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Przygotowanie studentek pedagogiki i socjologii do roli edukatorów zdrowotnych w zakresie profilaktyki raka szyjki macicy

Streszczenie

Wstęp. Program profilaktyki raka szyjki macicy może być skuteczny jedynie pod warunkiem objęcia skriningiem cytologicznym większości docelowej populacji kobiet. Aby było to możliwe, konieczne jest włączenie w akcje promocyjne nie tylko pracowników służby zdrowia, ale również innych grup zawodowych dysponujących odpowiednim przygotowaniem do prowadzenia edukacji zdrowotnej, w tym m.in. pedagogów, socjologów, pracowników socjalnych. Grupy te, mogłyby stworzyć potencjalne pozamedyczne ogniwo w łańcuchu edukacji zdrowotnej, a tym samym wzmocnić skuteczność populacyjnych programów profilaktycznych.

Cel. Celem pracy było ustalenie, czy studentki pedagogiki i socjologii posiadają odpowiednią wiedzę z zakresu profilaktyki raka szyjki macicy, która pozwoliłaby im pełnić w przyszłości rolę edukatorów zdrowotnych i wpływać na aktywizację kobiet do uczestnictwa w programach profilaktycznych.

Materiał i metody. Badaniem ankietowym objęto 284 studentki pedagogiki i socjologii z dwóch uczelni wyższych w Szczecinie. Zastosowany kwestionariusz dotyczył wiedzy z zakresu epidemiologii, patogenezy, rokowania, objawów i profilaktyki raka szyjki macicy.

Wyniki. Z przeprowadzonych badań wynika, że połowa studentek wykazuje się przeciętną wiedzą na temat raka szyjki macicy. Wysoki poziom wiedzy odnotowano u blisko 1/3 studentek.

Wnioski. Studentki socjologii i pedagogiki, które odbyły kształcenie z uwzględnieniem programów nauczania obejmujących socjologię zdrowia i profilaktykę prozdrowotną, wykazują akceptowalny poziom wiedzy wymagany do pełnienia ról edukatorów zdrowotnych w zakresie profilaktyki raka szyjki. Wiedzę na temat raka szyjki macicy należy jednak przekazywać potencjalnym edukatorom zdrowotnym w sposób bardziej usystematyzowany.

Słowa kluczowe: rak szyjki macicy, profilaktyka, skrining, edukacja zdrowotna.

Readiness of pedagogy and sociology students for the role of health educators in cervical cancer prevention

Abstract

Introduction. Cervical cancer prevention program may be efficient only when cytological screening covers most women from a target population. Achieving this goal requires involvement of other than healthcare workers professionals being properly prepared for participation in health education, such as pedagogics, sociologists and social workers. These professionals could serve as an additional non-medical component of health education chain and therefore improve the effectiveness of population-based prevention programs.

Aim. The aim of this study was to assess if pedagogy and sociology students have sufficient knowledge pertaining to cervical cancer prevention, enabling their future work as health educators to motivate women to participate in prevention programs.

Material and methods. This questionnaire survey included 284 female students of pedagogy and sociology from two university schools in Szczecin. Survey questions referred to their knowledge on epidemiology, pathogenesis, prognosis, symptoms and prevention of cervical cancer.

Results. This study revealed that half of the students had moderate knowledge on cervical cancer. A high level of knowledge was observed in one-third of the participants.

Conclusion. Students of pedagogy and sociology, whose curricula included health sociology and health prevention courses, exhibited acceptable level of knowledge required to take a role as health educators in cervical cancer prevention. However, potential health educators should be educated on cervical cancer prevention in a more systematized manner.

Keywords: uterine cervix cancer, prevention, screening, health education.

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INTRODUCTION

Prevention programs for cervical cancer can be effective only when the majority of the target population of women is covered by screening cytology. Furthermore, as shown by the experience of numerous countries, only the centrally organized and coordinated prevention programs can achieve their objectives of reducing the significant morbidity and mortality associated with this disease [1]. Such a coordinated program has been conducted in Poland for only a few years and has addressed women aged 25-59 years covered by the health services financed with public funds. However, despite extended and actively implemented preventive campaign, the fraction of women that enrolls in Pap smear tests is still unsatisfactory. According to the data from the Information System for Monitoring of Prevention (SIMP, System Informatycznego Monitorowania Profilaktyki), administered by the National Health Fund (NFZ, Narodowy Fundusz Zdrowia), every year about 800 000 Pap tests are performed, which corresponds to less than 30% of women qualified to the program [2]. It seems that the actual percentage of Polish women's participation in cytological screening is higher, because many patients choose to perform the preventive cytology outside of the NHF, but still the numbers are insufficient to attain epidemiologically beneficial effects.

