

# Women's health behaviours regarding cervical cancer prevention

## Zachowania zdrowotne kobiet w zakresie profilaktyki raka szyjki macicy

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**Słowa kluczowe:** rak szyjki macicy, zachowania zdrowotne, profilaktyka.

### Abstract

**Introduction:** Cervical cancer is a serious problem in gynaecological oncology, which gains even more importance when it concerns young women at reproductive age – 20–39. It is an alarming fact that despite the knowledge about causes of the development of the disease, its dynamics, diagnostic and treatment methods, in Poland, very high mortality rates are still observed, compared to the other countries of the European Union.

**Aim of the research:** To evaluate health behaviours of women with respect to cervical cancer prophylaxis.

**Material and methods:** The study included 115 women aged 20 to 50, and was conducted in the Regional Mother and Newborn Child Centre in Kielce by the method of a diagnostic survey. The research instrument was a questionnaire consisting of 28 items designed by the author.

**Results:** Analysis of the results of the study showed that 17.39% of respondents initiated sexual activity when aged under 18. The examined women had a relatively good knowledge of the basic cervical cancer risk factors. Among the main cervical cancer risk factors, 80.00% of respondents mentioned infection with HPV virus.

**Conclusions:** Health behaviours of women with respect to cervical cancer prophylaxis are becoming increasingly positive. However, educational actions should be enhanced concerning detailed information pertaining to cervical cancer and benefits resulting from vaccination against HPV virus.

### Streszczenie

**Wprowadzenie:** Rak szyjki macicy stanowi poważny problem w onkologii ginekologicznej. Szczególne znaczenie ma wtedy, gdy dotyczy młodych kobiet w wieku prokreacyjnym, pomiędzy 20. a 39. rokiem życia. Bardzo niepokojące jest to, że pomimo znajomości przyczyn rozwoju choroby, dynamiki, metod diagnostycznych i leczniczych w Polsce wciąż poziom umieralności jest bardzo wysoki w porównaniu z pozostałymi krajami Unii Europejskiej.

**Cel pracy:** Poznanie oraz próba oceny zachowań zdrowotnych kobiet w zakresie profilaktyki raka szyjki macicy.

**Materiał i metody:** W badaniu wzięło udział 115 kobiet w wieku od 20 do powyżej 45 lat. Zostało ono przeprowadzone na terenie Świętokrzyskiego Centrum Matki i Noworodka w Kielcach. W badaniu wykorzystano metodę sondażu diagnostycznego. Narzędziem badawczym był autorski kwestionariusz w formie ankiety składający się z 28 pytań.

**Wyniki:** Z analizy przeprowadzonych badań wynika, że przed 18. rokiem życia współżycie seksualne rozpoczęło 17,39% ankietowanych. Badane kobiety dość dobrze znają podstawowe czynniki ryzyka wystąpienia raka szyjki macicy. Spośród badanych 80,00% do głównych czynników ryzyka rozwoju raka szyjki macicy zalicza infekcję wirusem HPV.

**Wnioski:** Zachowania zdrowotne kobiet w zakresie profilaktyki raka szyjki macicy stają się coraz bardziej pozytywne. Należy jednak zwiększyć działania edukacyjne dotyczące szczegółowych informacji na temat raka szyjki macicy oraz korzyści wynikających ze szczepienia przeciwko wirusowi HPV.

### Introduction

Cervical cancer is among the most frequent types of cancer concerning the female reproductive organs,

and is the second most common cancer in women worldwide. At present, a growing tendency may be noted in morbidity due to cervical cancer. This phenomenon is especially clearly observed in an increas-

ingly younger age group, between 20 and 39 [1, 2]. This is due to inappropriate life style, bad nutritional habits, addictions, contamination of the environment, as well as risky sexual behaviours, including early initiation of sexual activity and a large number of partners. The major cervical cancer risk factor is infection with human papillomavirus (HPV). Approximately 80% of sexually active women experience such an infection in their lives. HPV virus plus additional risk factors, such as cigarette smoking, high parity, and long-term hormonal contraception, cause cervical cancer [3, 4].

