

Socioeconomic factors, prior carrying out of Pap smear and knowing of the HPV-vaccine among nursing students

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ABSTRACT

Aim: To explore the knowledge of a Nursing department's female students regarding HPV vaccine awareness and to associate this knowledge with socioeconomic factors, as well as with previous Pap smear (Pap test) carrying out. The receptivity to vaccination against HPV was also investigated.

Material and method: One hundred and ten female ATEI nursing students, aged 18-54 years, attending courses of the fifth and sixth semester, were enrolled in the study. A questionnaire with closed-ended questions regarding cervical cancer and its prevention possibilities.

Results: 64% of female students were aware of the HPV vaccine, whereas less than half of women were aware of the HPV test. >20years of age and prior carrying out of Pap smear were positively correlated with HPV vaccine awareness.

Conclusions: Knowing of HPV vaccine among nursing students is inadequate. A prior carrying out of Pap smear increases the possibility of HPV vaccine awareness. Nursing students' familiarization with the existing prevention programs is considered necessary.

Keywords: Human Papilloma Virus, prevention, vaccine, Nursing, students

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INTRODUCTION

The primary prevention of cervical cancer is now possible and vaccines against human papilloma virus (HPV) are available. HPV is a major causative factor of cervical cancer.^{1,2} Gradually, all developed European countries include the HPV vaccine in national immunization programs.^{3,4} Vaccines against HPV protect against the most pathogenic and dangerous subtypes, i.e. 16 and 18. However, a quadrivalent vaccine is available, i.e. against subtypes 16, 18, 6 and 11. It offers protection not only against malformations and cervical cancer, but also against genital warts, which are one of the most common sexually transmitted diseases.⁴ The success of prevention programs depends on the participation of the population, and on the knowledge of health professionals and their willingness to participate in respective programs. Studies have shown that not only reservations on safety and efficacy of the vaccine exist within health care professionals, but the latter often seem to ignore its existence as well.^{5,6} There is hope that, as newer research data are being introduced into the curricula, improved perceptions of the new generation of health professionals will

help current prevention programs to succeed.⁷ The knowledge of young scientists acquired in their student years will constitute the foundation for the integration of new developments on the prevention of cervical cancer in primary care. Apart from their studies, socioeconomic factors affect perceptions of disease prevention, as citizens' contact with the health care system is affected, and prejudices, that are often difficult to overcome, are created.^{8,9,10,11}

The purpose of this study was to investigate a nursing department students' knowing of HPV vaccine and correlation with socioeconomic factors, and prior conduct of Pap smear as well. Receptivity to vaccination against HPV is also investigated.

Material and Methods

110 nursing department students 18-54 years old, attending courses of the 5th and 6th semester participated in the research. The survey was conducted in a regional nursing department during the period March-April 2010. A questionnaire which included 66 closed-ended questions in relation to women's knowledge on the prevention of cervical cancer, Pap smear, HPV, as well as their

attitudes to vaccination concerning both themselves and their children, was used as a research tool. This questionnaire has been previously used in the research program "Lysistrata", as well as in other similar investigations in the Greek territory.^{10,11} Each woman participated in the research after written consent and completed the questionnaire anonymously, in the presence of research team members. This study presents the results concerning the knowledge of existence of HPV vaccine.

Statistical Analysis

Descriptive statistics were applied and frequency tables were constructed for the variables under consideration. It is estimated that a number of factors are associated with knowing of the HPV vaccine. Both univariate and multivariate regression analysis of these factors were conducted. The level of statistical significance was set at $p < 0,05$. Statistical analysis was performed with 'SPSS 17.0' software for Windows.

Results

The majority of students in the sample were 20-24 years old (70 women, accounting for 81%). 27 women were under 20 years of age (24.5%) and 13 over 24 years of age (10%). 93 women were single (85%) (Table 1). About 64%

of female students were aware of the existence of vaccine against HPV, while less than half knew the existence of HPV test and even fewer had been tested (Table 2). When univariate analysis was applied, it was observed that those aged >20 and a prior carrying out of Pap smear correlated positively with knowing of the vaccine against HPV (Table 3). When these two variables were introduced to a model of multivariate analysis, a statistically significant association between each variable and knowing of the HPV vaccine was barely noted (Table 4).

