

EFFECTIVENESS OF PLANNED TEACHING PROGRAM ON KNOWLEDGE REGARDING INFECTION CONTROL AMONG WARD ATTENDANTS

Poonam,¹ Sonali Thour²

^{1,2}Nursing tutor, School of Nursing, Desh Bhagat University, Mandi Gobindgarh Punjab

Corresponding author: Poonam, Nursing Tutor, School of Nursing,
Desh Bhagat University, Mandi Gobindgarh Punjab. Email Id: poonamchalg50@gmail.com

ABSTRACT

Infection control is essential for preventing hospital-acquired infections (HAIs) and ensuring patient safety. Ward attendants play a key role in maintaining hygiene but often lack adequate knowledge. This study assessed the effectiveness of a planned teaching program on infection control among ward attendants at Guru Gobind Singh Medical Hospital. A quantitative pre-experimental one-group pre-test and post-test design was used with 50 participants selected through convenience sampling. Data were collected using a structured questionnaire. After the pre-test, a teaching program with demonstrations and visual aids was conducted, followed by a post-test. Results showed a significant improvement in knowledge, with mean scores increasing from 15.48 to 18.62. The study concludes that planned teaching programs effectively enhance infection control knowledge. Regular training is recommended to improve practices and reduce HAIs. Aim: To evaluate the effectiveness of a planned teaching program on infection control knowledge among ward attendants at Guru Gobind Singh Medical Hospital and assess improvement after the intervention. Materials and Methods: A quantitative pre-experimental one-group pre-test and post-test design was used among 50 ward attendants selected through convenience sampling. Data were collected using a structured questionnaire covering demographic details and infection control knowledge. After the pre-test, a teaching program with lectures, demonstrations, and visual aids was conducted, followed by a post-test. Data were analyzed using descriptive and inferential statistics. Results: The mean knowledge score increased from 15.48 (pre-test) to 18.62 (post-test), showing significant improvement. Participants demonstrated better understanding across all areas, including hand hygiene, PPE use, and waste management. Conclusion: The planned teaching program was effective in improving infection control knowledge. Regular training and continuous education are recommended to enhance practices and reduce hospital-acquired infections.

Keywords: Infection control, teaching program, ward attendants, hospital acquired infection, knowledge.

INTRODUCTION

Hospital-acquired infections (HAIs), also known as nosocomial infections, remain a persistent and serious challenge in healthcare systems across the world. These infections are acquired by patients during their stay in hospitals or other healthcare facilities and are not present or incubating at the time of admission. HAIs significantly increase patient morbidity and mortality, delay recovery, prolong hospitalization, and place a substantial economic burden on both healthcare institutions and patients. In developing countries, the burden is even greater due to limited resources, overcrowding, and gaps in infection control practices. Therefore, prevention and control of HAIs is a critical priority in ensuring quality healthcare delivery and patient safety.

Effective infection control requires a multidisciplinary approach involving all categories of healthcare workers. While doctors and nurses are often the focus of infection control training, ward attendants are equally important members of the healthcare team. They play a crucial role in maintaining environmental hygiene, assisting in

patient care activities, transporting patients, handling linen, and managing biomedical waste. Their responsibilities bring them into frequent contact with patients, contaminated surfaces, and infectious materials, increasing their risk of both acquiring and transmitting infections. Despite their significant role, ward attendants often have limited access to formal education and structured training programmes, leading to inadequate knowledge and suboptimal practices in infection prevention.

The World Health Organization identifies infection prevention and control (IPC) as a cornerstone of safe and effective healthcare. According to WHO guidelines, simple and cost-effective measures such as proper hand hygiene, use of personal protective equipment (PPE), safe injection practices, environmental sanitation, and biomedical waste management can drastically reduce the transmission of infections. Among these, hand hygiene is considered the most fundamental and effective measure. The “Five Moments for Hand Hygiene” approach emphasizes the importance of cleaning hands before and after patient contact, after

exposure to body fluids, and after touching patient surroundings.