Every day, five Polish women die due to cervical cancer. Despite advances in medicine, in Poland, the mortality rates due to this cause still remain high, and in 25% of women this cancer is detected at the stage when it is impossible to cure. In Scandinavian countries, where cervical screening is obligatory for all women, the detection rate is more than 50% [5, 6]. This difference is due to poorly effective prophylaxis [7].

The first symptoms associated with cervical cancer are poorly characteristic and do not evoke concern among women. The first symptoms of dysplasia and cervical cancer may occur as late as 5–10 years after the onset of the cancerous process. The symptoms due to which a woman reports to a physician occur when the cancer is invasive and infiltrates the adjacent tissues. These symptoms include vaginal discharge tinged with blood, with an unpleasant odour, bleeding between periods, contact bleeding (e.g. after intercourse, physical effort, irrigation, hygienic procedures, or palpation examination), lower abdominal pain, and pain in the lumbar spine region. In later periods of the disease, vaginal discharge becomes more abundant with an odoriferous, sweet to nauseous odour caused by necrotic changes and inflammation. Bleeding episodes intensify as a result of tumour lysis, and create a threat to life for the woman. When the cancer is at a very advanced stage, there develop symptoms caused by pressure of the tumour upon adjacent organs, including pain on defecation, difficulties with urination, oedema of the lower extremities and prostration of the body [8, 9].

The treatment of cervical cancer depends on the degree of progression of the tumour. Most often, it is a combined treatment: various methods of treatment are combined, such as surgery, radiotherapy and chemotherapy [10].

Cervical cancer prophylaxis may be divided into the primary prophylaxis, which is related to prevention of occurrence of HPV infections, and secondary prophylaxis, which consists in early detection of symptoms of the disease [11, 12]. For many years, secondary prophylaxis has dominated. At present, this situation may change due to the discovery of a vaccine against oncogenic types of HPV virus. In primary cervical cancer prophylaxis, apart from vaccination against HPV virus, special attention should be paid to the shaping of correct sexual behaviours in

order to reduce the spread of HPV virus [13, 14]. Secondary prophylaxis, i.e., early detection, provides the possibility to detect cancer at an early stage at which it may be cured [15, 16]. Prophylactic cervical cancer programmes have been developed, the goal of which is to reduce mortality and morbidity due to cervical cancer, as well as to increase women's awareness concerning prophylaxis [7, 17]. However, the greatest role in both prevention and early detection of cervical cancer is played by the women themselves, because they decide about their health behaviour.

### Aim of the research

The objective of the study was to evaluate health behaviours of women with respect to cervical cancer.

### Material and methods

The study covered a group of 15 women aged 20–50, and was conducted during March–April 2015 in the Regional Mother and Newborn Child Centre in Kielce, by the method of a diagnostic survey. The research instrument was a questionnaire designed by the author which consisted of 28 items. The questions were closed, single-choice or multiple-choice. The first four questions concerned the characteristics of the group in the study. The remaining questions pertained to health behaviours presented by the examined women, and their knowledge concerning cervical cancer and its prevention.

The respondents' knowledge concerning cervical cancer and its prophylaxis was determined based on replies to questions 20–26. For each correct answer to a single-choice question, a score of 1 was ascribed, and for an incorrect answer a score of 0. For multiple-choice questions, several answers could be correct, and scores were ascribed for expressing an opinion about each answer proposed in a question. For example, in a multiple-choice question, where (a) and (b) are correct, a respondent who ticked the answers (a), (d) and (e) obtains a score of 2/5 because he/she:

- ticked answer (a) as correct, and actually this is the correct answer;
- ticked answer (b) as incorrect, whereas this answer is correct;
- ticked answer (c) as incorrect, and actually this answer is incorrect;
- ticked answer (d) as correct, while this answer is incorrect;
- ticked answer (e) as correct, whereas this answer is incorrect.

