

Original Article

Chapter Two: 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

In this chapter, the researchers are going to explore some previous studies that are linked to the on-going study. An overview of existing literature related to knowledge of nurses regarding adverse events post immunization.

Thus, in order to conduct similar research, it is necessary to thoroughly investigate and analyze previous studies in order to demonstrate how this research differs from others. In this chapter, 11 studies were selected, studied, and analyzed. Subsequently, they were discussed thoroughly by comparing them to the study paper according to the variety of aim, sample, place, method, and result.

Previous Studies

A cross-sectional study in Albania showed that the majority of the respondents working at health centers in the district of Tirana in general, had poor knowledge levels on AEFI surveillance. The main objective of this study was to explore and evaluate the perception, knowledge, practice and approaches of all health professionals involved in immunization practices and primary health care of the infant from birth to 18 years old. The sample was consisted of 102 health professionals interviewed by a structured questionnaire containing 68 questions. An (12.74%) of respondents had good knowledge level on AEFI. More than half of them (52.94%) had fair knowledge level and a considerable proportion (34.32%) had poor knowledge level. From this study it was concluded that it was necessary to develop training and educational programs in order to increase awareness of all health professionals involved in child health toward reporting and knowledge of AEFI. Also, it was necessary to build feedback systems to give information on AEFI [1].

In rural block of Haryana, India, a cross-sectional descriptive study of randomly selected 30 Multipurpose Health Workers (MPHWs)

of Beri block with an aim to assess the knowledge of Multipurpose Health Workers regarding AEFI found that there was a lack of knowledge about the cause, and identification of AEFI despite periodic training programs. Also, it was observed that level of correct knowledge was decreasing with increasing age of respondents. So, there recommended was to train the health workers to improve reporting and prevent complications due to vaccines [2].

Another cross-sectional hospital-based study was conducted to determine nurses' knowledge, perception, and practice towards surveillance of post immunization adverse events within Nairobi County health centers, Kenya which it revealed that the majority of the respondents working at Nairobi County health centers had poor knowledge on AEFI surveillance. The study sample comprised staff nurses that a total of 274 consenting nurses who met the eligibility criteria were given the questionnaire. Thus, 194 (70.8%) of the respondents had poor knowledge whereas 80 (29.2%) had good knowledge on AEFI. Moreover, the study recommended that there is a need to train and mentor nurses on AEFI surveillance [3].

A study by Saha and Mani in Alipurduar District, West Bengal with an aim to assess knowledge regarding AEFI of community health nurses and to determine the association between selected demographic variables and the knowledge of community health nurses showed that poor knowledge and practices still persist among health care workers. Out of total 184 community health nurses posted in two blocks; the participants were selected by Non-probability purposive sampling technique. So, total participants enrolled were 148. The result of this study showed that the majority (53.38%) of the respondents had good knowledge and few also had (6.76%) excellent knowledge. However not all were aware of actual meaning of AEFI (36%). Therefore, periodic training and in-service education to ensure quality of immunization in this setting is recommended by this study [4].

Moreover, A phenomenological qualitative study was done in Kebbi State, Nigeria to investigate the understanding and experience of AEFI among healthcare workers and Routine Immunization (RI) officers showed that the knowledge level of healthcare providers on AEFI definition and classification varied and was suboptimal. Face-to-face interviews were conducted with 12 RI providers, 8 Expanded Program on Immunization (EPI) officers, and 8 Disease Surveillance and Notification Officers. The most frequently study participants mentioned possible cause of AEFI was error during vaccination. Block rejection, lower immunization uptake, loss of confidence in RI, attack on RI providers, discrimination of RI providers and divorce threats among spouses were the consequences of AEFI. Supportive supervision of the RI sessions, refresher training on safe injection for RI providers, and symptomatic treatment of clients with AEFI would prevent AEFI consequences. Also, educating caregivers, community sensitization, and dialogue would minimize the consequences of AEFI [5].