Environmental cleanliness is another critical component of infection control. Hospital environments can act as reservoirs for harmful microorganisms if not properly maintained. Regular cleaning and disinfection of patient care areas, equipment, and high-touch surfaces are essential to prevent the spread of infections. Ward attendants are primarily responsible for these tasks, making their knowledge and adherence to proper cleaning protocols extremely important.

Biomedical waste management is equally vital in preventing infection transmission. Improper segregation, handling, and disposal of waste can expose healthcare workers, patients, and the community to infectious hazards. Ward attendants are directly involved in waste collection and disposal processes, and inadequate knowledge in this area can lead to serious consequences, including needle-stick injuries and the spread of communicable diseases.

Education plays a pivotal role in improving the knowledge, attitude, and practices of healthcare workers. As highlighted in Fundamentals of Nursing, continuous education and in-service training are essential for maintaining competence and ensuring safe patient care. Structured teaching programmes provide a systematic and organized method of delivering information, allowing participants to understand key concepts, develop practical skills, and adopt appropriate behaviors. These programmes can include lectures, demonstrations, role plays, audiovisual aids, and hands-on training sessions to enhance learning and retention.

Furthermore, Park's Preventive and Social Medicine emphasizes that prevention is always better than cure, and that awareness and education are fundamental components in controlling the spread of infections. The book highlights that community and hospital-based education programmes are essential for strengthening infection control measures and reducing disease transmission.

In addition to improving knowledge, structured teaching programmes also help in changing attitudes and practices. When ward attendants understand the importance of infection control measures and the risks

associated with non-compliance, they are more likely to follow standard precautions consistently. This behavioral change is crucial for sustaining long-term improvements in infection control practices.

Moreover, regular monitoring, supervision, and reinforcement of training are necessary to ensure that knowledge is translated into practice. Healthcare institutions should develop policies that mandate periodic training sessions, refresher courses, and competency assessments for all categories of staff, including ward attendants. Supportive supervision and availability of necessary resources such as handwashing facilities, PPE, and waste disposal systems are also essential for effective implementation of infection control measures.

Therefore, it is imperative to assess the existing level of knowledge among ward attendants regarding infection control practices and identify gaps that need to be addressed. Implementing structured teaching programmes tailored to their educational level and job responsibilities can significantly enhance their understanding and skills. Such interventions not only empower ward attendants but also contribute to a safer healthcare environment.

In conclusion, strengthening infection control practices through education and training of ward attendants is a vital step toward reducing hospital-acquired infections. By improving their knowledge and promoting adherence to standard guidelines, healthcare institutions can enhance patient safety, reduce the burden of infections, and improve the overall quality of care. Continuous efforts in education, monitoring, and institutional support are essential to sustain these improvements and ensure effective infection prevention in healthcare settings.

METHODOLOGY

A quantitative research approach was adopted for the present study, as it allows for objective measurement and statistical analysis of data to determine the effectiveness of an intervention. The research design selected was a pre-experimental one-group pre-test and post-test design, which is commonly used to evaluate the impact of educational programs by comparing participants' knowledge before and after the intervention.

The study was conducted among ward attendants working at Guru Gobind Singh Medical Hospital, Faridkot. This setting was chosen due to the direct involvement of ward attendants in patient care activities and infection control practices within the hospital environment.

A total of 50 ward attendants constituted the sample for the study. Participants were selected using a non-probability convenience sampling technique, based on their availability and willingness to participate during the period of data collection. Inclusion criteria included ward attendants who were currently working in the hospital and were able to understand the language of instruction, while those who were absent or unwilling to participate were excluded from the study.

