

RESEARCH COMMUNICATION

Information Sources for Serbian Women on Cervical Carcinoma Risk Factors

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Abstract

Background: The epidemiological situation regarding cervical carcinoma in Serbia is rather unfavorable and one of contributing factors is the insufficient interest of women concerning the risk factors responsible for occurrence of this disease. The aim of this study was to determine the sources of relevant information for women. **Methods:** An anonymous questionnaire was used for questioning of patients, students and women undergoing systematic examinations. There were 600 women in total in 2006, 2009 and 2010, and the data were statistically processed by the χ^2 test with Yates correction and the Fisher test. **Results:** When observed for certain groups of tested women, and summed up for all three periods, there was a statistically significant difference for the answer “without any knowledge” ($p=0.0001$). When observed for certain years and summed up for all three tested groups, there was a statistically significant difference in answers regarding the source of information, the “doctor” ($p=0.0011$), “media” ($p=0.0349$) and “encyclopedia-internet” ($p=0.0136$). **Conclusion:** The media are a dominant source of information for women on risk factors for cervical cancer. The significance of the Internet increased during the three observed periods, while the students considered themselves least informed of all concerning risk factors.

Keywords: Cervical carcinoma - sources of information - knowledge of women - risk factors - Serbia

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Introduction

During the previous several decades, many countries managed to significantly reduce the number of newly diseased and deceased from malignant tumors of cervix uteri. Unfortunately, those positive changes have bypassed our country. According to the available data, epidemiological situation in Serbia regarding cervical carcinoma is highly unfavorable, and according to incidence and mortality rates, we belong to the top of the list of European countries (Curado et al., 2007; Ferlay et al., 2010). Each year, in Central Serbia, there are 950 new patients, while 400 women dies (Institute of Public Health of Serbia, 2012). At the same time, in Vojvodina, an annual number of the newly diseased is 300, and the deceased 140 (Cancer Registry of Vojvodina, 2012). The reason for such a bad situation could be found in absence of the organized and widespread process of early detection of preinvasive forms of the disease, i.e. screening. One of the reasons could also be an inappropriate level of knowledge of women regarding the risk factors responsible for occurrence of this disease. Information on causes of the disease, ways of prevention, diagnosis of the disease and treatment are presented to women from various sources. At the same time, different sources of information are in

relation to different quality of information and possibilities for their acceptance by the women. A contribution to the fight against the cervical carcinoma is also the definition of the sources of knowledge on this disease, with the aim of better education and reduction of risk.

The aim of the research was to establish the sources of information on risk factors responsible for occurrence of malignant tumor cells of cervix uteri.

Materials and Methods

The basic instrument in this research was the anonymous questionnaire. During the questioning, the sources of information were defined in three groups of women: the patients treated at the Oncology Institute of Vojvodina (the IOV) in Sremska Kamenica, female students going for the examination to the Students' Health Protection Institute Novi Sad and women coming to the systematic examination to the IOV. The questioning was performed in three periods: in 2006, 2009 and in 2010. During the years 2006 and 2009, 70 women were questioned in each of the groups, while in 2010, 60 women per group were questioned. Thus, a total of 600 women were questioned. After collection of data, they were sorted out, processed and analyzed. The following statistical tests

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were used: χ^2 test with Yates correction and the Fisher test. For statistical processing of data, a program package Statistika 10 was used.

Results

The first part of the results are the demographic data summarized in the following part of the paper. Table 1.

The examinees from the two groups (the patients and the women at the systematic examination) had relatively similar values of the average age, while the group of female students, which was to be expected, differed from the average age of the other examinees.

Twenty-seven or 4.71% of women of the total number of examinees (600) had residence outside of Vojvodina. By testing the statistical significance, a statistically significant difference was found regarding the educational degree between the group of patients and the women coming to the systematic examination, summarized for all three years regarding all three questioned levels of education. The difference was highly statistically significant ($p < 0.0001$). The group of female students was not analyzed for this characteristic.

The second part of the results contains data obtained regarding the sources of information on cervix uteri malignant tumors in all three questioned groups of examinees, observed per years of questioning.

In the group of the diseased women in 2006, the main sources of knowledge on cervical carcinoma were their visits to doctors, and then media. Table 2. In the group of students, the main source of information were the media, then their visits to doctors and school. Women coming to the systematic examination evaluate approximately the

same the significance of information obtained from the media and the doctor. Even 25.7% of the students, 7.1% of the patients and 2.9% of the women from the systematic examination claimed that they had no knowledge on the subject.

