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## Palenie tytoniu wśród kobiet hospitalizowanych z powodu chorób narządu rodne

## Smoking among women hospitalized due to reproductory organ diseases

### Streszczenie

**Wstęp.** Jednym z największych zagrożeń dla zdrowia i życia człowieka jest palenie tytoniu. Zdaniem J.K. Karczewskiego i wsp., palenie „...jest przyczyną większej liczby zgonów niż AIDS, alkoholizm, wypadki samochodowe, narkotyki, pożary, zabójstwa i samobójstwa razem wzięte...”. O skali problemu – szkodliwego wpływu dymu tytoniowego na zdrowie człowieka – świadczy fakt, że co 10 sekund na świecie umiera człowiek na chorobę wywołaną paleniem tytoniu.

**Cel pracy.** Celem pracy była analiza palenia tytoniu przez kobiety hospitalizowane z powodu chorób w obrębie narządu rodne.

**Materiał i metody.** Szczegółowej analizie poddano następujące zmienne: fakt systematycznego palenia papierosów; wiek rozpoczęcia palenia; liczba papierosów wypalanych dziennie; okres czasu systematycznego palenia. Badaniami objęto grupę 210 kobiet, w wieku od 18 do 73 lat. Kobiety uczestniczące w badaniach były hospitalizowane w oddziałach ginekologicznych z powodu potrzeby diagnozowania i/lub leczenia chorób (także nowotworowych) w obrębie narządu rodne. Badania przeprowadzono w 2002 i 2003 roku. Terenem badań były cztery z pięciu oddziałów ginekologicznych, funkcjonujących w szpitalach na terenie miasta Kielce. Dobór pacjentek do badań został dokonany na zasadach doboru losowego. W badaniach wykorzystano Kwestionariusz Ankiety. Udział pacjentek w badaniach był anonimowy i dobrowolny.

**Wyniki.** Uzyskane wyniki badań umożliwiły sformułowanie następujących wniosków:

1. Kobiety palące papierosy stanowiły blisko trzecią część (31,9%) badanej populacji.
2. Większość kobiet (74,6%) palenie rozpoczyna przed 21 rokiem życia.
3. Około połowa palących kobiet (51%) wypala dziennie ponad 10 sztuk papierosów.
4. Z punktu widzenia długości okresu czynnego palenia, kobiety palące przez 11 do 20 lat stanowiły najliczniejszą grupę w badanej populacji (38,8%).
5. Istnieje potrzeba intensyfikacji działań ukierunkowanych na walkę z nałogiem palenia tytoniu, szczególnie wśród młodocianych oraz udzielaniu wszechstronnej pomocy osobom pragnącym pozbyć się tego nałogu.

**Słowa kluczowe:** palenie tytoniu, choroby narządu rodne.

### Summary

**Introduction.** Smoking is one of the biggest threats to human health and life. According to JK Karczewski et al. “...more people die because of smoking than because of AIDS, alcoholism, car accidents, drugs, fires, assassinations and suicides all together...”. The scale of the problem – the harmful effect of smoking on human health – is evidenced by the fact that every 10 seconds one person in the world dies from a smoking-related disease.

**Aim of the work.** The study aimed at analysing smoking by women hospitalized because of diseases of the reproductive organ.

**Material and methods.** The following variables have been analysed in detail: the fact of regular smoking; smoking start age; number of daily smoked cigarettes; period of regular smoking. A group of 210 women aged 18 to 73 was included in the study. Women participating in the study were hospitalized in gynaecology departments because of the need to diagnose and/or treat diseases of the reproductive organ (including cancers). The study was carried out in 2002 and 2003. The study was performed in four out of the total of five gynaecology departments in the city of Kielce. Patients included in the study were selected at random. The study employed a survey questionnaire. Patients participated in the study on an anonymous and voluntary basis.

**Results.** The results obtained in the study made it possible to formulate the following conclusions:

1. Smoking women made up almost one third of the population under study (31.9%).
2. Most women (74.6%) start smoking before 21 years of age.
3. About a half of smoking women (51%) smoke more than 10 cigarettes a day.
4. As regards the active smoking period, women with an 11 to 20 years' smoking history were the most numerous group in the population under study (38.8%).
5. There is a need to intensify actions aimed at fighting smoking, especially among minors, and to provide comprehensive help to individuals who want to give up that addiction.

**Key words:** smoking, deceases of the reproductive organ.

## INTRODUCTION

Smoking is one of the biggest threats to human health and life. According to JK Karczewski et al. "...more people die because of smoking than because of AIDS, alcoholism, car accidents, drugs, fires, assassinations and suicides all together..." [1]. The scale of the problem – the harmful effect of smoking on human health – is evidenced by the fact that every 10 seconds one person in the world dies from a smoking-related disease [1]. As S Kałucka estimates "...every second premature demise in men and every tenth in women results from smoking..." [2].