Women that do not participate in prevention programs have an increased risk of developing cervical cancer [3]. Integrating this group of women into screening cytology and/or other preventive and diagnostic methods (for example the so-called HPV „self-test") that are oriented towards recognizing cervical cancer risk groups, is a priority even in countries with high participation in prevention programs [4].

Several studies have examined the causes behind women's lack of participation in cytological screening. Most publications point to the specific socio-demographic factors, emotional and personality traits, and insufficient knowledge about cervical cancer and the goals of preventive cytology [5-8]. In Polish conditions, such an analysis was made by, amongst others, Spaczyński et al. [9]. These authors have suggested that women residing in rural areas, maidens and widows as well as poorly educated women participate less frequently in screening tests. The most frequently given reasons given by the surveyed patients for refusal to participate in prophylactic program usually included lack of time, being under a continuous supervision of "their own" gynecologist, an dislike of the test and a lack of need for its implementation. These authors also point out the ineffectiveness of a system that was implemented in Poland of sending personal invitations to perform cytology – according to data from SIMP only 5.5% of women reported receiving the invitation as a reason for participating in the program.

It seems that despite the creation, in recent years in Poland, an efficient infrastructure for cervical cancer screening at the primary stage (obtaining the samples) and diagnostic (cytological evaluation and in-depth diagnostics), central coordination, information technology and financing of health services, as well as a fairly widely conducted public campaigns, the system of motivating women to participate in the program based on personal invitations is inefficient [2,9]. Hence, it is necessary to search for other organizational, legislative, and, most of all, social solutions in order to overcome the barriers affecting women's low participation in cytological screening. One of the key elements may be the exploration of the levels of awareness, health behavior and knowledge about cervical cancer in certain social groups, so as to modify their behavior in a targeted way and to encourage the use of existing prophylactic infrastructure [7]. No less important may be the active involvement of non-medical professional groups in the promotion of cancer prevention in certain settings. In addition to journalists, the so-called „celebrities" and other well-known media personalities, professional groups that are predisposed to public education, such as educators, sociologists, social workers, etc., should be included, following appropriate training, into public promotion of health behaviors associated with prevention of cervical cancer. These groups could create a potential, non-medical link in the chain of health education, and thereby enhance the effectiveness of population-based prevention programs.

AIM

The aim of this study was to determine whether female pedagogy and sociology students have adequate knowledge in terms of cervical cancer prevention, which would allow them to fulfill in the future the role of health educators and motivate women to participate in prevention programs.

MATERIAL AND METHODS

This study was conducted between May and June 2010. Two hundred and eighty four female pedagogy and sociology students (in both cases master degree programs) from two universities in Szczecin were included in this study. All the students attended lectures on the sociology of health, health promotion in disease prevention as well as 21st century diseases of civilization, carried out in 2009-2010 academic year, whose program included, amongst others, selected issues dealing with the prevention of cervical cancer. Detailed characteristics of the study group are shown in Table 1.

The respondents filled out an anonymous questionnaire containing eighteen questions that tested their knowledge of the epidemiology, pathogenesis, prognosis and prevention of cervical cancer (Figure 1). Single or multiple choice questions were asked. One point was awarded for each correct answer (to a maximum score of twenty nine points).

The frequency of correct answers to individual questions is presented as absolute numbers and percentages. Distribution of correct answers to each question was compared according to the grouping variables: age of the respondents, course and year of study, marital status, place of residence and financial situation (Table 1). Pearson's chi-square test or Fischer test was used in this analysis. All calculations were performed using Statistica 7.0 (StatSoft®, Poland) package, and the level of significance was set at $p \leq 0.05$.

RESULTS

The level of knowledge of female pedagogy and sociology students was divided into four categories based on the number of points obtained in response to the questions, as presented in Table 2.

The undertaken study shows that half of the surveyed students have an average knowledge of the epidemiology, pathogenesis, prognosis, symptoms and prevention of cervical cancer. A high level of knowledge was reported in nearly 1/3 of the students. The frequency of correct responses to individual questions in the questionnaire is presented in Table 3.

