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ORIGINAL ARTICLE **OPEN ACCESS**

Descriptive Study to Assess the Knowledge Regarding Infection control protocol used by Health Care Providers of paediatric unit at selected hospital in Delhi NCR: With a view to develop an education package on infection control protocol

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ABSTRACT
One of the most typical issues with health care management is healthcare-associated infection (HCAI). It poses a major health risk by increasing patient morbidity and mortality, length of hospital stays, and hospitalisation expenditures. A safe workplace for people who work in healthcare facilities and high-quality patient care both depend on effective infection prevention and control. By implementing effective infection control measures, it is essential to reduce the risk of infection spread to patients and hospital professionals. Study was done to assess the knowledge regarding Infection Control protocols among health care provider and to find out the association between the knowledge score with selected demographic variables. The researcher prepared an education package on Infection Control protocols based on the knowledge of health care providers. The research approach adopted for the current study is quantitative. This was a descriptive study of 135 health care provider of paediatric unit in selected hospital Delhi NCR. A cross- sectional one-time test research design was selected. The researcher has selected the sample by a non- probability purposive sampling technique. The technique was used to select the samples. Structure knowledge questionnaire were used to assess the of health care provider paediatric unit with view to develop an education package on infection control package. The overall knowledge of health care provider on infection control protocol shows the mean value 20.422 with the mean percentage 68.07& and standard deviation 3.465. The knowledge level of the health care provider regarding infection control protocol. Majority of 57% (77) of the Participants have moderate knowledge and 43% (58) of the Participants had adequate knowledge. Assess the knowledge regarding infection control protocol used by health care providers of paediatric unit with a view to develop an educational package on infection control package. The association between knowledge level with selected demographic variable. The obtained chi square value of the variables as Gender (χ^2 = 11.137, p-value 0.001), Undergone training on infection control (χ^2 = 5.811, p-value 0.016), are significant at 0.05 level of significance.
Keywords: *Knowledge, Educational package, Heath care Provider, Infection control package.*

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INTRODUCTION

One of the most common concerns regarding controlling health care is healthcare-associated infection (HCAI). Having an occurrence of 3.0-20.7 percent and an incidence rate of 5-10 percent, hospital acquired infection is a known public health hazard around the world. Infections acquired in hospitals have become increasingly visible as a cause of increased morbidity and mortality [1]. Neonatal care should undergo a paradigm shift as a result of India's Make in India strategy. Because the Equipment costs, including both consumable and non-consumable costs, is expected to come down across the board, the current system of solely conservative approach to neonatal case management must move to a high-end professional and preventive strategy [2]. HAIS can lower one's quality of life or possibly shorten one's life expectancy, as well as cost a lot of money in the long term. For example, after a needle stick injury with a needle from an infected source patient, the probability of HAIS was 0.3 percent for BIV, 3% for hepatitis C, and 6-30 percent for hepatitis B [3]. According to the National Nosocomial Infection Surveillance System (NNIS), 14.1 hospital acquired illnesses per 1000 patient days are reported. The severity of illness, prematurity, congenital malformations, systemic disorders, amount of invasive surveillance, indiscriminate use of antibiotics, failures in sanitation and disinfection processes, and the nature of diagnostic procedures all

increase the risk of hospital acquired infection in new-borns. In neonatal intensive care units, hospital-acquired infections are one of the primary causes of preventable morbidity and mortality [4].

A pathogen is a bacterium that has the ability to cause infectious disease in humans. Bacteria, Fungi, Protozoa, and Viruses are pathogens that belong to four different categories of microbes. Infectious disease is caused by pathogens [5].

8.7% of hospital patients had nosocomial infections, according to a WHO prevalence survey conducted in 55 hospitals across 14 countries across the Eastern Mediterranean, Southeast Asia, Western Pacific, and Europe WHO regions. Over 4 million neonates per year pass away before they turn four weeks old. 98 percent of these deaths occur in developing nations [6].

The NMR and the U5MR differ significantly amongst Indian districts. From 83.1 per 1000 live births in 2000 to 42.4 per 1000 live births in 2017, the U5MR in India decreased. The infant mortality rate in India was 29.07 per 1,000 live births [7].