Poland belongs to countries with the highest rate of tobacco smoking; the ratio of smoked cigarettes per head is among the highest in Europe [3]. The data from Chief Bureau of Statistics (GUS), confirm that the prevalence of smoking in our country is decreasing. In the years 1996-2004 the share of smoking men dropped from 47.3% to 38.0%, and in women from 24.4% to 23.1% [4]. At the end of 2004, there were 3.8 million female smokers [4].

Taking up smoking by young people is an important index of future disease incidence and mortality. In the opinion of experts "...when today's young people reach the medium or old age, 10 million people per year will die in the world because of smoking (3 million in the developed and 7 million in developing countries)..." [5].

The above presented data demonstrate an urgent need to undertake actions aimed at preventing young people from starting smoking as well as providing comprehensive aid to people who want to get rid of the habit. Results of research on smoking are not only used to forecast the incidence of diseases and mortality caused by protracted diseases in the population, but also to develop proper strategies of anti-nicotine policies.

## OBJECT OF THE STUDY

The object of the study was an analysis of smoking by women hospitalized due to diseases of the reproductive organ.

## MATERIAL AND METHOD OF THE STUDY

The study included a group of 210 women aged 18 to 73. The women participating in the research were hospitalized in gynaecology departments because of the need to diagnose and/or treat diseases of the reproductive organ (including cancers).

The study was carried out in 2002 and 2003. It was performed in four out of the total of five gynaecology departments in the city of Kielce. Patients included in the study were qualified on the basis of the following criteria: 1. hospitalization due to a disease or diseases of the reproductive organ (pregnant women and women after miscarriage were excluded from the research); 2. completed eighteen years of age (majority); 3. at least three days' stay in the department; 4. consent to participate in the research. Patients were selected for the research at random.

The survey questionnaire which was employed for the research was developed especially for this study. Attached to the questionnaire was a written instruction clarifying the way of filling it in properly. Patients participated in the study on an anonymous and voluntary basis.

Statistical analyses were carried out using the statistical package SPSS v.12 pl. Relevance of differences between the categorized (with respect to place of residence, age and education) groups was estimated employing the test of independence  $\chi^2$ . Statistical values for  $p < 0,05$  were regarded as being of statistical relevance.

## PROFILE OF THE STUDIED GROUP

The study included a group of 210 women aged 18 to 73. The structure of the studied group with respect to their age categories was as follows: 1).  $\leq 35$  years of age – 21.9%; 2). 36-45 years – 24.8%; 3). 46-55 years – 37.6%; and 4).  $\geq 56$  years – 15.7% of the women. The structure of the studied group by education is shown in Figure 1. More than half of the respondents had secondary education (52.4%). Those with higher and with primary or vocational education constituted groups of equal percentage of 23.8%. Women with secondary and post-secondary education prevailed in all age groups. In terms of statistics, differences in education with respect to particular age groups appeared irrelevant.

Table 1 contains percentage of the participants by their place of residence. Among the youngest patients, country dwellers prevailed, while women living in big cities (population  $> 100,000$ ) dominated the oldest age category. Considering the education factor, villagers with the lowest education (primary, vocational) were three times as numerous (54.0%) as those with higher education (16.0%). The inverse proportion appeared among those living in big cities.

The analysis of structure of the respondents' residence in view of age and education groups reveals substantial differences at the level  $p < 0,001$  – Table 1.

## RESULTS OF THE RESEARCH

The following variables were subject to a detailed analysis:

1. the fact of regular smoking;
2. the age of smoking commencement;
3. the number of daily smoked cigarettes;
4. the duration of regular smoking.

The mentioned factors were analysed in view of age, education and place of residence of the studied women. It was assumed that regular smoking meant at least one cigarette per day for the minimum period of two years.

The data analysis in Figure 2 indicates that 31.9% of the women admitted regular smoking. No substantial differences were found in this respect with regard to age, education or place of residence of the respondents.

The data comprised in Figure 3 show that among the smoking women, the most (38.8%) started smoking between the ages of 19 to 21. The largest shares occurred in the groups of women: aged 46-55, with higher education, dwellers of towns of population  $\leq 100,000$ .