The age group with the highest risk of developing cervical cancer was correctly identified by slightly more than 1/4 of the respondents, and the scale of morbidity in Poland was estimated correctly by less than 10% of the respondents. High-risk age group was significantly more likely to be correctly identified by sociology students (p=0.018) (Figure 1A). In other cases, the grouping variables did not influence significantly the distribution of responses intended to check the knowledge of the epidemiology of cervical cancer.

Less than half of the respondents could correctly identify the risk factors for cervical cancer, and the role of viruses in the etiology of this disease was known to only about 60% of respondents. At the same time, almost 85% of the respondents knew that human papillomavirus (HPV) causes cervical cancer and almost 90% were aware that the major route of transmission for this virus is through sexual contacts (including close contact of skin of the genital areas). Much less, only a little over half of the respondents, knew that in addition to cervical cancer, HPV is also responsible for other diseases of the genitals in both sexes. Nearly 90% of respondents were aware that there are not too many factors related to lifestyle,

TABLE 1. Characteristics of students participating in this study (n=284).

Grouping variable	Category	n	%
Age	20-30 years	221	77.9
	31-40 years	36	12.7
	41-50 years	22	7.7
	above 50 years	5	1.7
Course of study	pedagogy	144	50.7
	sociology	140	49.3
Year of study	I	143	50.4
	III	50	17.6
	IV	39	13.7
	V	51	17.9
Marital status	maidens	149	52.4
	married	80	28.2
	divorced	9	3.2
	widows	2	0.7
	cohabiting	44	15.5
Place of residence	countryside	56	19.7
	town up to 5,000	29	10.2
	town between 5,000 and 20,000	58	20.4
	cities between 20,000 and 100,000	52	18.3
	cities over 100,000	89	31.4
Financial situation	very good	13	4.6
	quite good	106	37.3
	acceptable	130	45.8
	quite poor	19	6.7
	poor	4	1.4
	hard to say	12	4.2

TABLE 2. Level of knowledge on the prevention and early detection of cervical cancer in pedagogy and sociology students (n=284).

Level of knowledge	Number of points	Respondents (n)	Fraction (%)
Insufficient	0-7	4	1.4
Low	8-14	45	15.8
Average	15-21	152	53.5
High	22-29	82	29.3

TABLE 3. Frequencies of correct answers to survey questions on cervical cancer amongst the students participating in this study (n=284).

Analyzed aspects of knowledge	Correct responses n	Correct responses %
A. Epidemiology		
A1. The age group with the highest risk of developing cervical cancer (4th decade of life)	74	26.1
A2. Three to four thousand cases of cervical cancers is diagnosed every year amongst Polish women	25	8.8
B. Pathogenesis		
B1. Risk factors (early sexual initiation, many sexual partners, cigarette smoking, immune deficiency/HIV, refraining from prophylactic activities)	127	44.7
B2. Viruses constitute the principal cause of cervical cancer	165	58.1
B3. HPV causes cervical cancer	241	84.8
B4. HPV is spread by sexual contact	249	87.7
B5. HPV is also responsible for other diseases of the genitals in both sexes	152	53.5
B6. There are not too many factors protecting completely against the development of cervical cancer (e.g. one sexual partner, condoms, healthy food and physical activity, refraining from sexual intercourse during recent 5 years)	249	87.7
C. Prognosis and symptoms		
C1. Cervical cancer is curable in the early stages of development	267	94.1
C2. Cervical cancer has no clinical symptoms in the early stages of development	175	61.6
D. Prevention		
D1. Cervical cancer can be prevented by avoidance of high-risk sexual behaviors, vaccination, cytology, and regular gynecological consultations	171	60.2
D2. Cytology refers to microscopic examination of cervical cells	255	89.8
D3. Cytology enables diagnosis of cervical cancer in the early clinical stages, reduces the risk of this cancer, and detects several types of cervical infections	197	69.4
D4. The first cytology should be performed at least 2-3 years after the initiation of sexual intercourse	15	5.3
D5. Cytology should be performed regularly at the time of gynecological consultations	268	94.4
D6. Cytology should be performed with a frequency of: • once a year • every three years	 240 36	 84.5 12.7
D7. Cytological screening in Poland is available free of charge as part of the prevention program financed by NFZ	242	85.2
D8. The screening program finance by NFZ is addressed to women between 25 and 59 years of age	131	46.2

which would protect completely against the development of cervical cancer. The role of viruses in the etiology of cervical cancer was better known to sociology students (p=0.003) (Figure 1B) and third-year students (p=0.002) (Figure 2A). All third-year students also knew that HPV is spread by sexual contact (p=0.001) (Figure 2B).

