



Research Article

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Knowledge of nursing Students of Shahid Sadoughi University of Medical Sciences about vaccination in adults

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Abstract

One of the most effective methods to avoid infectious diseases is immunization. The usage of vaccines has eliminated many diseases. Given that nurses are involved in vaccination of individuals, so, their knowledge of vaccination will be effective. Therefore, this study was conducted to investigate the level of knowledge of nursing students of Shahid Sadoughi University of Medical Sciences in Yazd about adult's vaccination from March 2021 to March 2022. This cross-sectional study was done on 96 nursing students in Yazd. After receiving the ethics code, and ethical considerations, the questionnaires were given to the students. Finally, the analysis was performed using SPSS software and significance level of 0.05. Awareness of native students was significantly higher than non-natives. There was no significant difference in knowledge based on academic year. Student's knowledge score was very low and this rate was only significantly related to native status of them.

Keywords: Knowledge, Nursing students, Adult's vaccination.

INTRODUCTION

One of the most effective ways to prevent infectious diseases and death caused by them is hygiene and immunization [1]. Proper use of vaccines has eradicated some diseases [2]. Routine immunization for adults has received little attention in recent years, but vaccination in adults is very important in preventing many infectious diseases [3]. Even if an individual or individuals have received a full complement of childhood vaccinations, some vaccines require booster doses every few years in adulthood to maintain their protective effect [4].

All adults should be vaccinated against measles, rubella, and mumps; unless it is proven that the person has performed the vaccination in the first year of birth or after that [5]. Influenza vaccine is also recommended for adults 65 years old and older and people with chronic diseases at any age [6-8].

Considering the importance of the topic and the role of nurses in awareness of vaccination and in order to increase the level of knowledge of adults about vaccination and its importance, in this research, the level of awareness of nursing students of Shahid Sadoughi University of medical sciences of Yazd about vaccination in adults was investigated.

MATERIALS AND METHODS

This study was done as a cross-sectional research. The target population included nursing students of Shahid Sadoughi University of Medical Sciences, Yazd, and the study period was from March 2021 to March 2022. This study obtained the approval of the ethics committee of our university. The exclusion criteria included unwillingness to answer the questions. The number of students studied was 96. The variables of this study included age, place of residence and academic year, and the awareness of students was measured according to these variables. The information gathering tool included a questionnaire containing three variables and 18 questions, based on which knowledge of students about vaccination (including: influenza, diphtheria, tetanus, HPV, chicken pox, pneumococcus, hepatitis B and coronavirus vaccines) was measured.

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The questions were four-choice, each question had only one correct answer, and if the answer was wrong, a score of zero was given, and if the answer was correct, a score of one was allocated. Then, by summing the scores of each person, the total score of the respondent was obtained. Finally, the data was entered into SPSS software (version 22) and statistical analysis was performed. The significance level in the current study was $p < 0.05$.

RESULTS

This study was performed on 96 nursing students. The average age of the students was 23.08 ± 3.40 years and the minimum age was 18 and

the maximum was 30 years. In terms of academic year, 30.2% were in the first year, 25% in the second year, 19.8% in the third year, and 25% in the fourth year.

About which vaccine should be injected in adults without underlying disease, out of 96 respondents to this question, 16 students chose the option of influenza, 20 students chose the option of diphtheria, 16 students chose the option of tetanus, and 44 students chose the option of all cases. Regarding the correctness of option 4, 44 students (45.8%) chose the correct option for this question. The percentage of correct and incorrect answers to other questions has showed in Table 1.

Table 1: The rate of correct and incorrect answers to questionnaire questions

Question	Correct answer N (%)	Incorrect answer N (%)
If a person has not been infected with chicken pox already, in which age group do you recommend the vaccine?	26 (27)	70 (73)
In what age groups is dt vaccine recommended?	13 (13.5)	83 (86.5)
At what age do you recommend the HPV vaccine in adult women?	23 (23.9)	73 (76.1)
In which people do you recommend the HPV vaccine?	41 (42.7)	55 (57.3)
At what age should the zoster vaccine be injected?	10 (10.4)	86 (89.6)
In which people should the killed flu vaccine be injected?	55 (57.2)	41 (42.8)
Which vaccine do you recommend for people over 60?	53 (55.2)	43 (44.8)
Chicken pox vaccine can be injected in which cases?	39 (40)	57 (60)
In which cases can dt vaccine be injected?	42 (43.7)	54 (56.3)
HPV vaccine should not be injected in which cases?	32 (33.3)	64 (66.7)
Zoster vaccine should not be prescribed in which cases?	41 (42.7)	55 (57.3)
Pneumococcal vaccine should not be injected in which people?	36 (37.5)	60 (62.5)
Corona vaccine can be prescribed in which cases?	47 (48.9)	49 (51.1)
What are the indications for the administration of the killed flu vaccine?	51 (53.1)	45 (46.9)
What is the indication of hepatitis B vaccine?	42 (43.7)	54 (56.3)
What is the indication for prescribing pneumococcal vaccine?	35 (36.4)	61 (63.6)
Which option is correct about live viral vaccines?	14 (14.5)	82 (85.5)

Table 2: Comparison of the knowledge score mean of nursing students between the two age groups of the study

Age (year)	Mean \pm Standard Deviation	Minimum	Maximum
Under 25	6.71 \pm 3.45	0	17
Above 25	3.68 \pm 9.25	5	14

Table 3: Comparison of the knowledge score mean of nursing students among native and non-native groups

	Mean \pm Standard Deviation	Minimum	Maximum
Native	7.38 \pm 3.35	0	17
Non-native	5.24 \pm 3.41	0	10

Table 4: Comparison of the knowledge score mean of nursing students according to academic year

Academic year	Mean \pm Standard Deviation	Minimum	Maximum
First	3.78 \pm 6.75	1	16
Second	3.92 \pm 6.75	0	17
Third	3.27 \pm 6.84	1	12
Forth	2.98 \pm 6.95	0	11

No significant difference was observed between the knowledge score mean of nursing students above and under 25 years old ($p=0.164$) (Table 2).

A significant difference was observed between the score mean of knowledge of nursing students in native and non-native groups ($p=0.038$) (Table 3).

No significant difference was observed between the knowledge score mean of nursing students according to academic year ($p=0.918$) (Table 4).

DISCUSSION

In the present study, the students' knowledge score was very low. No significant difference was detected between the awareness score mean of nursing students in two age groups. But, the difference was statistically significant between native and non-native groups.

In a study on the awareness of medical students in France regarding vaccination, almost one third of the students did not have the necessary knowledge about vaccination and the desired strategies to reassure patients in this regard ^[9].

In a study in India that was conducted on 957 students of dentistry, medicine and nursing, questions were asked about HPV and the development of cervical cancer and the relationship between HPV and the occurrence of immune diseases. 430 people had very good information about the vaccine and 65 of them had already received a dose of the vaccine. Of the remaining 433 people who did not have good information, none had injected the vaccine. Age, sex, family history and mother's education had no effect on vaccination. Among the students, nursing students had good information about vaccination, followed by medicine and finally dentistry ^[10].

In another study, the responses of medical students regarding hepatitis B and C vaccination were investigated. Only 57.1% of students were aware of the prevalence of hepatitis. 85% of them also had good knowledge about hepatitis vaccine ^[11].

CONCLUSION

In this study, almost 80% of the questions have less than 50% correct answers. The knowledge score was also very low. The knowledge score of native students was higher. Considering that native students mostly lived in the center of Yazd province and awareness is better in the center of the provinces, this subject can be justified.

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Conflicts of interest

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