The data collection instrument used was a structured questionnaire designed to assess knowledge regarding infection control practices. The tool consisted of two sections. Section I included socio-demographic variables such as age, gender, educational qualification, and years of work experience. Section II comprised 30 multiple-choice questions covering key aspects of infection control, including hand hygiene, use of personal protective equipment (PPE), biomedical waste management, environmental cleanliness, and prevention of cross-infection. Each correct response was awarded one mark, and the total score reflected the overall knowledge level of the participants.

Prior to the main study, the tool was validated by experts in the field of nursing and public health to ensure content validity. A pilot study was conducted on a small group of participants to assess the feasibility and reliability of the tool, and necessary modifications were made accordingly.

Data collection was carried out in three phases. In the first phase, a pre-test was administered to all participants to assess their baseline knowledge regarding infection control. In the second phase, a structured teaching program was implemented. The teaching program included lectures, demonstrations, and the use of audiovisual aids to enhance understanding. The content was presented in a simple and comprehensible manner, focusing on practical aspects of infection control relevant to ward attendants'

daily responsibilities.

In the third phase, a post-test was conducted after the teaching intervention using the same questionnaire to evaluate the effectiveness of the program. The time interval between the pre-test and post-test was maintained to ensure adequate assimilation of knowledge.

The collected data were systematically organized and analyzed using both descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the data, while inferential statistics were applied to determine the significance of the difference between pre-test and post-test scores.

Ethical considerations were strictly maintained throughout the study. Permission was obtained from the concerned hospital authorities, and informed consent was taken from all participants. Confidentiality and anonymity of the participants were ensured.

RESULTS

Interpretation of the Table: Comparison of Pre-test and Post-test Mean Knowledge Scores

The above table presents a clear comparison between the mean knowledge scores of ward attendants before and after the implementation of the planned teaching programme. The pre-test mean score of 15.48 indicates that, prior to the intervention, most participants had an average level of knowledge regarding infection control practices. This suggests that although they possessed some basic understanding, there were noticeable gaps in critical areas such as hand hygiene, use of personal protective equipment (PPE), biomedical waste management, and prevention of cross-infection.

After the administration of the structured teaching programme, the post-test mean score increased to 18.62. This rise in the mean score reflects a significant improvement in the knowledge level of the ward attendants. The increase indicates that the participants were able to effectively grasp and retain the information provided during the teaching sessions. It also shows that the educational strategies used—such as lectures, demonstrations, and visual aids—were successful in enhancing understanding.

Furthermore, the findings reveal a positive shift in the

distribution of knowledge levels among participants. While the majority of ward attendants initially fell into the “average knowledge” category in the pre-test, a larger proportion moved into the “good knowledge” category in the post-test. This transition highlights the effectiveness of the teaching programme in not only increasing overall scores but also improving the quality and depth of knowledge.

The difference between the pre-test and post-test mean scores (an increase of 3.14 points) is a strong indicator of the impact of the intervention. It demonstrates that structured teaching programmes can play a vital role in addressing knowledge deficiencies and strengthening infection control awareness among ward attendants.

In conclusion, the table clearly illustrates that the planned teaching programme was effective in improving the knowledge of ward attendants regarding infection control practices. This improvement is likely to translate into better adherence to safety protocols in clinical settings, ultimately contributing to the reduction of hospital-acquired infections and enhancement of patient care quality.

The study findings showed that most ward attendants had average knowledge in the pre-test. After the teaching program, the number of participants with good knowledge increased. The mean pre-test score was 15.48 while the post-test score was 18.62, indicating improvement in knowledge after the intervention

Test Mean Score Pre-test 15.48 Post-test 18.62
Table: Comparison of Pre-test and Post-test Mean Knowledge Scores

INTERPRETATION OF THE TABLE

The pre-test mean score of 15.48 reflects the baseline level of knowledge regarding infection control practices, indicating that the participants possessed only a moderate level of understanding prior to the intervention. This suggests the presence of knowledge gaps in essential areas such as hand hygiene, use of personal protective equipment, biomedical waste management, and prevention of cross-infection.