In the following questioning, in 2009, the patients stated media as the leading source of information, which occurred as such in almost half of the cases. Table 3. Ten percent of patients stated that they had no knowledge on this disease. Both in the group of students and the group of women at the systematic examination, the leading sources of knowledge were the media. While 12.9% of students believed that they had no knowledge on this disease, in women at the systematic examination, only one woman (or 1.4%) was of such an opinion.

Similarly to the previous year, in 2010, the main source of information in all three groups remained the media. Table 4. The percent allocated to the media in all three groups reduced within the range from 47%-54% in 2009 to the range of 35%-45% in 2010.

Further, the paper presents the sources of information per groups, summed up for all three observed periods.

Within the group of patients, the most significant sources of information were the media (38.5%) and the doctors (37.5%).

The group of female student, most often stated the media as the source of information (44%), and then followed the students believing that they have no knowledge on the subject (20.5%)

Within the group of women from the systematic examination, the most significant sources of information were the media (47.5%) and the doctors (29.5%).

The differences occurring among the three groups according to the sources of information – the media, encyclopedias-internet, and the option of any other sources of information were not statistically significant.

The differences regarding the answer “without any knowledge” among the three groups were highly statistically significant, $p = 0.0001$ where the percent of students with this answer was 20.5%, the patients 7.5%, and the women at the systematic examination 3%.

The differences in opinions regarding the participation of sources of knowledge, meaning the “doctor” and the “school” were not evaluated due to the fact that the patients, i.e. the students were unavoidably directed to certain sources.

Further, the paper presents the sources of information

Table 1. Demographic Data of Three Groups of Examinees

	Group A	Group B	Group C
Age (average)	48.25	22.57	43.18
Place of residence %			
Vojvodina	96.00	93.00	97.50
Other	4.00	7.00	2.50
Level of education %			
Elementary school	22.00	0	4.00
Secondary school	58.5	100.00	35.00
University school	19.5	0	60.50

* A patients, B students, C systematic examination

Table 2. Sources of Information on Cervical Carcinoma, 2009

	2006						2009						2010					
	Patients		Student		Systematic Examinations		Patients		Student		Systematic Examinations		Patients		Student		Systematic Examinations	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DOCTOR	35	50	9	12.9	29	41.4	19	27.1	9	12.9	13	18.6	21	35	4	6.7	17	28.3
SCHOOL	2	2.9	7	10	3	4.3	3	4.3	9	12.9	4	5.7	2	3.3	10	16.7	1	1.7
MEDIA	23	32.9	30	42.9	30	42.9	33	47.1	35	50	38	54.3	21	35	23	38.3	27	45
ENCYCLOPEDIA OR INTERNET	4	5.7	3	4.3	4	5.7	7	10	7	10	11	15.7	12	20	6	10	10	16.7
OTHER SOURCES	1	1.4	3	4.3	2	2.9	1	1.4	1	1.4	3	4.3	1	5	14	23.3	3	5
UNINFORMED	5	7.1	18	25.7	2	2.9	7	10.0	9	12.9	1	1.4	3	5	14	23.3	3	5
TOTAL	70	100	70	100	70	100	70	100	70	100	70	100	60	100	60	100	60	100

regarding the years of questioning, summed up for all three questioned groups.

During the three periods of questioning, the percentage of women who state the “doctor” as the source of information gradually reduced from 34.7%, 19.5% and 23.3%. The stated difference was statistically significant, $p=0.0011$.

The number of examinees in the three groups, which stated “school” as the most significant source of information on this disease was uniform and without statistically significant difference.

During the three phases of questioning, the role of media first increased and then reduced, i.e. it was 39.6%, 50.5% and 39.5% per years. The difference was statistically significant, $p=0.0349$. If we add the data for the years 2009 and 2010, and match them with the data for the year 2006, then it could be said that the role of media increased from 39.6% to 45.4% in those two observed periods.

Finally, the role of encyclopedia, which, mostly implies Internet, evidently increased (5.2%, 11.9%, 15.5%) with the statistically significant difference, $p=0.0136$.

For options “other sources of information” and “without any knowledge”, there was no significant difference between the answers among the three observed years.

