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KNOWLEDGE OF VACCINATION AMONG THE NURSING STUDENTS

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ABSTRACT: BACKGROUND: The protection of children is a task of every health care provider and must be taken up with a high priority. Majority of the mortality and morbidity can be averted by simple measures like appropriate vaccination, hygienic measures and good nutrition. **OBJECTIVE:** To assess the knowledge of nursing students about vaccines and vaccination. **METHODOLOGY:** This pilot study was conducted among the nursing students in a tertiary care hospital. A questionnaire with multiple choice answers was administered to the students and any doubts regarding the questions were clarified before they started answering. **RESULTS:** In our study out of the 60 students who participated in the study none of them scored even fifty percent. The basic knowledge about vaccines example BCG vaccine itself was surprisingly too low. Only 11.6% i.e. 07 out of 60 students knew the correct dose, site and route of administration of BCG vaccine. In the present study it was noted that the awareness and knowledge about the adverse reactions and its management was uniformly low. Surprisingly only 2 students out of 60 knew about the specific diseases prevented by the specific vaccines. **CONCLUSION:** The results of the data analyzed from this pilot study shows that there is a dearth of knowledge about vaccines among the nursing students. Hence emphasis should be laid on the need for adequate and right knowledge about vaccines and immunization schedule along with the hands on experience of the nursing students during their teaching curriculum and training period itself.

KEYWORDS: Vaccination, Nursing students, Knowledge, Hands on experience.

INTRODUCTION: The corner stone of the primary health care effort is to provide the basic and primary series of vaccines in the first year of life. Vaccines provide active immunity to the body by stimulating the immune system which produces antibodies against disease producing organisms. Mortality of children due to the vaccine preventable diseases is still high in our country due to the poor knowledge and the myths about vaccination and vaccines. According to the study conducted by SAARC (reports of August 2013), only 36% of children are fully vaccinated before the age of 12 months in India, as per the national immunization schedule.

NFHS 3 survey done in 2005-2006 shows that the immunization coverage in Karnataka against six major diseases such as TB, Diphtheria, Pertussis, Tetanus, Polio and Measles was only 55% as compared to 81% (highest) in Tamilnadu, 79% in Goa, 75% in Kerala and the least in Nagaland which is 21%.

The protection of children is a task of every health care provider and must be taken up with a high priority. Nurses are the major source of primary information regarding the vaccines and immunization schedule and are the ones who administer the vaccines in most of the places in our country specially the rural areas. Majority of the nurses opt for the government services after their training period and hence their knowledge and hands on experience about vaccines and vaccination should be updated.

The main theme of this study was to assess the knowledge about vaccines, equipment's and

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operational issues among the nursing students which needs to be addressed by them as they may be the primary source of information about the vaccines and the immunization schedule among the rural population of our country in order to protect each and every child.

OBJECTIVE OF THE STUDY: To assess the knowledge of nursing students about vaccines and vaccination.

METHODOLOGY,: This pilot study was conducted among the nursing students in a tertiary care hospital, with the main objective of testing their knowledge about vaccines. A total of 60 GNM students who had finished the pediatric postings participated in the study.

A questionnaire with multiple choice answers was administered to the students and any doubts regarding the questions were clarified before they started answering. The questionnaire comprised of questions regarding the dose, route, site of administration of vaccines, cold storage, adverse reactions of vaccines, specific diseases prevented by the vaccines, vaccine vial monitor, duration of time with in which the reconstituted vaccine can be use and so on. A total of 50 questions were given and each correct answer was rewarded a score of one and the data was analyzed.

The students were under strict vigilance while answering the questionnaire. Time limit of thirty minutes was given to answer.

RESULTS: In our study out of the 60 students who participated in the study none of them scored even fifty percent. The responses given by the students were as follows.

Responses by the students	No. of students n = 60	Percentage
Correct Dose, site and route of administration of BCG vaccine	07	11.6%
Correct dose of BCG vaccine	35	58.3%
Correct route and site of BCG vaccine administration	03	05%
Diluents used for reconstitution of BCG vaccine	06	10%
Diluents used for reconstitution of MMR vaccine	09	15%
Duration with in which the reconstituted vaccine is used	08	13.3%
Temperature maintained in the refrigerator where vaccines are stored	22	36.6%
Place where the diluents are kept in the refrigerator	01	1.6%
Age limit for the catch up vaccination	00	00
Vaccines that come in amber coloured	19	31.6%

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bottles (light sensitive)		
VVM	20	33.3%
Age at which the first dose of vitamin A is administered	03	05%
Interval between OPV and Breast feeding	00	00
Gluteal region as a site for vaccine administration	40	66.6%
Duration of time for reporting the adverse effect of vaccines	03	05%
Drug of choice during the anaphylactic reaction	08	13.3%
Specific diseases prevented by the vaccines	02	3.3%

Table 1

Source of information	No. of students n = 60	Percentage
Television	07	11.6%
Class	26	43.3%
Observation	06	10%
Internet	03	05%
Hands on experience	05	8.3%
Elders at home	02	3.3%
Multiple sources	02	3.3%
No reply	09	15%

Table 2: Source of information

DISCUSSION: This pilot study was conducted among the nursing students with the objective of assessing their knowledge about the vaccines and vaccination. In our study we found that the overall knowledge about vaccines was very poor among the students and hence the questions as tabulated in the results were specifically looked for as they are the common ones which have to be known by all the health care workers and hence were given the preference.

In our study, the basic knowledge about vaccines example BCG vaccine itself was surprisingly too low. Only 11.6% students knew the correct dose, site and route of administration of BCG vaccine.

Only 15% and 10% of the students knew the proper diluents used for the reconstitution of MMR and BCG vaccines. Only 13.3% of the students knew the time duration with in which the reconstituted vaccine should be used. 33.3% of the students had the knowledge about the vaccine vial monitors, 36.6% of students knew about the proper temperature to be maintained in the refrigerator where the vaccines are stored.

It was surprising that none of the students knew the age limit for the catch up vaccination and also the interval between OPV administration and breast feeding, which is the commonest question of

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all mothers who come for vaccination. In our study 66.6% of the students said gluteal region as the site for vaccination.

Only one out of 60 students scored 21 for a total score of 50 as compared to the study conducted by Shwetha Pandey et al where 50 % of the nurses had better knowledge and acceptance of the H1N1 vaccine as compared to the doctors. In this study 48 students scored between 10 and 16 for a total score of 50.

In the present study it was noted that the awareness and knowledge about the adverse reactions and its management was uniformly low. It was alarming to know that only 2 students out of 60 knew about the specific diseases prevented by the specific vaccines.

In our study 43.3% of the students said that their source of knowledge was from classes, 11.6% said television as the source of information.

CONCLUSION: The results or the data analyzed from this pilot study shows that there is a dearth of knowledge about vaccines among the nursing students. Majority of the nurses go to the government services who are the primary source of information, and are the ones who administer the vaccines even now in our country especially in the rural areas where they are easily available and approachable. If they are unable to pick up an adverse reaction and cannot prevent mortality during an anaphylaxis which can even result in the failure of future immunization coverage in the community of children is not acceptable. Therefore their knowledge about vaccination is essential and should be updates.

Hence emphasis should be laid on the need for adequate and right knowledge about vaccines and immunization schedule along with the hands on experience of the nursing students during their teaching curriculum and training period itself.

LIMITATION OF THE STUDY: Only the GNM students participated in this study where-as the B.Sc. and M.Sc. students were excluded.

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