

Behaviour among women in the scope of cervical cancer prevention

Zachowania kobiet w zakresie profilaktyki raka szyjki macicy

Aleksandra Słowiecka

Department of Psychology and Medical Pedagogy, Institute of Public Health, Faculty of Health Sciences, Jan Kochanowski University, Kielce, Poland
Head of Department: Aldona Kopik PhD

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Słowa kluczowe: kobiety, nowotwory szyjki macicy, cytologia, profilaktyka.

Abstract

Introduction: Cytological examination is a simple and inexpensive method used in the prevention of cervical cancer. In Poland, too low proportions of women still have the test.

Aim of the research: To analyse the attitudes towards cervical cancer prevention.

Material and methods: Two hundred and ten hospitalized women were invited to take part in the investigation. The research used the diagnostic poll method, using the author's original questionnaire form. The research was carried out in four gynaecological wards.

Results: Of the women who participated in the research, 16.2% by the time of diagnosis had never received a Pap test. In the analysed group, 88.2% of women were not referred to a specialist for a Pap test. Among all respondents, only 35.7% underwent cervix cytology regularly, i.e. once a year or once every 2 years.

Conclusions: The effort made by the women towards the attitudes of cervical cancer prevention was insufficient; still too many women had not reported to the specialist for taking material from the cervix, or did not do so regularly. A significant relation in the behaviour of women was found depending on their level of education and place of residence. Greater activity of nurses, midwives and family physicians in stimulating Polish women to participate in prevention programmes for cervical cancer is advisable. To increase the health awareness of girls and women, it is important to include in the curriculum, especially in secondary schools, the issues of prevention of female reproductive system cancer.

Streszczenie

Wstęp: Prosta i tania metoda stosowana w profilaktyce raka szyjki macicy jest badanie cytologiczne szyjki macicy. W Polsce tym badaniem objęty jest nadal zbyt niski odsetek kobiet.

Cel pracy: Analiza zachowań kobiet w zakresie profilaktyki raka szyjki macicy.

Materiał i metody: Badaną grupę stanowiło 210 kobiet hospitalizowanych z powodu chorób w obrębie narządu rodowego. W badaniach zastosowano metodę sondażu diagnostycznego. Wykorzystano kwestionariusz ankiety własnego opracowania. Badania przeprowadzono na czterech oddziałach ginekologicznych.

Wyniki: U 16,2% respondentek do chwili rozpoznania choroby nigdy nie pobrano do badania materiału z szyjki macicy. Aż 88,2% kobiet w analizowanej grupie nie było kierowanych na to badanie. Jedynie 35,7% respondentek poddawało się badaniu cytologicznemu szyjki macicy regularnie, tj. raz w roku lub raz na 2 lata.

Wnioski: Zachowania w zakresie profilaktyki raka szyjki macicy podejmowane przez badane kobiety były niewystarczające, nadal zbyt wiele kobiet nie zgłaszało się na pobranie materiału z szyjki macicy lub robiło to nieregularnie. Stwierdzono istotną zależność analizowanych zachowań respondentek od ich poziomu wykształcenia i miejsca zamieszkania. Wskazana jest większa aktywność pielęgniarek, położnych i lekarzy rodzinnych w mobilizowaniu polskich kobiet do udziału w programach profilaktycznych dotyczących raka szyjki macicy. W celu zwiększenia świadomości zdrowotnej dziewcząt i kobiet wskazane jest ujęcie w programach nauczania, głównie szkół ponadgimnazjalnych, zagadnień z zakresu profilaktyki chorób narządu rodowego.

Introduction

A Papanicolaou (Pap) test is used in the prevention of cervical cancer as a simple and inexpensive cervix cytological examination. The test allows the lesions to be detected in the early stages [1, 2]. The basic con-

dition to take material from the cervix is to report to the specialist and voluntarily undergo the medical examination. In order to obtain tangible effects, the screening test in the cytological examination should be repeated regularly. The frequency of having a Pap

test depends on the individual assessment of a woman's health situation and meeting specific eligibility criteria.

In Poland, despite the implementation of the programme of cervical cancer prevention, currently funded with public funds in the form of three stages [3], satisfactory results are not achieved [4]. According to the specialists, still too low a percentage of Polish women have a Pap test [4–6]. This situation results from various reasons; one of them is insufficient knowledge of cervical cancer and low attendance in the programme [4]. To understand the behaviour of women and their lack of recommended attitudes in the scope of cervical cancer prevention is a valuable source of information which should be taken into consideration in making some revision to the programme in the future. It is believed that an important factor in increasing women's participation in prevention programmes can be achieved by improving their health awareness [7–10].

