – GO, Brazil. Rev Lat Am Enfermagem, 14:720–7.
10. Ofili, A. N., Asuzu, M. C., & Okojie, O. H. (2017). Knowledge and practice of universal precaution amongst nurses in Central Hospital, Benin City, Edo State, Nigera. Niger Postgrad Med J., 10, 26-31.