This respondent ticked correctly 2 out of 5 answers; hence, the score is 2/5. A maximum score of 7 could be obtained (this number of questions were taken into consideration).

Knowledge was evaluated using a school scale:

- 0–3.50 points (0–50% of maximum possible score) – insufficient knowledge;

- 3.51–5.25 points (50–75% of maximum possible score) – satisfactory knowledge;
- 5.26–6.30 points (75–90% of maximum possible score) – good knowledge;
- 6.31–7 points (90–100% of maximum possible score) – very good knowledge.

**Statistical analysis**

The values of qualitative variables in several groups were compared using the  $\chi^2$  test (with Yates' correction for 2x2 tables). *P*-values < 0.05 were considered statistically significant. Statistical calculations were performed using the statistical package R 3.1.2. (R Development Core Team (2009).

**Results**

The study group comprised 115 women in the Regional Mother and Newborn Child Centre in Kielce, i.e. 100% of the study population. The respondents were aged 20–50. The largest number of them were aged 26–30 – 39 from among 115 women participating in the survey, i.e. 33.91%, whereas the smallest number of respondents were aged 41–45 – 8 women, i.e. 6.96%. The conducted analysis showed that 60 from among 115 women in the study were rural inhabitants (52.17%), and 55 (47.83%) were urban inhabitants. The majority of the examined women had university education – 69 from among 115, i.e. 60.00%. The majority of them were married – 86 from among 115, i.e. 74.78%, followed by 24 who were never married, i.e. 20.87%, and only 1 who was widowed (0.87%).

In the group examined, 33 respondents, i.e. 28.70%, had a cervical test performed within the last year. Women who did not remember the date of the last test constituted 8.70%, while as many as 5.22% of the examined women had never had this test performed (Table 1).

In the examined group, 52 from among 99 respondents who had a cervical test performed and remembered having one performed, i.e. 52.53%, reported for the examination due to complaints, 29, i.e. 29.29%, had a cervical test performed during a visit to a gynaecologist because of pregnancy, and only 9 (9.09%) respondents used the invitation obtained within the cervical screening programme, and also 9 (9.09%) respondents had the cervical test performed when they reported to a gynaecologist on their own initiative for prophylactic purposes (Table 2).

When analysing answers provided by the respondents, 42 from among 99 women in the study who had a cervical test performed and remembered having one performed (42.42%), underwent a cervical test every 2 years, 31 (31.31%) respondents did so every year, whereas 4 (4.04%) respondents had the test every 5 years (Table 3).

Analysis of the results of the survey showed that 20 respondents initiated sexual activity when aged

**Table 1.** Analysis of replies to the question: When did you last have a cervical test performed?

Answer to question 10	Number	Percentage
Within the last year	33	28.70
Within the last 2 years	22	19.13
Within the last 3 years	23	20.00
More than 4 years ago	21	18.26
I do not remember	10	8.70
Never	6	5.22

**Table 2.** Analysis of replies to the question: For what reason was the cervical test performed?

Answer to question 11	Number	Percentage
I reported on my own initiative for prophylactic purposes	9	9.09
Invitation within cervical screening programme	9	9.09
I reported to a physician due to complaints	52	52.53
During visit to gynaecologist due to pregnancy	29	29.29

*The percentages do not add up to 100% of the study group, because not all the respondents had a cervical test performed, or they did not remember having one performed.*

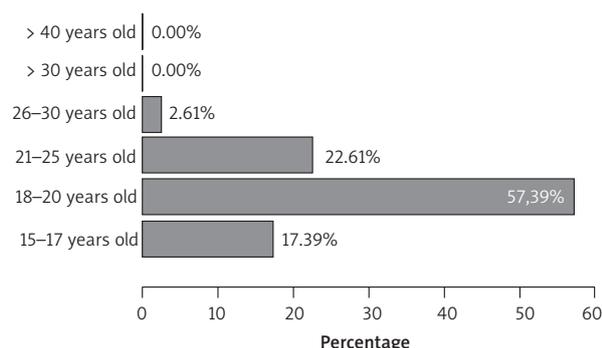
**Table 3.** Analysis of health behaviours of healthy women with respect to regular performance of cervical test