Aim of the research

The aim of the study was to analyse the behaviour of women in the scope of cervical cancer prevention.

Material and methods

The research was conducted with 210 women, aged 18 to 73 years. The average age for all respondents was 45.5 years. In connection with the low rate of interest of respondents in individual years of age, four age groups were used. Percentages of women in particular age classes were as follows: 1: ≤ 35 years (21.9%); 2: 36–45 years (24.8%); 3: 46–55 years (37.6%); and 4: ≥ 56 years (15.7%). Among the respondents, 52.4% of women had secondary education and post-secondary education. The percentages of women who had a higher education (23.8%), and primary or vocational education were the same (23.8%). According to place of residence, respondents were divided into three groups: 1 – living in country areas (36.7%); 2 – living in a city of up to 100 thousand inhabitants (≤ 100 thousand

inhabitants) – 27.6%; 3 – living in a city of over 100 thousand inhabitants (> 100 thousand inhabitants) – 35.7%. The research used the diagnostic poll method, using the author's original questionnaire form. The research was carried out in four gynaecological wards in hospitals in Kielce. In the research the following criteria were used to select respondents: 1) hospitalization due to illness or diseases of reproductive organs (pregnant women and those who had a miscarriage were excluded from this analysis); 2) the age of 18 (lawful age); 3) staying in the ward for at least three days; 4) getting consent to participate in the research.

Statistical analysis

Statistical Package for Social Sciences (version 12.0) was used to compute statistical analyses. The significance of differences between categorized groups (according to place of residence, age and education) was evaluated with the chi-square test of independence (χ^2). A level of $p < 0.05$ was considered statistically significant.

Results

From the analysis of given answers as shown in Table 1, it follows that 83.3% of women had a Pap test. 16.2% of respondents by the time of diagnosis had never received a Pap test. In the research significant differences among participants were found depending on education ($p < 0.05$) and place of residence ($p < 0.001$). Women with the lowest level of education (primary, vocational education) and respondents living in the country more rarely had a Pap test than women with a higher education and living in big cities (> 100 thousand inhabitants). Detailed data are shown in Table 1.

The group of respondents was asked for any reasons why the material from the cervix was never taken for a Pap smear. The analysis showed that 88.2% of women had not reported to a specialist to have a smear test (Table 2). 11.8% of participants were referred to a doctor for taking a Pap test but did not

Table 1. Respondents who had a Pap test – women by age, education and place of residence

Respondents who had a Pap test	Age groups [years]				Education			Place of residence			Total	
	≤ 35	36–45	46–55	≥ 56	Prim. and voc.	Second.	Higher	Country	Town $\leq 100\ 000$	Town $> 100\ 000$		
Yes	<i>n</i>	35	44	67	30	37	93	46	54	51	71	176
	%	76.1	84.6	84.8	90.9	74.0	84.5	92.0	70.1	87.9	94.7	83.8
No	<i>n</i>	11	8	12	3	13	17	4	23	7	4	34
	%	23.9	15.4	15.2	9.1	26.0	15.5	8.0	29.9	12.1	5.3	16.2
Total	<i>n</i>	46	52	79	33	50	110	50	77	58	75	210
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

$$\chi^2 = 3.33; df = 3$$

$$p = NS$$

$$\chi^2 = 6.06; df = 2$$

$$p < 0.05$$

$$\chi^2 = 17.86; df = 2$$

$$p < 0.001$$

Table 2. Reasons for not having a Pap test – women by age, education and place of residence

Kinds of reasons	Age groups [years]				Education			Place of residence			Total
	≤ 35	36–45	46–55	≥ 56	Prim. and voc.	Second.	Higher	Country	Town ≤ 100 000	Town > 100 000	
Woman not reported to a doctor for taking a Pap test	<i>n</i> 11 % 100.0	8 100.0	8 66.7	3 100.0	11 84.6	15 88.2	4 100.0	19 82.6	7 100.0	4 100.0	30 88.2
Woman reported to a doctor but did not want a Pap test	<i>n</i> – % –	–	4 33.3	–	2 15.4	2 11.8	–	4 17.4	–	–	4 11.8
Total	<i>n</i> 11 % 100.0	8 100.0	12 100.0	3 100.0	13 100.0	17 100.0	4 100.0	23 100.0	7 100.0	4 100.0	34 100.0

Table 3. Frequency of Pap smear testing – women by age, education and place of residence