One in ten patients in high-income countries experience injury while obtaining hospital care, according to estimates. Numerous unfavourable circumstances, of which almost 50% are avoidable, can result in injury. Hospitals in low- and middle-income countries (LMICs) experience 134 million adverse events annually as a result of subpar care, which leads to 2.6 million fatalities. Up to 4 out of 10 patients experience injury when receiving primary and outpatient care globally. Up to 80% of injury can be avoided. The most harmful mistakes involve medication use, prescription, and diagnosis [8].

RESEARCH STATEMENT

"A Descriptive Study to Assess the Knowledge Regarding Infection control protocol used by of Health Care Providers of paediatric unit at selected hospital in Delhi NCR. With a view to develop a education package on infection control protocol."

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding Infection Control protocols used by health care provider of pediatric unit
2. To find out the association between the knowledge score with selected demographic variables of the health care providers.
3. To prepare a education package on Infection Control protocols based on the knowledge of health care providers.

MATERIAL AND METHODS

The present study was under taken to assess the Knowledge Regarding Infection control protocol used by of Health Care Providers of paediatric unit at selected hospital in Delhi NCR. The study was conducted in selected hospital of Delhi NCR. The 135 Health care provider who were full fill the inclusive criteria were included for this study. Socio-demographic variables collected and the Structured knowledge questionnaire regarding infection control protocol was used to assess the knowledge of health care provider were drawn by non-probability Purposive sampling technique was used to select the sample. The findings of the study have been discussed with reference to the sections and findings of the other studies.

Inclusive Criteria

1. The health care providers who are working in pediatric unit of selected hospital of Delhi NCR.
2. The health care providers who are present and willing to participate in the study.

Exclusive Criteria

1. Health care provider who are not available and not willing to participate in the study.
2. The health care providers who are other than pediatric unit

DEVELOPMENT OF RESEARCH TOOL

The tools will be created in accordance with the study's goals. Prior to the development of the tool, the following actions will be taken:

- Related journalism was reviewed in the preparing of the tool
- Guidance and consultation of the experts
- Personal experience of the investigator
- Direct contact with Health care provider during visits
- For the formulation of the statistical analysis plan, a discussion with the statistician was held

TOOLS FOR DATA COLLECTION

The expertise of healthcare professionals was evaluated using a structured knowledge questionnaire about infection control practices. The participants were asked to sign a consent form indicating that they were willing to take part in the study. Both descriptive and inferential statistics were utilised to analyse the research findings. SPSS and Microsoft Excel both used to calculate the results. The Departmental Research Committee of the faculty of Nursing, SGT University was consulted for approval. The SGT University's

ethical committee provided its approval. Before answering the questions, study participants gave their informed consent, and they had complete discretion over whether or not to participate in the research.

RESULT AND DISCUSSION

Figure 1 shows the sample 65.2% (88) of Participants were in the age group of 21- 30 years, followed by 27.4% (37) were in the age group of 31-40 years and remaining 7.4% (10) were in the age group of 41-50 years. Figure 2 According to gender, majority 61.5% (83) of Participants were females and 38.5% (52) of Participants were males. Figure 3 According to education qualification of the participant. 28.1% (38) of Participants done their B.Sc Nursing, 25.9% (35) of Participants done their MBBS, 23.7% (32) of Participants done their MD and 22.2% (30) of the Participants done their GNM. Figure 4 The type of family of the participants, majority 71.1% (96) of the Participants were having nuclear family and 28.9% (39) were living in joint family. Figure 5 According to the marital status, 51.9% (70) of the participants were married and 48.1% (65) were unmarried. Figure 6 According to the area of work, 30.4% (41) of health worker working in OPD, 29.6% (40) were work in pediatric ward, 28.1% (38) participants work in NICU and 11.9% (16) were work in NICU. Figure 7 the year of experience majority 66.7% (90) health care provider having 0-5 years of experience followed by 18.5% (25) participant having 11 – 15 years of experience and 7.4% (10) participants each having 6-10 years and more than 15 years of experience. Figure 8 According to undergone training on infection control, majority 60.7% (82) participants were undergone training on infection control and 39.3% (53) participants were not undergone the training.

