



NEEDLE STICK INJURY PREVENTION KNOWLEDGE

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ABSTRACT:

Needle stick injuries are a prevalent occupational hazard for healthcare workers, particularly nurses, and pose significant health risks due to potential exposure to bloodborne pathogens. This article examines the knowledge and awareness of needle stick injury prevention among staff nurses in a selected hospital in Tumkur. By highlighting essential prevention strategies, including proper disposal techniques, the use of safety-engineered devices, and the importance of personal protective equipment (PPE), the article emphasizes the need for continuous education and training. Developing self-instructional modules can enhance nurses' understanding and implementation of best practices, ultimately fostering a safer work environment and reducing the incidence of needle stick injuries.

Furthermore, it is essential to create a culture of safety within healthcare settings, where nurses feel empowered to report incidents and near misses without fear of reprimand. Regular workshops and refresher courses can provide staff with updated information on the latest safety protocols and technologies. Encouraging collaboration among healthcare teams can also promote shared learning and accountability in adhering to safety measures. Ultimately, investing in the education and resources for nurses will lead to improved patient care and a healthier workplace.

Keywords: Needle stick injuries, prevention, staff nurses, healthcare, safety practices, education, training, bloodborne pathogens.

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INTRODUCTION

Needle stick injuries are a significant concern in the healthcare sector, particularly affecting nurses who are frequently exposed to sharp instruments. These injuries can lead to serious health implications, including the transmission of bloodborne pathogens such as HIV, hepatitis B, and hepatitis C. The risk of such injuries not only impacts the health and safety of healthcare workers but also affects the overall quality of patient care.

Despite the known risks, many nurses may lack comprehensive knowledge regarding effective prevention strategies. This gap in knowledge can lead to increased vulnerability to needle stick injuries. It is essential to assess the current level of understanding among staff nurses about the prevention of these injuries to implement effective training programs.

In this context, developing self-instructional modules tailored to the specific needs of nurses can play a crucial role in enhancing their knowledge and awareness. These educational tools can provide vital information on best practices, safe handling of needles, and the importance of using safety-engineered devices. By prioritizing education and training, healthcare facilities can create a safer working environment for nurses, ultimately reducing the incidence of needle stick injuries and promoting better health outcomes for both staff and patients. Needle stick injuries are a significant concern in healthcare settings, posing serious risks to nurses and other healthcare workers. These injuries can lead to the transmission of bloodborne pathogens, including HIV, hepatitis B, and hepatitis C, making it crucial for staff nurses to be well-informed about prevention strategies. Understanding the knowledge surrounding needle stick injury prevention is essential for creating a safer work environment and minimizing the risk of exposure.

The prevention of needle stick injuries involves several key practices. First, proper disposal of needles and sharps is vital. Nurses must be trained to use puncture-resistant containers and to dispose of used needles immediately after use. Additionally, the implementation of safety-engineered devices, such as retractable needles and safety syringes, can significantly reduce the risk of injury. Education on the importance of using personal protective equipment (PPE) and following standard precautions is also critical in preventing these injuries.

Moreover, ongoing education and training programs for nurses can enhance their knowledge and awareness of needle stick injury prevention. Developing self-instructional modules that provide comprehensive information on best practices, risk factors, and the correct use of safety devices can empower nurses to take proactive measures in their daily routines. By fostering a culture of safety and encouraging open discussions about needle stick injuries, healthcare facilities can ensure that their staff is well-prepared to prevent such incidents effectively.

LITERATURE REVIEW

A literature review on needle stick injuries highlights the critical issues surrounding occupational safety for healthcare workers, particularly nurses. Needle stick injuries pose significant risks due to the potential transmission of bloodborne pathogens such as HIV and hepatitis B and C. According to the Centers for Disease Control and Prevention (2022), implementing comprehensive guidelines is essential for preventing these injuries and protecting healthcare workers. The guidelines emphasize the importance of safe handling and disposal of needles, as well as the use of personal protective equipment (PPE).

Research by Jagger and Sweeney (2019) provides an extensive review of the literature on needle stick injuries, indicating that despite advancements in safety protocols, these incidents remain prevalent in healthcare settings. The authors suggest that a combination of education, proper training, and the use of safety-engineered devices can significantly reduce the occurrence of these injuries. Their findings underline the need for healthcare facilities to foster a culture of safety and to prioritize training programs that enhance awareness among staff.

McGowan and Becker (2021) further emphasize the importance of understanding the factors contributing to needle stick injuries. Their study reviews various occupational exposures and highlights that environmental factors, such as workspace design and availability of safety devices, play a crucial role in preventing injuries. They advocate for ongoing education and the implementation of safety measures tailored to specific healthcare environments.

Pugliese (2020) discusses the strategies for improving safety in healthcare settings, focusing on the need for systematic approaches to prevent needle stick injuries. The author suggests that healthcare organizations should adopt a multi-faceted strategy that includes engineering controls, administrative policies, and continuous training programs to ensure that staff are equipped with the knowledge and tools needed to minimize risks.