Answer to question 12	Number	Percentage
Annually	31	31.31
Every 2 years	42	42.42
Every 3 years	14	14.14
Every 4 years	8	8.08
Every 5 years	4	4.04

*The percentages do not add up to 100% of the examined group, because not all women had a cervical test performed or they did not remember having one performed.*

under 18, which constitutes 17.39%. The most frequently indicated age interval was 18–20 (66 women, i.e. 57.39%), followed by 21–25 (26 respondents, i.e. 22.61%) (Figure 1).

The results of the analysis showed that 67 from among 115 (58.26%) respondents had 1 partner or did not have any, followed by 40 (34.78%) respondents who had 2–4 partners, 5 (4.35%) respondents replied that the number of their partners was within the range



**Figure 1.** Distribution of answers concerning the age of sexual initiation

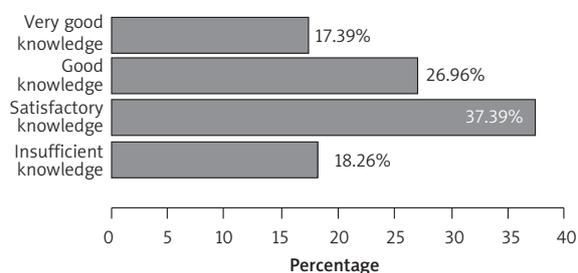
**Table 4.** Analysis of answers to the question concerning the number of sexual partners

Answer to question 14	Number	Percentage
0 or 1 partner	67	58.26
2–4 partners	40	34.78
5–9 partners	5	4.35
10 or more partners	3	2.61

**Table 5.** Analysis of answers to the question concerning the type of contraception applied

Answer to question 15	Number	Percentage
Preservative	64	55.65
Oral hormonal contraceptives	19	16.52
Contraceptive patches	0	0.00
Intrauterine device	2	1.74
Contraceptive injections	0	0.00
Contraceptive vaginal rings	2	1.74
I do not use any	38	33.04

*The percentages do not add up to 100%, because this was a multiple-choice question.*



**Figure 2.** Level of women's knowledge

5–9, while 3 (2.61%) respondents indicated 10 or more sexual partners (Table 4).

The type of contraception most frequently used by the women in the study is preservative – 64 from among

**Table 6.** Analysis of women's knowledge concerning main cervical cancer risk factors

Answer to question 25	Number	Percentage
Infection with HPV virus	92	80.00
Late initiation of sexual life	1	0.87
Early initiation of sexual life	55	47.83
Age	31	26.96
Small number of sexual partners	2	1.74
Large number of sexual partners	73	63.48
Large number of childbirths	19	16.52
Small number or lack of childbirths	4	3.48
Cigarette smoking	59	51.30
Vegetarian diet	0	0.00
Low socioeconomic status	20	17.39
High-fat diet	5	4.35
Partners sexually non-monogamous	38	33.04

*The percentages do not add up to 100%, because this was a multiple-choice question.*

115 (55.65%) respondents; 38 examined (33.04%) women did not use any contraceptives; while 19 (16.52%) used oral contraceptives (Table 5).

The majority of the women in the study had a satisfactory level of knowledge – 43 from among 115, i.e. 37.39%; followed by unsatisfactory knowledge (21; 18.26%), and very good knowledge (20; 17.39%) (Figure 2).

Among the main causes of cervical cancer, 92 from among 115 women participating in the survey (80.00%) mentioned infection with HPV virus, 73 (63.48%) respondents mentioned a large number of sexual partners, 59 (51.30%) mentioned cigarette smoking, 55 (47.83%) mentioned an early initiation of sexual life, 38 (33.04%) mentioned sexually non-monogamous partners, 31 (26.96%) mentioned age, 20 (17.39%) mentioned a low socioeconomic status, 19 (16.52%) mentioned a large number of childbirths, 5 (4.35%) mentioned high-fat diet, 4 (3.48%) mentioned a small number or lack of childbirths, 2 (1.74%) mentioned a small number of sexual partners, and 1 (0.87%) mentioned late initiation of sexual life (Table 6).