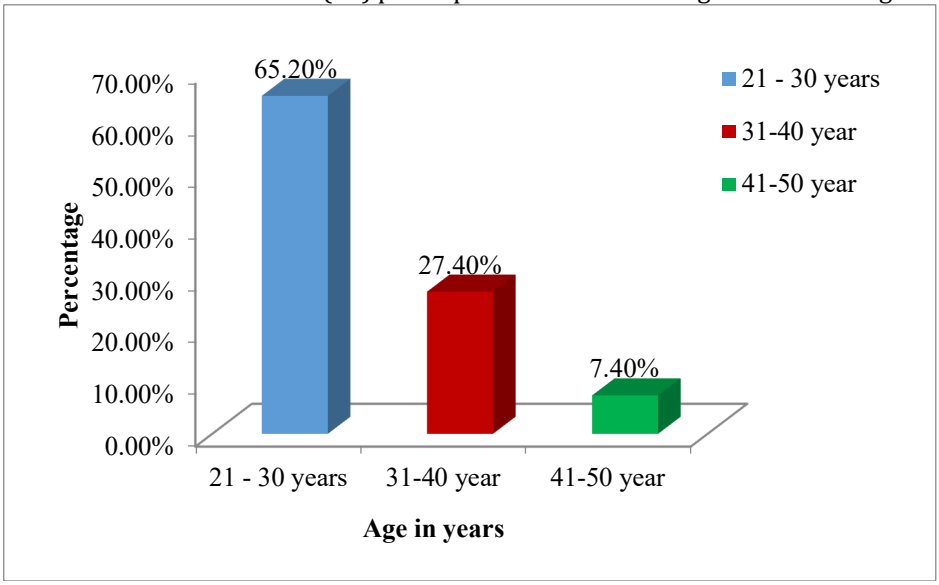

Figure 1: Bar chart showing percentage distribution on the basis of age in year

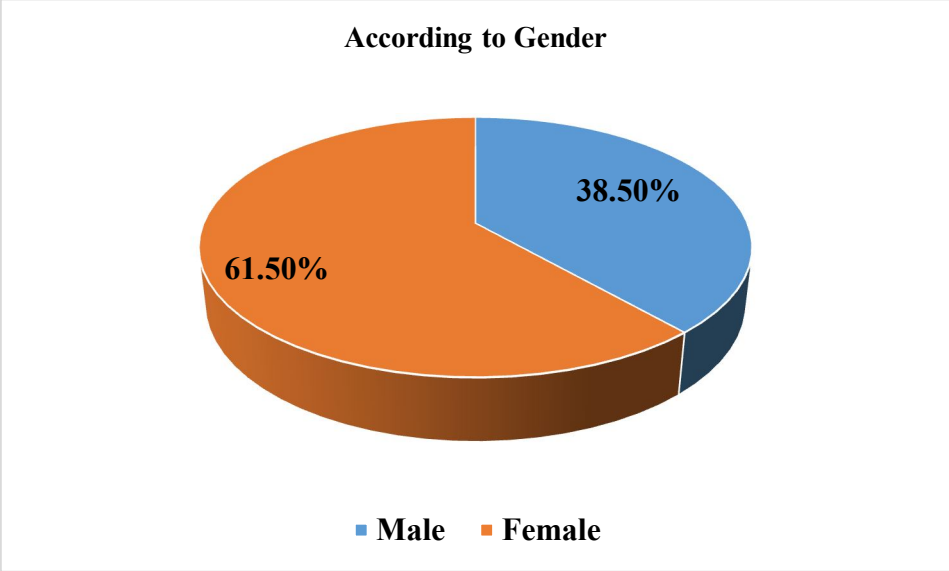

Figure 2: Pie chart showing percentage distribution on the basis of Gender

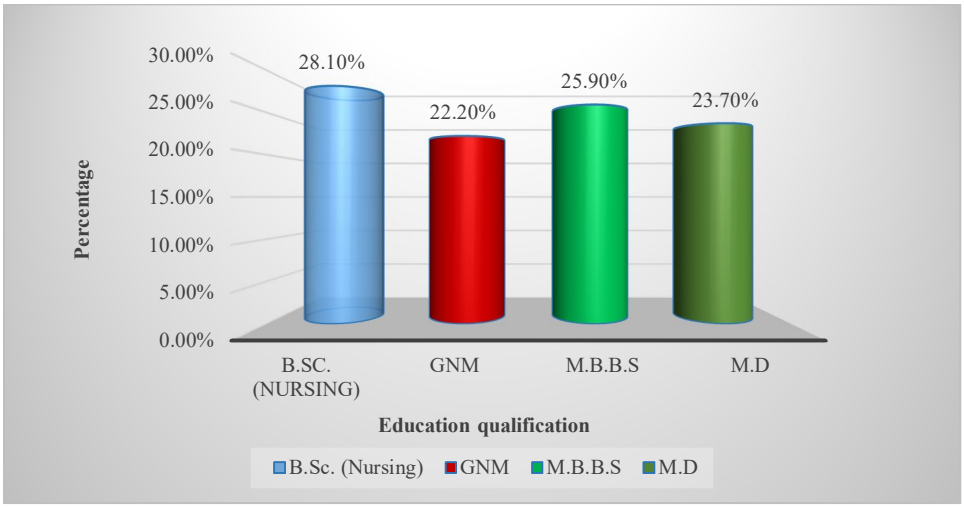