Discussion

According to the results of this work, the most important determinants of knowing of HPV vaccine was a prior carrying out of Pap smear and age, while a significant proportion of female students were not aware that the vaccine against HPV exists. The findings of this study are consistent with those of similar international surveys carried out among health professionals as well as the general population. A domestic research found that 90% of midwives were aware that a vaccine against HPV is available, while the percentage of students was 60% respectively.¹² The involvement of the respondent physician in screening tests and related postgraduate training

programs was positively correlated with knowledge of the medical issues on HPV and the possibility of prevention of cervical cancer.¹³ It was also found that increased levels of knowing about HPV are combined with frequent carrying out of the Pap smear.⁸ The women included in the sample are not familiar with these contemporary data, and half of them said they are unaware of the existence of the human papilloma virus, and the vast majority had not carried out the relevant tests. This phenomenon occurs not only in Greece, but even in the most sanitarly advanced countries.⁷

Despite the fact that the sample consisted of third-year students of nursing department, which have already taken courses of primary care and screening, their knowledge on this topic was inadequate, a finding further supported by other studies in Greek health professionals as well.^{14,15} Marital status, place of permanent residence, family income, and occupation were not associated with knowledge of the vaccine against HPV. Socio-economic factors, which often determine the relationship of citizens to health services, and the sanitation quality level of the inhabitants of a country had no particular impact on knowledge of nursing students on HPV. In contrast, previous exposure of

students to health care services at secondary prevention level (Pap smear) determined whether they knew that there is a vaccine against HPV or not.

This finding, described in other studies as well, is to demonstrate the importance of organized programs for the prevention of cervical cancer and regular contact between citizens and preventive health care services.^{5,16,17} Citizens and vulnerable groups in particular, are familiar with the latest developments in prevention and adopt effective methods of protection against various diseases. They acquire knowledge and skills from specialists and, based on scientific data, dispel prejudices, contributing to the overall quality of life in the community, and ultimately changing their behavior and standards through practice.^{18,19}

The latter, according to the present investigation is proved to be superior to theoretical training, as the prerequisite for female students expanding their knowledge was their previous experience rather than knowledge or other factors. Experiential knowledge and experience are the deposit for their transformation into conscious health care professionals. The results of this survey highlight the importance of elaboration and implementation of organized prevention programs in primary health care and

participation of health professionals and students in them. Theoretical knowledge should be consolidated through practical familiarization with latest data.

Although the study was conducted in just one university department and its results can hardly be generalized, is indicative of insufficient knowledge found in a portion of health care professionals and students. The results are consistent with those of other international studies, revealing the size of the problem and common challenges faced by health care professionals worldwide.

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ANNEX

Table 1. Demographic traits of sample

	N	%
Age		
<20	27	9,0
20-24	70	81,0
>24	13	10,0
Total	110	100,0
Marital status		
Single (Females)	93	85,0
Married (Females)	14	14,0
Widows	3	3,0
Total	110	100,0
Profession		
Unemployed (Females)	55	59,2
Health Professional (Females)	25	7,1
Other (Females)	19	25,5
Total	98	100,0
Monthly family income		
<2000 euro €	64	21,0
>2000 euro €	25	14,6

Place of permanent residence		
Village	10	21,0
Town	13	8,0
City	33	41,0
Big urban area with large population	54	30,0
Total	100	100,0

Table 2. Assessment of knowing the HPV-vaccine

	YES		NO		Total
	N	%	N	%	
Have you ever heard of HPV?	80	74	28	26	108
Have you ever heard of HPV-vaccine?	65	64	37	36	102
Knowing of the HPV test	51	49	54	51	105
Carrying out of HPV test	14	14	86	86	100

Table 3. Univariate logarithmic regression analysis on knowing of the HPV-vaccine, socioeconomic factors, and previous carrying out of Pap smear

Independent variables	Knowing of HPV-vaccine	Ignorance of the HPV-vaccine	Modified likelihood ratio (odds ratio)	CI 95% p	p
Age					
> 20 years	12	14	1,00	(0,14-0,89)	0,02
≤ 20 years	53	22	0,36		
Profession					
Workers (female)	30	22	1,00	(0,21-1,20)	0,12
Unemployed (female)	30	11	0,50		
Marital status					
Married (female)	11	3	1,00	(0,56-8,37)	0,58
Single / divorced (female)	54	32	2,17		
Household income					
>2000 euro €	33	24	1,00	(0,16-1,32)	
<2000 euro €	18	6	0,45		0,15
Place of permanent residence					
Urban areas	11	8	1,00	(0,27-2,08)	0,58
Rural areas	53	29	0,75		
Prior Pap smear					
No	23	21	1,00	(1,05-5,80)	0,03
Yes	38	14	2,47		