Analysis of the results of the study showed that 86 from among 115 women participating in the study (74.78%) did not know what types of HPV virus are responsible for the development of cervical cancer, while 26 (22.61%) respondents knew that these are types 16 and 18 (Table 7).

The Internet was the most frequently used source of knowledge concerning cervical cancer prophylaxis (71 from among 115 (61.74%) respondents), 56 women in the study (48.70%) acquired their knowledge from a gynaecologist, a nurse was the source of knowledge

**Table 7.** Women's knowledge concerning types of HPV virus responsible for development of cervical cancer

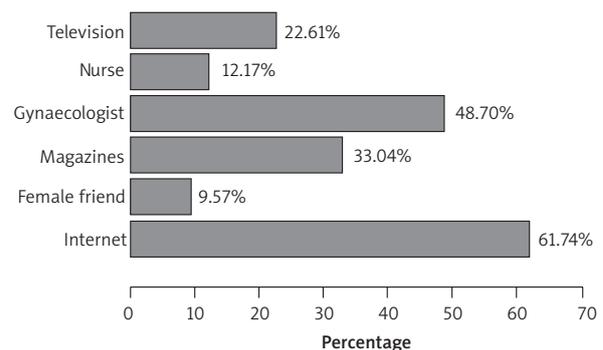
Answer to question 23	Number	Percentage
Types 6 and 8	1	0.87
Types 16 and 18	26	22.61
Types 1 and 2	2	1.74
I do not know	86	74.78

The percentages do not add up to 100%, because this was a multiple-choice question.

for 14 women in the survey (12.17%), while the least popular source of knowledge was a female friend – 11 (9.57%) respondents (Figure 3).

**Discussion**

Cervical cancer is a serious problem in oncologic gynaecology. The main cause of the disease is infection with HPV virus, and other factors increasing the risk of cervical cancer development, including age, early initiation of sexual life, cigarette smoking, a large number of sexual partners and a large number of childbirths. Observance of the principles of cervical cancer prophylaxis allows the reduction in morbidity, or early detection of the cancer creates the chance for total recovery.



**Figure 3.** Sources of information concerning cervical cancer and its prophylaxis

The presented study shows that women's behaviours with respect to cervical cancer prophylaxis are becoming increasingly more positive. While analysing the results of the study, it was discovered that 28.7% of women had had a cervical test performed in the last year. It is a positive fact that 87% of women in the study had a cervical test at least once in 3 years. Efforts should be undertaken to ensure that this percentage continues to increase. Similar results were also obtained by Chosamata M.S. in the study 'Determinants of cervical cancer screening utilization among women aged 30–45 years in Blantyre District, Malawi'.

**Table 8.** Health behaviours according to the women's place of residence

Question in the survey	Rural area		Urban area		P-value
	n	%	n	%	
6 Prophylactic activities	36	60.00	33	60.00	1
16 Cigarette smoking	11	18.33	11	20.00	1
19 Participation in Population Programme of Cervical Cancer Prophylaxis and Early Detection	18	30.00	13	23.64	0.577
27 Education	46	76.67	48	87.27	0.219
28 Readiness for vaccination	15	25.00	11	20.00	0.677

In the  $\chi^2$  test, p-values are higher than 0.05; therefore, the place of residence does not exert any effect on the above-analysed behaviours.

**Table 9.** Health behaviours according to women's marital status

Question in the survey	Married		Remainder		P-value
	n	%	n	%	
6 Prophylactic activities	53	61.63	16	55.17	0.693
16 Cigarette smoking	16	18.60	6	20.69	1
19 Participation in Population Programme of Cervical Cancer Prophylaxis and Early Detection	24	27.91	7	24.14	0.878
27 Education	69	80.23	25	86.21	0.658
28 Readiness for vaccination	18	20.93	8	27.59	0.628

In the  $\chi^2$  test, p values are higher than 0.05; therefore, marital status does not have any effect on the above-analysed behaviours.