Lastly, the World Health Organization (2021) underscores health worker safety as a global priority, advocating for the implementation of comprehensive safety protocols and the promotion of best practices in healthcare settings worldwide. This emphasis on health worker safety reflects a growing recognition of the importance of protecting those who provide care, ultimately leading to improved patient outcomes and a safer healthcare environment. Needle stick injuries remain a significant concern in the healthcare sector, affecting a substantial number of healthcare workers annually. Recent statistics indicate that approximately 1 in 3 healthcare workers will experience such an injury during their careers, highlighting the urgency of addressing this issue. These injuries not only pose immediate physical risks, such as exposure to bloodborne pathogens like HIV and hepatitis, but they also have psychological repercussions. Many healthcare professionals report experiencing anxiety and stress regarding the potential transmission of diseases, which can adversely affect their mental health and job performance.

The regulatory framework surrounding needle stick injury prevention plays a crucial role in safeguarding healthcare workers. Guidelines set by organizations like the Occupational Safety and Health Administration (OSHA) mandate that healthcare institutions implement safety protocols to minimize risks. These regulations emphasize the need for proper training, the use of safety-engineered devices, and the establishment of a culture of safety within healthcare settings. Recent advancements in technology, such as retractable needles and safety syringes, have significantly improved the safety of needle use, showcasing proactive approaches to injury prevention.

Moreover, effective training and education programs are vital in reducing needle stick injuries. Many healthcare facilities have implemented initiatives that focus on safe handling practices and the proper use of safety devices, leading to a notable decrease in incidents. A global perspective reveals varying rates of needle stick injuries and prevention strategies across countries, influenced by cultural attitudes toward safety. Looking ahead, continued research and advocacy for healthcare worker safety remain essential, with an emphasis on exploring new technologies and practices to further mitigate the risk of needle stick injuries.

METHODOLOGY

The methodology of the study outlines the systematic approach used to gather and analyze data regarding the knowledge and awareness of needle stick injury prevention among staff nurses.

1. **Descriptive Survey Approach:** This method allows researchers to gather information from a specific population to describe their characteristics or behaviours. In this case, the focus was on understanding the knowledge levels of staff nurses regarding needle stick injury prevention.
2. **Sample Selection:** The study involved a sample of 60 staff nurses from selected hospitals in Tumkur. The selection was done using a non-probability convenient sampling technique, which means that the researchers chose participants based on their availability and willingness to participate, rather than using random sampling methods. This approach is often practical in healthcare settings where time and resources are limited.
3. **Formal Permission:** Before conducting the study, the researchers obtained formal written permission from the relevant authorities. This step is crucial in research ethics, ensuring that the study is approved and that the rights of participants are protected.
4. **Data Collection:** Data was gathered using a self-administered knowledge questionnaire. This type of questionnaire allows participants to answer questions independently, which can help in obtaining honest and unbiased responses regarding their knowledge on the topic.
5. **Data Analysis:** The collected data was analysed using both descriptive and inferential statistics. Descriptive statistics help summarize and describe the main features of the data, such as mean scores and percentages. Inferential statistics allow researchers to make inferences or generalizations about the larger population based on the sample data.

RESULTS AND DISCUSSION

The major findings of the study reveal important insights into the knowledge levels of staff nurses regarding the prevention of needle stick injuries.

1. **Knowledge Levels:** The study found that there was a notable variation in knowledge among the staff nurses. Specifically, 61.67% of the nurses demonstrated inadequate knowledge, while 38.33% showed moderate knowledge. This indicates that a significant portion of the nursing staff may not have sufficient understanding of needle stick injury prevention, which is critical for their safety and patient care.



2. Overall Mean Percentage: The overall mean percentage of knowledge scores was calculated to be 47.05%. This score suggests that, on average, the nurses scored less than half of the possible points on the knowledge assessment, indicating a general lack of awareness or understanding of the necessary prevention strategies. The standard deviation of 1.455 indicates that there was some variability in the scores among the participants.

3. Demographic Variables: The study also explored the relationship between the nurses' knowledge levels and various demographic factors, including age, education, experience, and attendance at in-service education programs. The findings revealed significant associations at the 0.05 level, meaning that these demographic factors are statistically linked to the knowledge levels of staff nurses. For example, it could imply that older nurses or those with higher education levels may have better knowledge about needle stick injury prevention.

Overall, these findings highlight the need for targeted educational interventions to improve knowledge among staff nurses, particularly focusing on those demographics that showed lower levels of understanding. Enhancing knowledge in this area is essential for reducing the incidence of needle stick injuries and promoting a safer healthcare environment.

CONCLUSION

In conclusion, needle stick injuries represent a critical safety issue within healthcare settings, particularly for nurses who are at increased risk due to their daily responsibilities. The potential transmission of bloodborne pathogens from these injuries underscores the need for comprehensive knowledge and effective prevention strategies. By focusing on proper disposal methods, utilizing safety-engineered devices, and emphasizing the use of personal protective equipment, healthcare facilities can significantly reduce the incidence of such injuries.

Furthermore, ongoing education and training are essential in empowering nurses with the information they need to protect themselves and their patients. Developing targeted educational programs and self-instructional modules can enhance awareness and promote best practices among staff. Ultimately, fostering a culture of safety and continuous learning within healthcare environments will not only safeguard healthcare workers but also contribute to improved patient care and outcomes.

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