Frequency of Pap smear testing	Age groups [years]				Education			Place of residence			Total
	≤ 35	36–45	46–55	≥ 56	Prim. and voc.	Second.	Higher	Country	Town ≤ 100 000	Town > 100 000	
Woman who has never had a Pap test	<i>n</i> 11 % 23.9	8 15.4	12 15.2	3 9.1	13 26.0	17 15.5	4 8.0	23 29.9	7 12.1	4 5.3	34 16.2
Once a year or once every 2 years	<i>n</i> 16 % 34.8	21 40.4	26 32.9	12 36.4	8 16.0	42 38.2	25 50.0	14 18.2	23 39.7	38 50.7	75 35.7
Every 3 years or less	<i>n</i> 10 % 21.7	4 7.7	11 13.9	6 18.2	7 14.0	15 13.6	9 18.0	12 15.6	8 13.8	11 14.7	31 14.8
Did not remember	<i>n</i> 9 % 19.6	19 36.5	30 38.0	12 36.4	22 44.0	36 32.7	12 24.0	28 36.4	20 34.5	22 29.3	70 33.3
Total	<i>n</i> 46 % 100.0	52 100.0	79 100.0	33 100.0	50 100.0	110 100.0	50 100.0	77 100.0	58 100.0	75 100.0	210 100.0

$$\chi^2 = 10.25; df = 9$$

$$p = NS$$

$$\chi^2 = 17.06; df = 6$$

$$p < 0.01$$

$$\chi^2 = 27.21; df = 6$$

$$p < 0.001$$

report to the specialist. In the analysed group were women living in country areas, aged 46–55, and women with primary, vocational and secondary school education. The numbers were small in percentage terms and did not allow for a statistical assessment in the above-mentioned group.

Of the women who participated in the research, 35.7% had received a Pap test regularly, once a year or once every 2 years (Table 3). 33.3% had difficulties to describe when they had a Pap test (did not remember). The third group of 16.2% consisted of women who have never had a Pap test. Every 3 years or less than that, 14.8% of women reported to the gynaecologist for a smear test. In terms of the analysed feature

the differences in the proportion of respondents by age class were not significant. Statistically significant relations occurred between respondents who were divided depending on education ($p < 0.01$) and place of residence ($p < 0.001$). Women with a higher education more often and on a more regular basis had a Pap test, i.e. once a year or once every 2 years, than women with the lowest education (primary, vocational) – 16%. Similar results were achieved between occupants of villages (18.2%) and big cities (> 100 thousand inhabitants) – 50.7%.

The majority of women who had had a Pap test were those who reported to the doctor for a smear test on the doctor's initiative (64.8%), especially the

Table 4. People on whom initiative respondents had had a Pap test – women by age, education and place of residence

Mentioned people	Age groups [years]				Education			Place of residence			Total	
	≤ 35	36–45	46–55	≥ 56	Prim. and voc.	Second.	Higher	Country	Town ≤ 100 000	Town > 100 000		
Own initiative	<i>n</i>	7	18	25	12	8	32	22	13	21	28	62
	%	20.0	40.9	37.3	40.0	21.6	34.4	47.8	24.1	41.2	39.4	35.2
Gynaeco- logist, family physician and nurse initiative	<i>n</i>	28	26	42	18	29	61	24	41	30	43	114
	%	80.0	59.1	62.7	60.0	78.4	65.6	52.2	75.9	58.8	60.6	64.8
Total	<i>n</i>	35	44	67	30	37	93	46	54	51	71	176
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

$$\chi^2 = 4.61; df = 3$$

$p = NS$

$$\chi^2 = 6.23; df = 2$$

$p < 0.05$

$$\chi^2 = 4.29; df = 2$$

$p = NS$

gynaecologist (61.4%) (Table 4). The family physician or nurse was mentioned only by 3.4% of respondents. On their own initiative 35.2% of women had a Pap test. The proportion of respondents did not differ with regard to age and place of residence, while significant differences were found between participants depending on education ($p < 0.05$). It was found that the higher the category of education the higher was the percentage of women who had a pap test on their own initiative.

Discussion

According to the Central Statistical Office (GUS) in 2009 6,147 Polish women died because of malicious tumours of reproductive organs, among which cervical cancer caused the death of 1,748 women [11]. Compared with 2008, indicators mentioned above were at a similar level [12]. Although intensive prevention has been conducted for many years against cervical cancer, performed in accordance with the rules at a specific period of time [3, 13, 14], radical improvement of the epidemiological situation of cervical cancer was not achieved. Still the number of deaths per 10 thousand population due to cervical cancer for several years has remained at a high level (2000 – 1.0; 2005 – 0.9; 2008 – 0.9) [11].