Table 10. Health behaviours according to age

Question in the survey	20–25		26–30		31–35		36–40		41–45		> 45		P-value
	n	%	n	%	n	%	n	%	n	%	n	%	
6 Prophylactic activities	10	47.62	22	56.41	16	72.73	11	78.57	3	37.50	7	63.64	0.236
16 Cigarette smoking	2	9.52	6	15.38	3	13.64	1	7.14	4	50.00	6	54.55	0.004
19 Participation in Population Programme of Cervical Cancer Prophylaxis and Early Detection	6	28.57	7	17.95	10	45.45	4	28.57	1	12.50	3	27.27	0.276
27 Education	19	90.48	31	79.49	21	95.45	11	78.57	6	75.00	6	54.55	0.082
28 Readiness for vaccination	5	23.81	9	23.08	4	18.18	3	21.43	3	37.50	2	18.18	0.922

In the  $\chi^2$  test, p-values are lower than 0.05 for smoking; therefore, age affects only the frequency of smoking; women in the age groups 41–45 and 46–50 smoke most frequently, while those aged 36–40 smoke most rarely.

where the use of cervical screening is also low. The researcher emphasized the necessity for education in order to increase women's awareness in the area of appropriate use of cervical cancer screening. Apart from regular cervical tests, health behaviours are also of great importance, as well as the elimination of risk factors [18].

The present study shows that women know relatively well the basic cervical cancer risk factors. Among the main causes of cervical cancer, 80.00% of respondents mentioned HPV virus infection, 63.48% mentioned a large number of sexual partners, and 51.30% mentioned cigarette smoking (Table 6). However, detailed information concerning the types of HPV virus associated with cervical cancer were not known to the respondents: 74.78% had no knowledge which types of HPV virus are mainly responsible for the development of this cancer (Table 7).

The respondents' level of knowledge concerning cervical cancer and its prophylaxis was at a satisfactory level. Nevertheless, women's behaviours were not equivalent to the knowledge possessed. The most frequent cause of reporting to a gynaecologist was the occurrence of complaints: 52.53% of women in the study, while only 9.09% did so for prophylactic purposes. Despite knowledge of risk factors, 17.39% of respondents initiated sexual life under the age of 18. Similar conclusions were also drawn by other researchers dealing with this scope of problems, and according to the studies by Mastelarz-Migas *et al.*, this was 23.8% of women [19]. Schiffman reported that women who initiated sexual life under the age of 16 are at twice as high risk of contracting cervical cancer than those who initiated sexual life at the age of approximately 20 [20].

The important cervical cancer risk factors are a large number of sexual partners and long-term use of hormonal contraceptives. The study shows that the examined women possessed knowledge concerning this problem, and 58.26% of them had one sexual partner. Hormonal contraceptives were used by 16 (52%) women. It is a positive fact that 55.65% of the women in the study used barrier contraceptive methods – preservatives, which decrease the risk of HPV virus infection.

The Internet constitutes the main source of information concerning cervical cancer for 61.74% of women, for 48.70% it is a gynaecologist, for 33.04% it is magazines, and only for 12.17% of women the major source of information concerning this problem was a nurse. Similar results were obtained by Ulman-Włodarz *et al.*, where for 59% of women the most frequent sources of knowledge of cervical cancer prophylaxis were magazines, television and radio (47%), as well as the Internet (38%). Therefore, it is necessary to increase activities by nurses and midwives in the dissemination of information about cervical cancer and its prophylaxis [16].