The second biggest group were women who started smoking before the age of 18 ( $\leq 18$  years) – 35.8%. The analysed subpopulation included mostly the youngest ( $\leq 35$  years), women with secondary education and big city dwellers (pop.  $> 100,000$ ). The lowest age of smoking commencement given by the respondents was 14 (two persons). About a quarter (25.4%) of the analysed group started smoking at

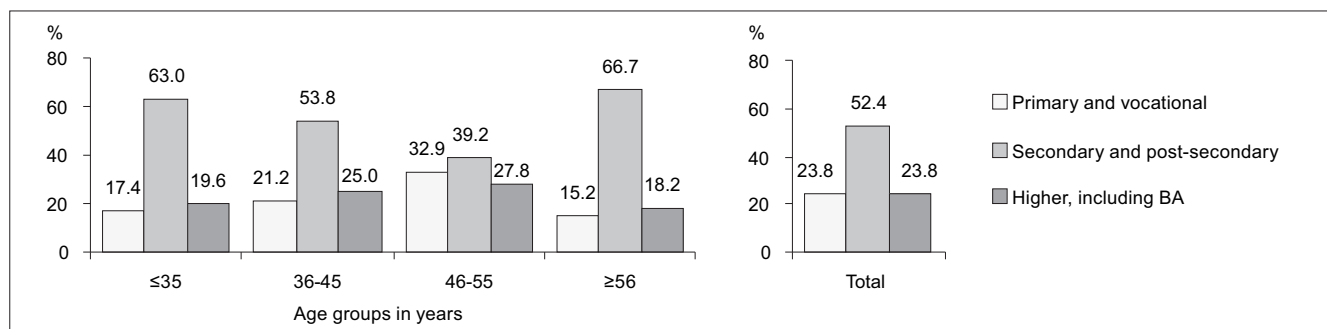


FIGURE 1. Education of the studied women by age.

TABLE 1. Place of residence – studied women by age and education.

| Place of residence:           |    | Age groups in years |       |       |       | Education            |                            |                      | Total |
|-------------------------------|----|---------------------|-------|-------|-------|----------------------|----------------------------|----------------------|-------|
|                               |    | ≤35                 | 36-45 | 46-55 | ≥56   | primary & vocational | secondary & post-secondary | higher, including BA |       |
| country                       | N  | 20                  | 21    | 32    | 4     | 27                   | 42                         | 8                    | 77    |
|                               | %W | 26.0                | 27.3  | 41.6  | 5.2   | 35.1                 | 54.5                       | 10.4                 | 100.0 |
|                               | %K | 43.5                | 40.4  | 40.5  | 12.1  | 54.0                 | 38.2                       | 16.0                 | 36.7  |
| towns with pop. under 100.000 | N  | 14                  | 18    | 20    | 6     | 12                   | 32                         | 14                   | 58    |
|                               | %W | 24.1                | 31.0  | 34.5  | 10.3  | 20.7                 | 55.2                       | 24.1                 | 100.0 |
|                               | %K | 30.4                | 34.6  | 25.3  | 18.2  | 24.0                 | 29.1                       | 28.0                 | 27.6  |
| towns with pop. above 100.000 | N  | 12                  | 13    | 27    | 23    | 11                   | 36                         | 28                   | 75    |
|                               | %W | 16.0                | 17.3  | 36.0  | 30.7  | 14.7                 | 48.0                       | 37.3                 | 100.0 |
|                               | %K | 26.1                | 25.0  | 34.2  | 69.7  | 22.0                 | 32.7                       | 56.0                 | 35.7  |
| Total                         | N  | 46                  | 52    | 79    | 33    | 50                   | 110                        | 50                   | 210   |
|                               | %W | 21.9                | 24.8  | 37.6  | 15.7  | 23.8                 | 52.4                       | 23.8                 | 100.0 |
|                               | %K | 100.0               | 100.0 | 100.0 | 100.0 | 100.0                | 100.0                      | 100.0                | 100.0 |

