

Original Article

Chapter Five: Level of Nurses Knowledge Regarding Adverse Events Post Immunization at the Health Care Centers in the Northwest of Jerusalem District

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Abstract

Background: Childhood immunization against common childhood diseases is the most powerful public health strategy to keep children healthy. It has been the most cost-effective public health intervention, saving an estimated 2–3 million lives around the world each year. However, because no vaccine is 100% safe and effective, so adverse events post-immunization may occur. These adverse events are any untoward medical occurrences that occur following immunization and do not necessarily have a causal relationship with the use of the vaccine. Moreover, if not rapidly and effectively dealt with it, it can undermine confidence in a vaccine and ultimately have dramatic consequences for immunization coverage and disease incidence.

Purpose: The purpose of this study was to determine the level of nurse's knowledge regarding adverse events post immunization at the health care centers in the northwest of Jerusalem district.

Methodology: Study designs: A descriptive cross-sectional study design was used. **Study population:** The study population consists of all of community health nurses who are working at health care centers in the northwest of Jerusalem district. **Study sample:** The study sample was consisted of community health nurses that working in this area and who did not administer the vaccination. A convenience sampling method was used to collect data, so, the number of nurses who enrolled in our study was 40 nurses. **Setting:** This study was conduct at health care centers in the northwest of Jerusalem district

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from 1st of December to the end of December of 2022. **Study tools:** The study tool that used in our study was the questionnaire tool. **Study strategies for analysis:** The collected data was analyzed by the Statistical Package for Social Sciences (SPSS) Version (28).

Results: The results of the research show that more than two-thirds of nurses were female and held Bachelor's Degree, and more than half of nurses aged 21-30 years old and have 1-4 years old experience. Almost two-thirds of nurses 62.5% have good knowledge, while 37.5% of nurses have poor knowledge, also it found that the nurses who work in governmental clinics have more knowledge score than others nurses ($p < 0.001$).

Recommendations: This study recommended to establish an educational program in health care centers to improve the nurse's knowledge regarding adverse events post-immunization and also for nursing students in universities and colleges. Furthermore, routinely validate staff's knowledge and competencies regarding vaccine administration and its adverse events were suggested.

Keywords: Adverse events post immunizations; Immunization; knowledge; Community health nurses; Vaccination; AEFI

Introduction

This chapter presents the main finding of the study as well as the similar studies that were in harmony and in contrast with the findings.

Discussion

Healthcare, particularly nurses, play a crucial role in ensuring a high quality of care for all patients. Our study included 40 nurses working in different types of clinics. This present study aimed to determine the level of nurse's knowledge regarding adverse events post immunization at the health care centers in the northwest of Jerusalem district.

In this study, the level of knowledge among nurses was (62.5%), Our finding is in harmony with the previous study that conducted in Egypt, which shown more than two-thirds of nurses have good knowledge toward vaccination [1]. The overall of good knowledge among nurses could be of some factors as follow:

- The first factor could be due to is the applied strategy of immunization that was implemented by the Palestinian ministry of health
- The second factor could be due to the orientation programs that are provided by the policymakers in clinics to the staff nurses, which help all staff upgrade their knowledge
- The third factor is the attempt of community health nurses to keep up-to-date on community health knowledge
- The fourth factor is that the nursing profession is considered a critical job because the nurses provide care for patients, not for machines or anything else,so they strive to stay as up-to-date as possible because any mistakes could be fatal.

- The fifth factor is that the vaccinations have been available in Palestine for a long time, so half of the community health nurses in the north-west of the Jerusalem district are aware of the vaccine and its adverse events
- The sixth factor is that the perseverance of nurses in sharing knowledge between them during meetings or discussion times in the health care centers
- The seventh factor is that previous dealings with cases that came to health centers suffering from adverse events post-immunization have led to increased knowledge among community health nurses

On the other hands, Yamoah et al., [2] concluded a study that based on the scores, detailed knowledge of vaccination and adverse events was lacking; only about 10% of study participants were highly knowledgeable about the details of adverse events following vaccination, with a vast majority having low to moderate knowledge.

Our findings shown that nurses have highest knowledge score in general information about vaccination domain as well as the way to reduce the appearance of adverse events of vaccination. Several studies were supported our findings [1,3,4].

Results of the present study indicated that, there were statistically significant difference between the overall knowledge with the type of health care center. While, no significant differences were found among gender, age, level of education and years of experience. This findings are in contrast with a study by Swarnkar et al. [5].

The factor why nurses working in governmental clinics have more knowledge could be due to:

- The continuous monitoring of the Palestinian Ministry of Health, especially in governmental clinics
- Vaccinations are given in governmental clinics, and this could positively affect the nurses' knowledge of vaccination and its adverse effects

Furthermore, a study by Selim M et al., [1] found Non-significant ($P = 0.648$) correlation between previous trainings taken and their knowledge regarding immunization also other studies found that Non-significant ($P = -.095$) negative correlation between previous trainings taken and their knowledge regarding immunization [5,6]. This finding is in harmony with our findings.

The factor why no significant differences were found among gender, age, level of education and years of experience could be due to:

- Both male and female nurses are taught the same scientific method in universities
- Regarding education, men and women are given the same opportunities without distinguishing between them
- Nurses who had taken a previous course in immunizations may have shared their information with those who did not take courses, and thus, this could affect their knowledge on vaccinations and their adverse events
- In the same clinic, information is shared between the nurses

Conclusion

The results of the research show that almost two-thirds of nurses have good knowledge, while the rest have poor knowledge. The domains with the highest average correct score were general knowledge and ways to reduce the appearance of adverse events of vaccination, with 76% and 62.5% respectively. Furthermore, all nurses 100% were answered correctly that vaccinations stimulate the human body's natural immune system to combat pathogens. Nurses who work in governmental clinics have a higher knowledge score than other nurses.

Recommendation

In this area (Northwest of Jerusalem District), it recommended to:

- Establish an educational and training program in the health care centers especially the private clinics to improve the nurse's knowledge regarding vaccinations and its adverse events
- Continuous training for nurses to keep them up-to-date on the immunizations and its adverse events
- Routinely validate staff's knowledge and competencies regarding vaccine administration and its adverse events
- Establish an educational program in the universities to improve the knowledge of nursing students in Palestine regarding vaccinations and their adverse events

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