Over 90% of respondents knew that cervical cancer is curable in the early stages of development. However, only a little over 60% of respondents were aware that at this stage the cancer in question has no clinical symptoms. Significantly better knowledge of the spectrum of cervical cancer symptoms was possessed by the sociology students (p<0.001) (Figure 1C), and third-year students (p<0.001) (Figure 2C).

About 60% of responders showed knowledge that was recognized as effective for prevention of cervical cancer. Nearly 90% of respondents knew the basics of cytology, and nearly 70% of respondents knew the diagnostic possibilities of this test, including the reduction in the risk of cancer of the cervix. However, only 5% of respondents knew that the first cytology should be performed at least 2-3 years after the initiation of sexual intercourse (the majority stated that testing should begin after the onset of menstruation or immediately after the first sexual intercourse). Nearly 95% of the respondents knew; however, that cytology should be performed regularly at the time of gynecological consultations, and not only in the event of complaints from the reproductive organs, pregnancy or medical indications. Nearly 85% of respondents indicated that regular smear tests should be performed with a frequency of once a year. Only 13% of respondents felt that these tests should be repeated every 3 years. The vast majority of respondents were aware that Pap tests are available free of charge as part of the prevention program financed by the universal health insurance. However, only half of those surveyed could define the target age group for this program. Knowledge of the diagnostic possibilities of cytology increased significantly along with the year of study (p=0.036) (Figure 2D). Significantly higher knowledge in this field was possessed by sociology students (p=0.005) (Figure 1D).