Figure 3: Cylindrical bar chart showing percentage distribution on the basis of Educational Qualification

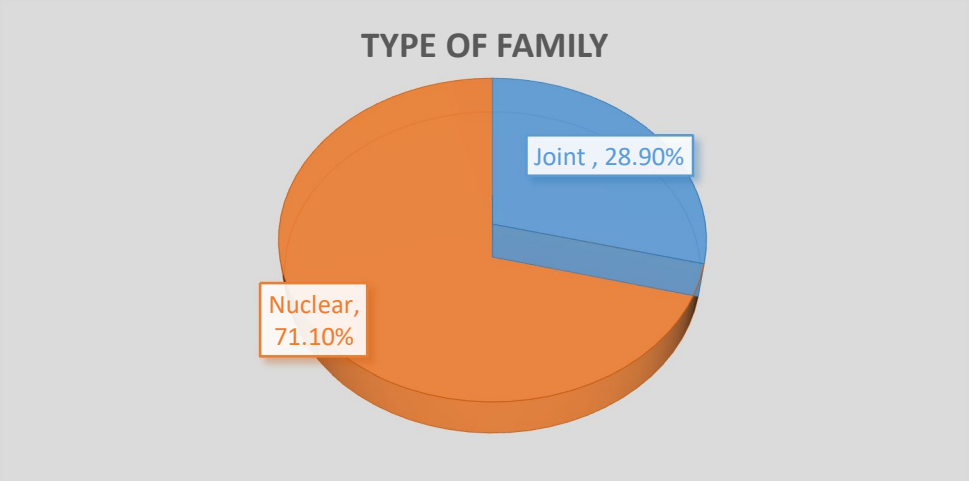

Figure 4: Pie chart showing percentage distribution on the basis of types of family

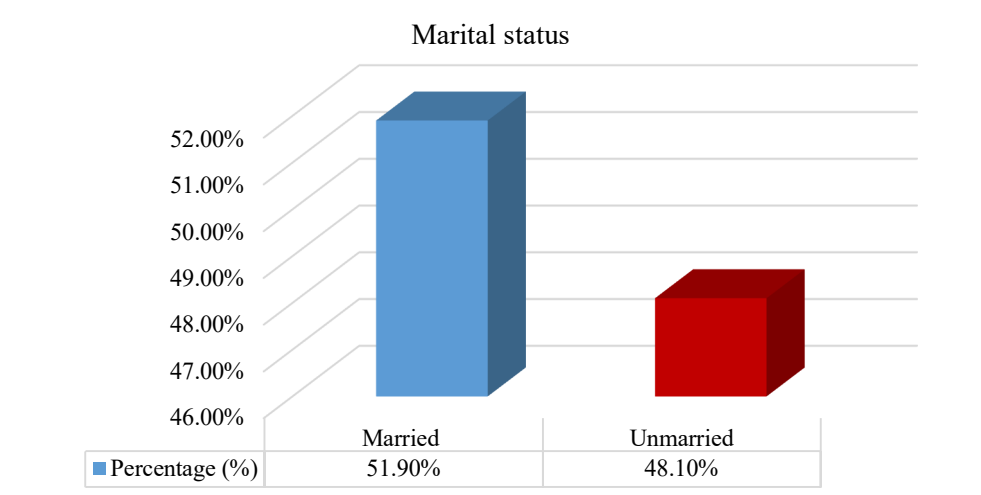

Figure 5: Bar chart showing percentage distribution on the basis of marital status