The benefits and advantages of cytology in the prevention of cervical cancer are confirmed by many specialists [15–17]. It is necessary to remember that to have a Pap test a woman has to report to the doctor. The research showed that by the time of diagnosis of the reproductive organ disease 16.2% of women had never had a smear test. Similar results were obtained by Binkowska and Dębski. In a group of 1,083 Polish women, aged 45–54 (chosen at random), almost one out of four tested women (24%) for more than 10 years had not had a Pap test, or some declared that they had never had one in their life [18]. Also Kozimala *et al.* mentioned low attendance of women towards

the prevention of cervical cancer [19]. Two thousand two hundred and two women were invited for a smear test and only 577 of them (26.2%) had this test. The remaining 73.8% of women did not take advantage of having a Pap test [19]. Other authors in their reports also confirmed the lack of regular and satisfactory reporting to a doctor by Polish women to take material from the cervix [10, 20, 21].

Detailed data concerning the frequency of reporting to the doctor for a smear test showed the real picture of women's attitudes towards cervical cancer prevention. The research showed that 35.7% of women, once a year or once every 2 years, had reported to the doctor for a Pap test and that it depended on education and place of residence of respondents. However, according to estimates of Filip *et al.*, in Poland, after several years of the regular screening programme only 12% of women are having a Pap test [22].

The presented data have to be recognized as unsatisfactory; thus the functioning programme needs to be urgently modified. It should be noted that only implementation of a long-term nationwide and population survey system of screening tests can decrease the incidence of cancer in women [21–23]. In many countries, as a result of a well-functioning screening programme, morbidity and mortality rates of women with cervical cancer have been radically reduced [2, 9, 10, 16, 23–25]. However, in many countries where due to numerous obstacles and restrictions women rarely or never participate in prophylaxis, the factors mentioned above remain at a high level [1, 7].

Based on material gathered in the research it must be noted that the actions taken by the respondents and attitudes towards cervical cancer prevention were insufficient. It would appear that if the methods which give a woman freedom of choice failed, other ways of increasing women's behaviour in cervical cancer prevention should become widespread. Considerable mobilisation of Polish women for regular health checks of

reproductive organs can be obtained by introducing an obligation to undergo gynaecological examinations at the periodic physical examination of employees. At least in the subpopulation of working women 100% attendance can be gained. It should be noted that each examination may also be an opportunity for health education, because improvement of the health situation of girls and women in Poland should be carried out to increase the level of health awareness.

Developing specific skills in the scope of health prophylaxis and motivation to take responsibility for women's own health could be introduced to the curriculum of secondary schools. The implementation of this plan can be effective and girls can improve their knowledge, education, self-control and individual activity in the scope of prophylaxis and therapy. These activities and other recommendations have already been proposed by experts [21, 26].

It is important to conduct a sustained information campaign and various forms of health education [1, 2, 7–9, 26]. The aim of these actions is to increase the participation of women in prophylaxis and to prevent the morbidity and mortality caused by cervical cancer.

In conclusion, this study should also provide opinions of specialists, which should be regarded as a warning and a challenge for people deciding on the implementation of prophylactic programmes in Poland. Considering the above problems, according to Didkowska *et al.*, if intensive action is not taken, women's health may be jeopardized, as it was in Finland 25 years ago [27]. Also Spaczyński *et al.* in the Report of the Realisation of the Population Program of Cervical Cancer Early Detection evaluated the effectiveness of action taken in the scope of this programme. According to the authors, obtaining effective screening methods in Poland requires many years of work [4].

Conclusions

The effort made by the women towards the attitudes of cervical cancer prevention was insufficient; still too many women had not reported to the specialist for taking material from the cervix, or did not do so regularly. A significant relation in the behaviour of women was found depending on their level of education and place of residence. Greater activity of nurses, midwives and family physicians in stimulating Polish women to participate in prevention programmes for cervical cancer is advisable. To increase the health awareness of girls and women, it is important to include in the curriculum, especially in secondary schools, the issues of prevention of female reproductive system cancer.

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Address for correspondence:

Aleksandra Słowiecka MD
Department of Psychology and Medical Pedagogy
Institute of Public Health
Faculty of Health Sciences
Jan Kochanowski University
al. IX Wieków Kielc 19, 25-317 Kielce, Poland
E-mail: aleksaonet@op.pl