Furthermore, in Kwekwe District, Midlands Province, Zimbabwe, a descriptive cross-sectional study was done due to outpatient surveillance system in Kwekwe district was reported 86 AEFI cases in 2009 but no surveillance forms were completed for these cases, therefore, this study was conducted to identify reasons for this anomaly. The results showed that none of 61 nurses interviewed could correctly define an AEFI. Almost half of the caregivers (52%) knew at least three vaccine preventable diseases, (45.7%) knew at least two possible presenting symptoms of AEFIs and less than half (43.5%) had received previous education on AEFIs. So, in this area, the lack of knowledge

on AEFI surveillance procedures was the main challenge that affected them therefore the recommendations were to send health workers for training on AEFI surveillance, ensure adequate supply of AEFI surveillance stationary, ensure meetings are held regularly and source adequate resources for AEFI surveillance [6].

Moreover, In the Central Region, Eritrea, a cross-sectional analytical study conducted by using a quantitative approach to equip Health-Care Professionals (HCPs) with knowledge and skills on detecting, reporting, investigating and assessing AEFIs. The results showed that knowledge and perceptions of 142 nurse practitioners on AEFI surveillance in this area were generally encouraging. A majority of the respondents (78.1%) correctly identified the causes of AEFI. "Immunization error can be a result of inappropriate route of administration" and "Immunization surveillance aims at early detection and response to AEFI" were the highest correctly responded items (each by 97.7% of the nurses). So, the study recommended that if further increase in knowledge of AEFIs is wanted, the relevant regional programmers and health-facility managers should think of organizing continued training, including refreshers, on AEFI surveillance with emphasis on the weakest links to ensure all HCPs are well trained and equipped in reporting, managing, and investigating AEFIs [7].

A study in Nigeria was done to assessed the level of knowledge, perception, and reporting attitude of Primary Healthcare (PHC) workers of AEFI in SabonGari local government area of Kaduna state. By used simple random sample method to select 110 primary healthcare workers it revealed that primary healthcare workers had good knowledge, perception, and reporting attitude toward AEFI surveillance. The majority of respondent (92.2%) knew about AEFI and over (80%) of the healthcare workers had been trained on AEFI and knew signs and symptoms of AEFI. More than (50%) of respondents had good knowledge on AEFI. There was a statistically significant relationship between age of healthcare workers ($P = 0.001$), previous training ($P = 0.036$), working experience ($P = 0.001$), and knowledge on AEFIs. Moreover, the study recommended that there is need for training and retraining of staff as part of professional development coupled with supportive supervision to ensure optimum performance and promote best practices in routine immunization service delivery [8].

Moreover, in Port Said city, a study was done to identify nurse's knowledge regarding vaccination and its adverse events. So, 64 nurses were enrolled and the result showed that most nurses had satisfactory score regarding overall knowledge of immunization. So the result showed that regarding the general knowledge of nurses of vaccines (96.9%) of the studied nurses had satisfactory knowledge, (93.8%) of the studied nurses had satisfactory knowledge about essential immunization precautions, while (53.1%) of the studied nurses had satisfactory knowledge about contraindications of vaccines, unfortunately only (40.6%) of the studied nurses had satisfactory knowledge as regard adverse events of vaccines, finally, (89.1%) of the nurses had satisfactory score regarding overall knowledge of immunization. The recommendations were to establish training programs reinforce knowledge and practice of nurses related to adverse event of vaccines, continues training for nurses to keep them up to date in relation to immunization [9].

Another study Nigeria, was aimed to assess the knowledge, attitude and reporting practices on adverse events following immunization among Routine Immunization Service Providers in health facilities of Sokoto State. The study sample of 285 respondents showed that many respondents had good knowledge on AEFI, but knowledge

gap still exists; as the result showed that the proportion of respondents with good knowledge (score >50%) on AEFI was 164 (63.6%), while 37(14.3%) and 57(22.1%) had fair (41-49%) and poor (<40%) knowledge respectively, so, they highlighting the needed for continuous on the job training and retraining of these personnel [10].