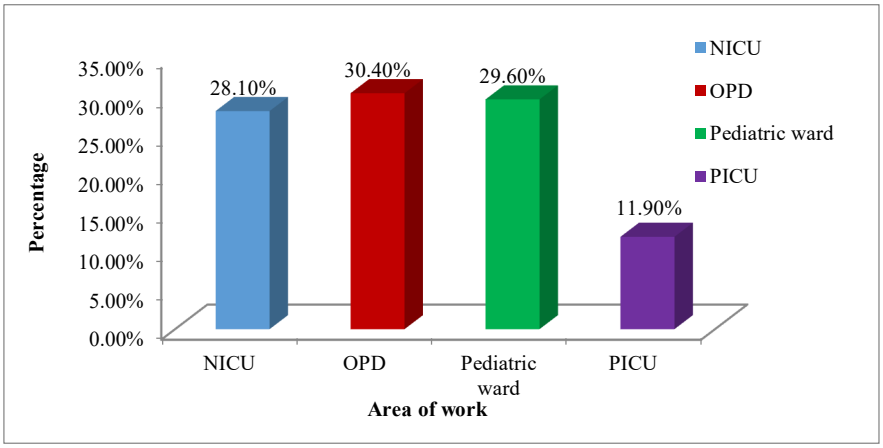

Figure 6: Bar chart showing percentage distribution on the basis of area of work

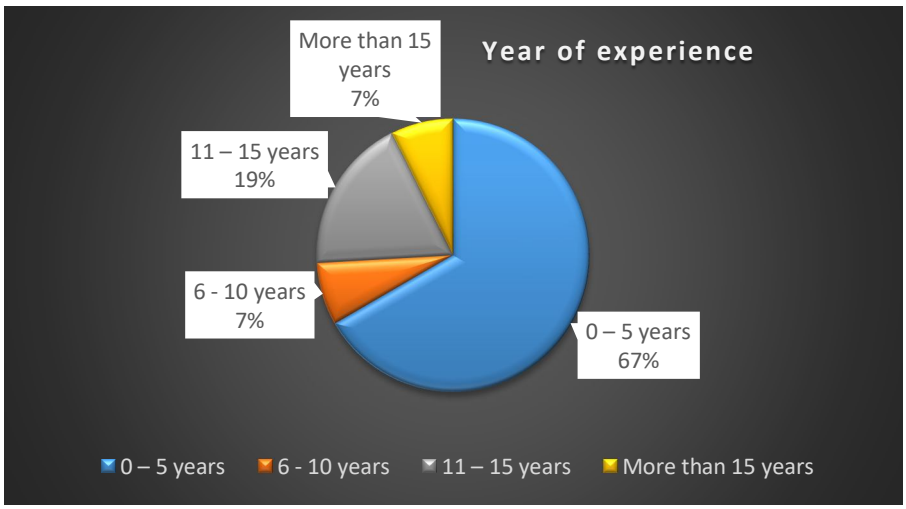

Figure 7: Pie chart showing percentage distribution on the basis of year of experience

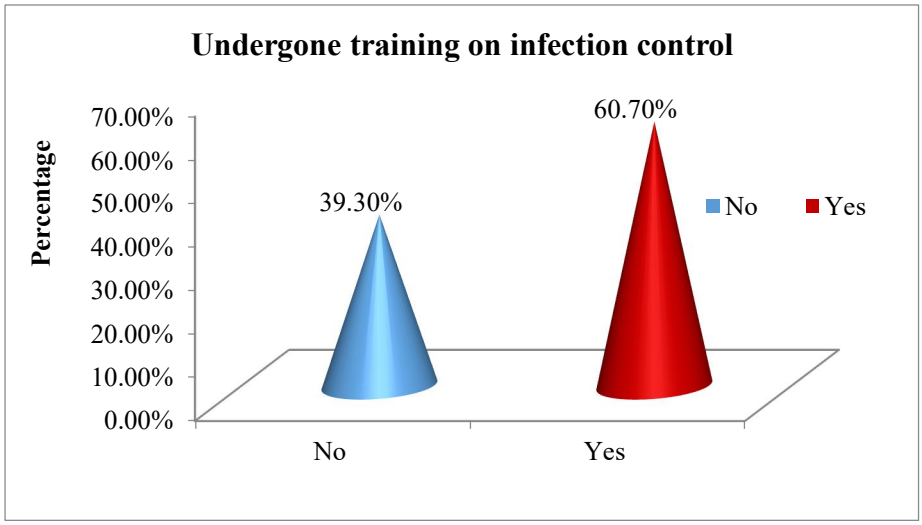

Figure 8: Cone chart showing percentage distribution on the basis of undergone training on infection control.