Discussion

In the first observed year, in women at the systematic examination, almost identical percentage was for the doctor and the media as the sources of information. In the group of patients, in half of the cases the doctors were stated as the sources, and in the group of students, the main sources of information were the media. In two older groups of examinees, such distribution was expected, having in mind previous contacts of the doctors with the diseased women and those coming to systematic examinations. However, the pupils of the first grade of high school in Sweden state that information obtained at school were the most important source, then medical institutions, while media occurred in the end (Hoglund et al., 2009). There is an open question whether our media are dedicated to health issues or our schools do not do their jobs regarding health education. In older age, in all groups, the leading role belongs to the media. Thus, among the students, the significance of the media constantly dominates in all three phases (43%, 50% and 38%). These data are somewhat higher than the data of Prof. Kapamadžija, who, in her PhD dissertation, which also questioned the knowledge of adolescents on sexuality, obtained the data that 40% of them acquired knowledge on sexuality through the media (Kapamadžija, 2002). The health education is special important in the rural areas because higher prevalence of risk factors in rural zone (Raychaundari and Mandal, 2012). The phone questioning conducted in Australia showed that half of the examinees obtain information on HPV through the media (Pitts et al., 2007). The same examinees stated that they would like to obtain more information from health workers. A paper published in the USA in 2010, showed that media,

dealing with health issues often do not present the most important facts on certain diseases (Kelly et al., 2009). For example, in even 80% of the shows, which dealt with HPV vaccination, the fact that even after the vaccination, the regular gynecological examinations are obligatory for cytological testing, was omitted.

Information obtained from the doctors were of the secondary significance within the group of students and were at the level of about 10%. Role of physician educations is insufficiently (Cermak et al., 2010). These data suggest that – with the exception of the doctors’ sources, which are, as we could see, proportional to the frequency of contacts with doctors but also to the age of the examinees – the main source of information were the media. Bushley, from the Center for Cancer Research in Honolulu, came to some similar conclusions on predominant importance of media in promotion of cancer prevention and health care education (Bushley et al., 2005). Education through educational system has, which is to be expected, the greatest importance in students (between 10% and 15%). Besides the previously stated facts on significance of the media, there are two other conclusions that impose as striking. The first is that the role of Internet and encyclopedia is extremely increasing. It can be assumed that Internet is responsible for this increase. The other is the worrying fact that significant number of women states that they have no knowledge, whatsoever on this carcinoma. This, primarily, applies to the students. Namely, each fifth student stated that she had no knowledge, whatsoever on cervix uteri carcinoma. There is a doubt whether some of the examinees from the other two groups lack self-criticism, sincerity or this was a real situation. A study, performed in Pakistan, showed that the medical personnel in only 61% stated HPV as the cause of the disease, and less than 10% knew that there was a vaccine for this disease (Ali et al., 2010). Should we look for the reason for insufficient knowledge of women in the insufficient knowledge of the certain number of health care workers? The study conducted in Turkey within nurses showed that there was no difference in knowledge in relation to age and working experience, but that there was a difference related to knowledge and positive family anamneses of cervical carcinoma (Ertem, 2010). It should be pointed out that the published papers show that interventions with the aim of improvement of health care education of women gave good results (Papa et al., 2009). Thus, by the radio program and by presenting some educational contents in Honduras, they increased the level of knowledge on cervical carcinoma. Also, the response to screening program was better (Perkins et al., 2007). In the study conducted in Antwerp, dr. Baay questioned 73 women, who regularly scheduled appointments with their general practitioners, 67 women who educated themselves on cervical carcinoma and 28 students of biomedical sciences (Baay et al., 2004). The Belgian women inform themselves on this topic, primarily through media (one third), and the author especially pointed out the insufficient role of the gynecologists in informing of women. As a reaction, when notified that they have HPV infection or genital warts, women most usually develop depression, anxiety and fear (Graziottin

and Serafini, 2004). Educational programs on risk factors, HPV and HPV vaccine must be conducted with extreme caution in order to prevent fear and anxiety (Friedman and Sheppard, 2007). Our population is also to expect a screening program of cervical carcinoma, which is an additional reason to maximally inform and motivate the population, but without unnecessary psychological pressure. In the process of education of women, especially of the younger population, it is important to eliminate the stigmatizing effect as the consequence of the present, sexually transmittable HPV infection (Lee et al., 2007). The results of the study, conducted in one high school, which compared two educational methods on cervical carcinoma, are very interesting (Rezaei et al., 2004). Before educational intervention, there was no difference in knowledge. In one group, the education was conducted through lectures, while in the other the source of knowledge were the flyers. The results showed that the better source of knowledge were the lectures. Finally, health education has very important role and for success of the HPV vaccination (Juntasopeepun et al., 2012)

In conclusions, generally observed, the media were the dominant source of information on this disease. The role of doctors in education is most pronounced in the group of patients. A significant trend of increase of the role of Internet is noted. The least informed are the students, according to their opinion (each fifth of them). The ways of information acquiring should be influenced and education should be conducted with caution without any accompanying negative psychological issues.

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