Furthermore, a cross-sectional study was conducted on Health workers of Jhalawar (Raj) by using a self-administered Questionnaire. The study was done because there are many researches on knowledge of immunization among parents or mothers but very few studies on knowledge and practices of immunization among health care providers. So, this study conducted to assess the level of knowledge and practices of immunization among health workers involved in routine immunization. Among the 144 respondents there was very good (75%) knowledge of diseases prevented by immunization. Also, an Increase in knowledge and practices observed with advancement of qualification but negative correlation found between previous training and length of service with both knowledge and practice of immunization. Moreover, it was concluded that the training received by majority is apparently not adequate. So, this requires the need for more efficient training and continuous education of health care providers in the field of immunization [11].

Summary

Finally, this chapter addressed the most important studies about the subject of the research, and then comment in regard to the extent of knowledge.

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References

1. Mehmeti I, Nelaj E, Simaku A, Tomini E, Bino S (2017) Knowledge, practice and approaches of health professionals to adverse events following immunization and their reporting in Albania. *Heliyon* 3: e00331.
2. Gupta NC, Rathod KG, Garg LR (2020) Assessment of knowledge of multipurpose health workers regarding adverse events following immunization in a rural block of Haryana, India. *International Journal of Contemporary Pediatrics* 7: 1.
3. Masika CW, Atieli H, Were T (2016). Knowledge, perceptions, and practice of nurses on surveillance of adverse events following childhood immunization in Nairobi, Kenya. *BioMed research international* 2016: 3745298.
4. Saha B, Mani S (2020) Assessment of knowledge and practices regarding adverse events following immunization (AEFI) among community health nurses in Alipurduar district, West Bengal. *J West Bengal Univ Health Sci* 1: 31-40.
5. Omoleke SA, Getachew B, Isyaku A, Aliyu AB, Mustapha AM, et al. (2022). Understanding and experience of adverse event following immunization (AEFI) and its consequences among healthcare providers in Kebbi State, Nigeria: a qualitative study. *BMC Health Services Research* 22: 741.
6. Muchekeza M, Chimusoro A, Nomagugu Ncube, Kufakwanguzvarova W Pomer (2014) Adverse Events Following Immunisation (AEFI) Surveillance in Kwekwe District, Midlands Province, Zimbabwe, 2009-2010. *Journal of Vaccines & Vaccination* 05: 3.
7. Abdu N, Mosazghi A, Yehdego T, Tesfamariam EH, Russom M (2022). Knowledge and Perceptions of Nurse Practitioners on Adverse Events Following Immunization and Barriers to Reporting in the Central Region, Eritrea: A Cross-Sectional Study. *Drug Healthcare and Patient Safety* 14: 125-134.
8. Aliyu A, Mohammed L, Maiha B, Isa A (2018) Knowledge, perception and reporting attitude of adverse effects following immunization among primary healthcare workers in sabon gari local government area Zaria, Kaduna state, Nigeria. *Nigerian Journal of Basic and Clinical Sciences* 15: 81.
9. M Selim ES, Elmazahy M, Hassan M, Hafez F (2020) Nurses knowledge and practice regarding adverse events of vaccines in expanded program on immunization in health care centers. *Port Said Scientific Journal of Nursing* 7: 213-230.
10. Sani UM, Oche MO, Raji MO, Ango UM, Jiya NM (2020) Knowledge, Attitude and Reporting Practices on Adverse Events Following Immunization among Routine Immunization Service Providers in Health Facilities of Sokoto State, Nigeria. *International Journal of TROPICAL DISEASE & Health* 40: 1-14.
11. Swarnkar M, Baig VN, Soni SC, Shukla U, Ali J (2016) Assessment of Knowledge and Practice about Immunization among Health Care Providers. *Natl J Community Med* 7: 281-285.



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