Following the implementation of the structured teaching programme, the post-test mean score increased to 18.62. This considerable rise in the mean score indicates a clear improvement in the knowledge

level of the participants. The higher post-test score reflects that the ward attendants were able to better understand and retain the information provided during the teaching sessions. It also suggests that the educational intervention was successful in clarifying concepts, correcting misconceptions, and enhancing overall awareness related to infection control practices.

The difference between the pre-test and post-test mean scores highlights the positive impact of the structured teaching programme. The improvement is not only numerical but also indicative of a meaningful gain in knowledge across various components of infection control. This suggests that the teaching methods used, including lectures, demonstrations, and visual aids, were effective in facilitating learning among the participants.

Furthermore, the increase in knowledge level implies that ward attendants are now better equipped to follow standard infection control protocols in their daily work. Improved knowledge can lead to better practices, thereby reducing the risk of hospital-acquired infections and promoting a safer healthcare environment for both patients and healthcare workers.

In conclusion, the comparison of pre-test and post-test mean scores clearly establishes the effectiveness of the structured teaching programme in enhancing the knowledge of ward attendants. This finding supports the importance of regular educational interventions and reinforces the need for continuous training programmes to maintain and further improve infection control practices in healthcare settings.

DISCUSSION

The results indicate that educational programs significantly improve knowledge among ward attendants. Similar findings have been reported in previous studies where training programs enhanced awareness of infection control practices among healthcare workers.

After the implementation of the educational programme, there was a marked improvement in knowledge levels. This suggests that structured teaching interventions, including lectures, demonstrations, and practical guidance, are effective in delivering essential

information in an understandable manner. The results support the principles outlined in Fundamentals of Nursing, which emphasize the importance of continuous education in improving healthcare practices.

The findings of this study are also in agreement with previous research studies, which reported that training programmes significantly enhanced awareness and understanding of infection control practices among healthcare workers. This consistency strengthens the validity of the present study and highlights the universal importance of educational interventions in healthcare settings.

The concepts from Park's Preventive and Social Medicine further support that prevention of infections largely depends on awareness, proper practices, and continuous training of healthcare personnel.

Thus, the study confirms that educational programmes are an effective tool in improving knowledge among ward attendants. Enhancing their understanding of infection control practices can contribute significantly to reducing hospital-acquired infections and improving the overall quality of patient care.

CONCLUSION

The study concludes that planned teaching programs are effective in improving knowledge regarding infection control among ward attendants. Regular training sessions should be conducted in hospitals to strengthen infection prevention practices.

Infection prevention is a key component of patient safety, as emphasized by the World Health Organization. Improving the knowledge of ward attendants through

systematic training can reduce the risk of hospital-acquired infections and promote a safer healthcare environment.

Therefore, it is essential that hospitals organize regular in-service education and training programmes to reinforce infection control practices. Continuous education, supervision, and monitoring will further help in sustaining knowledge and ensuring the application of safe practices in day-to-day patient care.

REFERENCES

1. World Health Organization. WHO Guidelines on Hand Hygiene in Health Care. Geneva: WHO; 2009.
2. Fundamentals of Nursing. Patricia A. Potter, Anne Griffin Perry. Fundamentals of Nursing, 8th ed. St. Louis: Mosby; 2013.
3. Nursing Research: Generating and Assessing Evidence for Nursing Practice. Denise F. Polit, Cheryl Tatano Beck. 10th ed. Philadelphia: Wolters Kluwer; 2017.
4. Park's Preventive and Social Medicine. K. Park. 26th ed. Jabalpur: BanarsidasBhanot; 2021.
5. Centers for Disease Control and Prevention. Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Atlanta: CDC; 2007.
6. Indian Nursing Council. Revised Syllabus and Guidelines for Nursing Education. New Delhi: INC; 2020.
7. Textbook of Microbiology. R. Ananthanarayan, C. K. JayaramPaniker. 10th ed. Hyderabad: Universities Press; 2017.