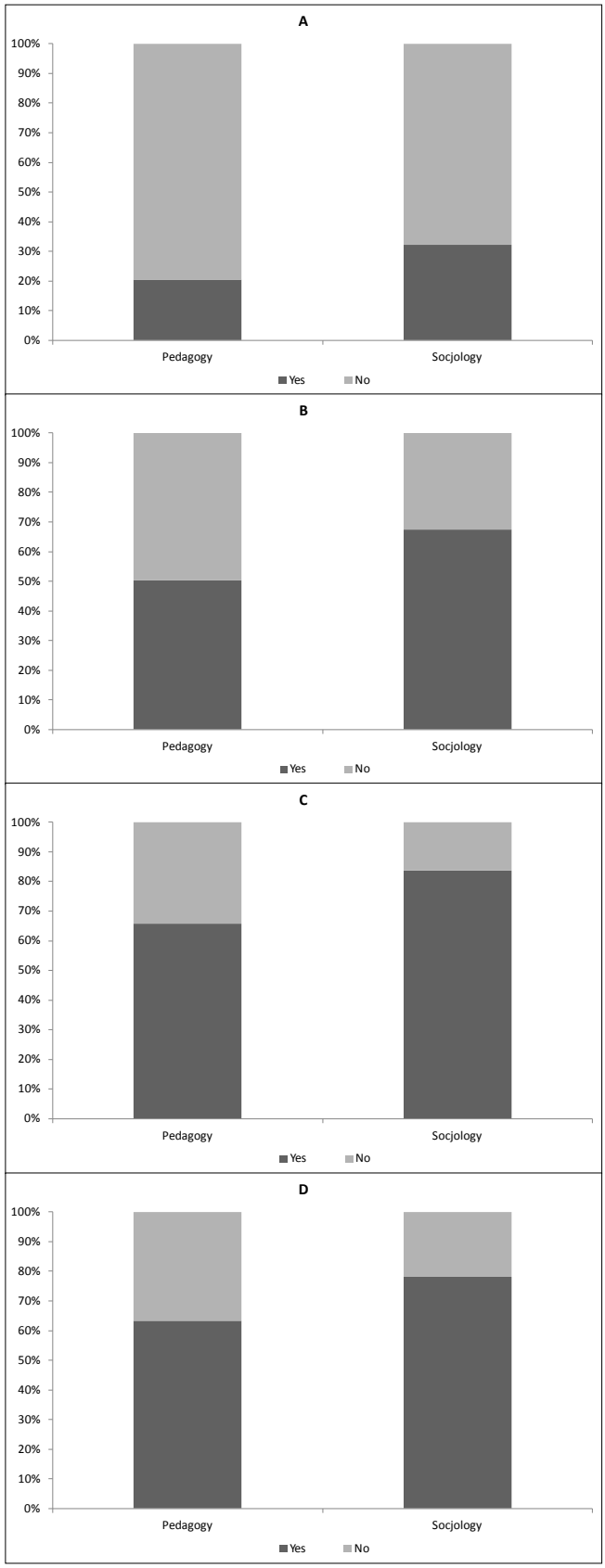

FIGURE 1. Frequencies of correct answers to survey questions on cervical cancer amongst students participating in this study (n=284) stratified by studied discipline: A – age group at risk of cervical cancer, B – role of viruses in cervical cancer etiology, C – early symptoms of cervical cancer, D – role of cervical cytology in cervical cancer detection. Differences between the groups significant at p≤0.05 (Pearson's chi-square test or Fischer exact test).

DISCUSSION

A number of international scientific reports have indicated poor knowledge about cervical cancer among women, which is one of the main reasons for the low response to preventive programs [10-12]. At the same time, various countries are seeking to motivate women to participate in the prophylaxis of cervical cancer [13,14]. An important role in this process is relegated to the traditional health workers, including general practitioners, gynecologists, etc. However, limited, time-constrained and formalized nature of contacts, especially between young women and doctors (with virtually no possibility of prevention counseling by nurses, midwives, social workers, etc.), is not conducive to health education. In Poland, worrisome data reported by Nowicki et al. [15], indicating a lack of proper health behaviors in a large group of women in medical professions, undermines their role in promoting cervical cancer prevention. It therefore seems reasonable to include other professional groups in health education, which, after appropriate training, could effectively

impart information about cervical cancer, especially in the course of youth education and interpersonal relations.

The aim of our study was to evaluate the training of pedagogy and sociology students to fulfill the potential roles of health educators in the prevention of cervical cancer. It should be emphasized that all the surveyed students had in their curriculum classes conducted by a gynecologist concerned with the sociology of health and preventive health-related issues including, amongst others, cervical cancer. This study showed that most students of these courses of study exhibit average or high levels of knowledge about the epidemiology, pathogenesis, prognosis, symptoms and prevention of cervical cancer, but this knowledge is not very structured.

Also, the issues related to the epidemiology of cervical cancer are generally not interesting to pedagogy and sociology students; this is unfortunate, because the data on the incidence of cervical cancer could make them realize that the disease is so common and occurs at such a young age that it can also affect them. Presumably, sociology students are more interested in the social scale of the phenomena, including health-related phenomena – hence their greater knowledge about the epidemiology of cervical cancer.

In terms of pathogenesis, the lack of awareness of factors that protect effectively against the development of cervical cancer does not translate into adequate knowledge about risk factors for this cancer, which should be avoided. Surprisingly few respondents knew about the viral etiology of cervical cancer – especially in the context of the demonstrated considerable knowledge about the human papilloma virus. Perhaps this is due to the fact that many people do not associate HPV with a virus. This suggests that the retained knowledge concerning prevention does not always have a scientific basis – therefore it is difficult to expect that it will be transmitted reliably to other women.

In turn, the knowledge about the prognosis of cervical cancer possesses a dangerous paradox – the respondents are aware of the curability of the early stages of cancer, but have much less information that would allow them to diagnosis this stage in themselves. This is a serious deficit that requires correction.

The percentage of respondents declaring knowledge of cervical cancer prevention methods is similar to the fraction of respondents who know the risk factors for this cancer – this indicates the importance of logic-based knowledge transfer for its preservation and practical use (from etiology to prevention). Poor knowledge about the date of the implementation of the first cytology in women is surprising and indicates the important shortcomings of the current health education. We are pleased by the fact that the majority of surveyed students knew about the Polish program of cervical cancer prevention.

In the course of our research, sociology students were found to possess higher levels of knowledge compared to pedagogy students in certain key aspects of understanding of the prevention of cervical cancer. There is, therefore, a need for greater emphasis on cancer prevention education among pedagogy students, because in view of their future profession and the possibility of contact with young people they can play a greater role in health education.