The result shows that overall knowledge of health care provider on infection control protocol shows the mean value 20.422 with the mean percentage 68.07% & and standard deviation 3.465.
Knowledge level of the health care provider regarding infection control protocol. Majority of 57% (77) of the Participants have moderate knowledge and 43% (58) of the Participants had adequate knowledge.

Arun Raj *et al* [9]; conducted cross-sectional a study on assessment of Health facilities for Airborne infection control practices and adherence to national airborne infection control guideline in Kerala, Southern India. This research was carried out in 25 public and private hospitals in Kerala, which were chosen at random from five districts. The IBM statistics programme for social science version 20 was used to conduct the statistical study. The survey found that infection control committees were present in the majority of facilities (70 percent). Staff received infection control training at 21 (42%) of the facilities, however 20 (40%) of the facilities were unfamiliar with NAIC guidelines. In 42 percent of the facilities, personnel received annual infection control training. The NAIC guidelines were unfamiliar to 40% of the establishments.

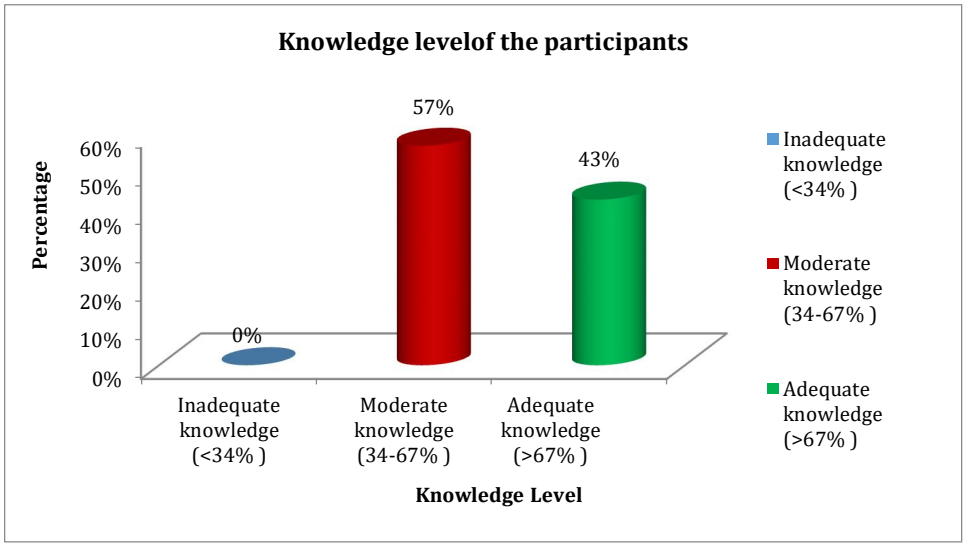

Figure 9: Cylindrical Bar graph showing knowledge level of the Participants on infection control protocol.

Association between knowledge level with selected demographic variable obtained chi square value of the variables as Gender (χ^2 = 11.137, p-value 0.001), Undergone training on infection control (χ^2 = 5.811, p-value 0.016), are significant at 0.05 level of significance. Other variables such as age in years (χ^2 = 1.303, p-value 0.521), Education qualification (χ^2 = 1.853, p-value 0.603), Type of family (χ^2 = 1.117, p-value 0.291), Marital status (χ^2 = 2.938, p-value 0.062), Area of work (χ^2 = 6.388, p-value 0.094), Year of working (χ^2 = 5.6338, p-value 0.131) are not significant at 0.05 level of significance.

CONCLUSION

The study concluded that there was a remarkable alteration in the Knowledge Regarding Infection control protocol used by of Health Care Providers of pediatric unit of selected hospital in Delhi NCR, shows the mean value 20.422 with the mean percentage 68.07& and standard deviation 3.465. The result shows that the knowledge level of the health care provider regarding infection control protocol. Majority of 57% (77) of the Participants have moderate knowledge and 43% (58) of the Participants had adequate knowledge.

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