The results of the present study showed a relationship between education level and regularity of visits

**Table 11.** Health behaviours concerning visit to gynaecologist according to education

Visits to gynaecologist	Primary/ vocational		Secondary school		University		P-value
	n	%	n	%	n	%	
I do not visit at all	2	15.38	1	3.03	1	1.45	< 0.001
I regularly visit for prophylactic purposes	1	7.69	13	39.39	44	63.77	
I visit when complaints occur	8	61.54	14	42.42	24	34.78	
I visit exclusively during pregnancy	2	15.38	5	15.15	0	0.00	

In the  $\chi^2$  test, *p*-values are lower than 0.05; therefore, education has an effect on the regularity of visits to a gynaecologist: the higher the education level, the higher the regularity of visits.

**Table 12.** Health behaviours of women according to education level

Question in the survey	Primary/vocational		Secondary school		University		P-value
	n	%	n	%	n	%	
6 Prophylactic actions	3	23.08	11	33.33	55	79.71	< 0.001
16 Cigarette smoking	6	46.15	6	18.18	10	14.49	0.029
19 Participation in Population Programme of Cervical Cancer Prophylaxis and Early Detection	2	15.38	6	18.18	23	33.33	0.165
27 Education	11	84.62	26	78.79	57	82.61	0.861
28 Readiness for vaccination	4	30.77	11	33.33	11	15.94	0.11

In the  $\chi^2$  test, *p* values are lower than 0.05 for prophylactic actions and cigarette smoking; therefore, education level has an effect on undertaking prophylactic actions and frequency of cigarette smoking: the higher the education level, the higher the frequency of undertaking prophylactic actions, and the lower the frequency of smoking.

to a gynaecologist (the higher the education level, the higher the regularity of visits) and between education and prophylactic action undertaken and cigarette smoking (Tables 8–12). Lipska *et al.*, in their studies, found a relationship between health-promoting behaviours of women and their age and state of knowledge. Women at an older age showed more incorrect behaviours, compared to those who were younger. It was also found that place of residence had no effect on health behaviours of women [13].

Studies by Bakalczuk *et al.* demonstrated that in the last year, 23% of women had a cervical test performed, within the last 2 years 30% of respondents had one, while 20% of them had never had this test performed. Our study presents a more positive image of the situation, where 28.70% had a cervical test performed within the last year, 20.00% had one within the last 3 years, 19.13% had one within the last 2 years, 18.26% had one more than 4 years ago, 8.70% did not remember when they had the test performed, whereas 5.22% had never had the test [14]. Studies by many researchers demonstrate that activities undertaken in the area of prevention and early detection of cervical cancer in Poland are still insufficient. The main problem in Polish society is a change of women's attitude towards protection and responsibility for their own health [21].

## Conclusions

Health behaviours of women with respect to cervical cancer prophylaxis are becoming increasingly more positive, which is the result of widely conducted education. However, the occurring complaints, and not prophylactic purposes, still remain the major cause of women's visits to a gynaecologist. Actions should be undertaken to encourage women to participate in the Population Programme of Cervical Cancer Prophylaxis and Early Detection.

Women's level of knowledge concerning cervical cancer and its prophylaxis remains at a satisfactory level. The women possess knowledge of the main risk factors. It is necessary to intensify educational actions providing detailed information pertaining to cervical cancer, undertaking risky sexual behaviours, and benefits resulting from vaccination against the HPV virus.

No statistically significant differences were observed between health behaviours of women in the area of cervical cancer prophylaxis and their place of residence and marital status. A statistical relationship was found between women's age and frequency of cigarette smoking, education level and regularity of visits to a gynaecologist: the higher the education level, the higher the regularity of visits. Education had

an effect on undertaking prophylactic actions and the frequency of smoking: the higher the education level, the higher the frequency of undertaking prophylactic actions, and the lower the frequency of smoking.

In the population examined, the Internet constituted the major source of information concerning cervical cancer and its prophylaxis. However, the Internet provides knowledge which is not thorough and is sometimes unreliable. Greater activity of nurses and midwives is recommended in the imparting of professional and reliable information about the problem of cervical cancer and its prophylaxis.

### Conflict of interest

The authors declare no conflict of interest.

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