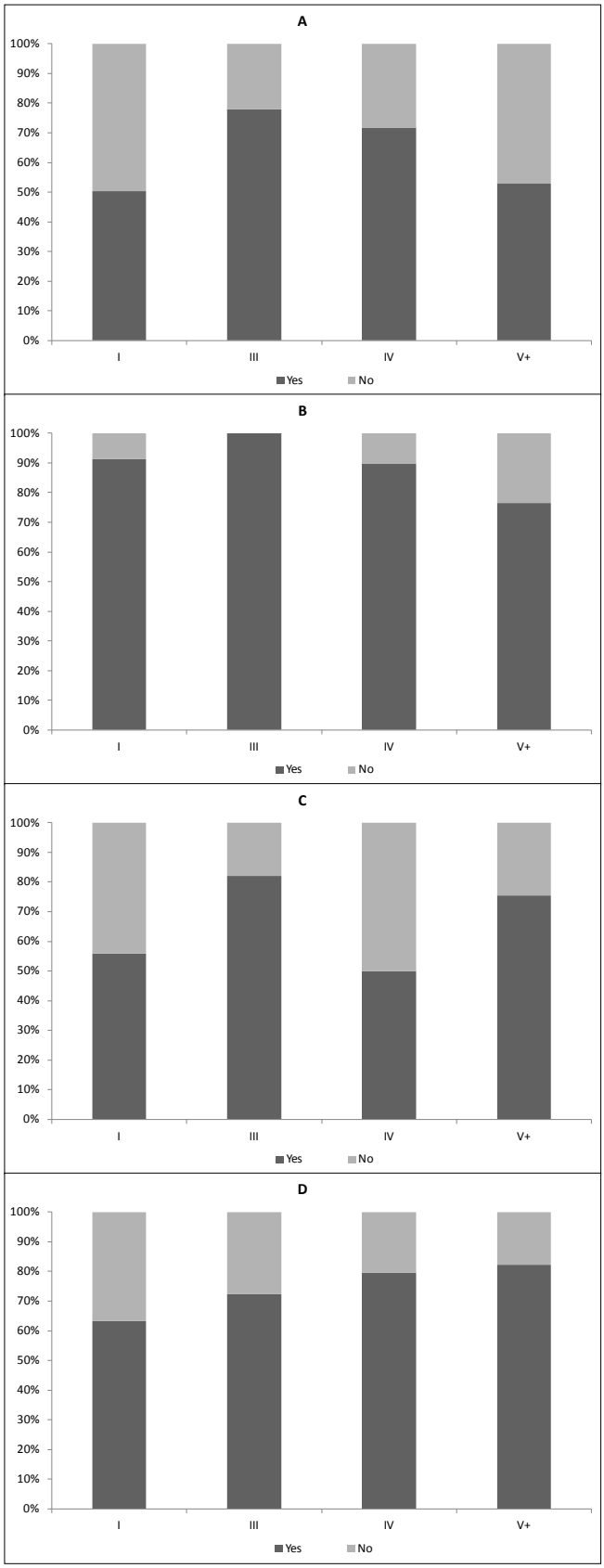

FIGURE 2. Frequencies of correct answers to survey questions on cervical cancer amongst students participating in this study (n=284) stratified by the year of studies: A – role of viruses in cervical cancer etiology, B – transmission routes of HPV, C – early symptoms of cervical cancer, D – role of cervical cytology in cervical cancer detection. Differences between the groups significant at p≤0.05 (Pearson's chi-square test or Fischer exact test).

From the results we infer the importance of non-medical higher education in the process of health education – students who participated in the training curriculum that included sociology of health and health promotion in disease prevention, show an acceptable level of knowledge required to perform the roles of health educators in the prevention of cervical cancer. It is essential to strive to ensure that the knowledge passed on in the course of training is even more structured, logical and digestible, with particular emphasis on etiopathogenesis, factors and risk groups, prevention and effective diagnostic and therapeutic possibilities. This way of education would allow female students to transfer acquired knowledge to other women, thereby building public health awareness and active participation in cancer prevention programs.

CONCLUSIONS

1. Sociology and pedagogy students have an average and to a lesser extent, high level of knowledge about cervical cancer, enabling them to perform the roles of health educators in the prevention of this cancer.
2. Knowledge of cervical cancer prevention should be imparted to potential health educators in a more structured way.

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