Chi<sup>2</sup> = 22,38  
DF = 6  
p<0.001

Chi<sup>2</sup> = 18,99  
DF = 4  
p<0.001

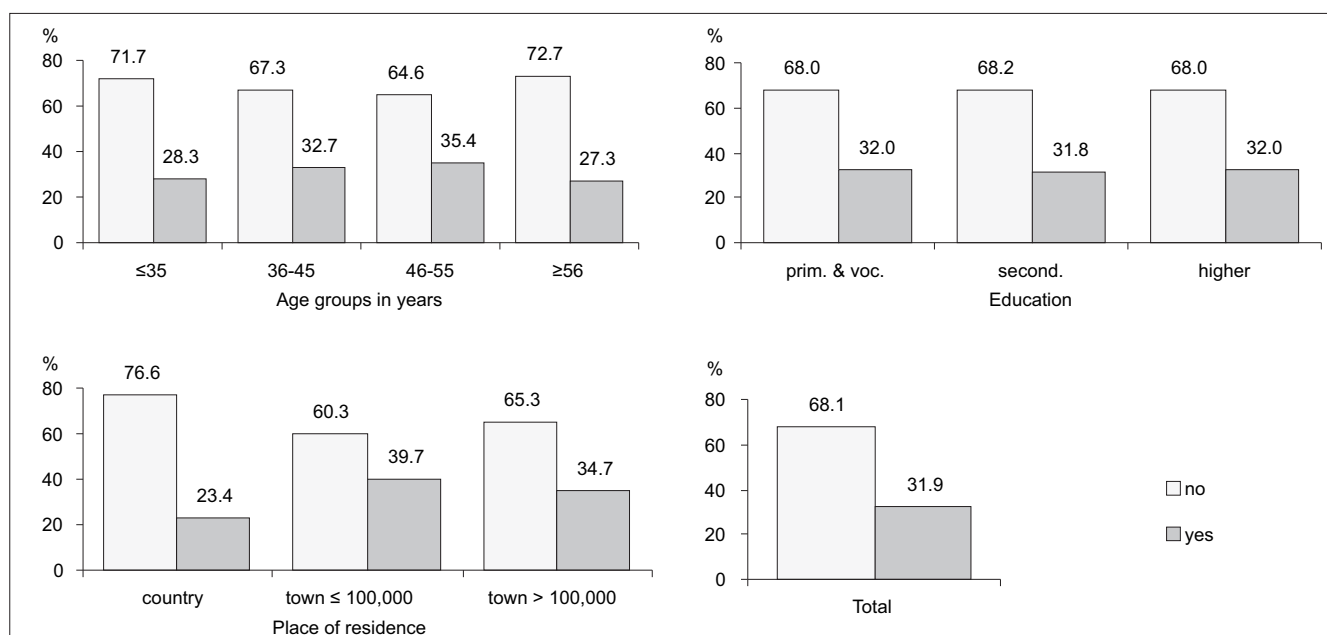


FIGURE 2. Regular smoking – studied women by age, education and place of residence.

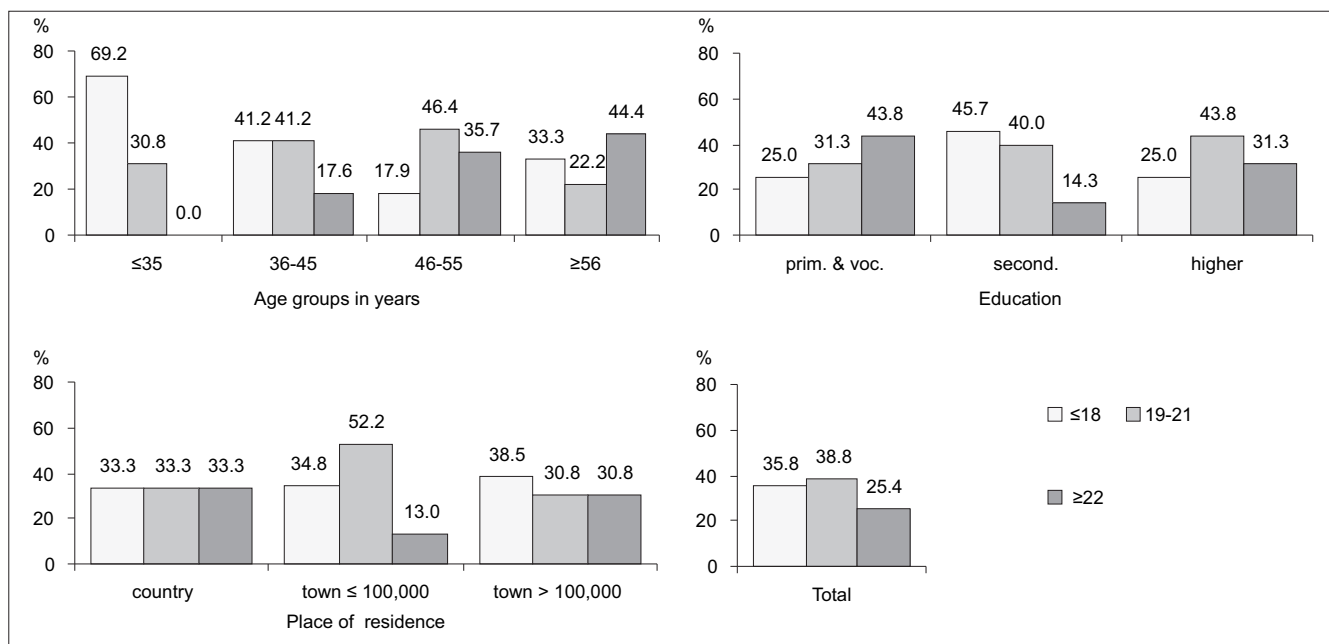


FIGURE 3. The age of smoking commencement– studied women by age, education and place of residence.

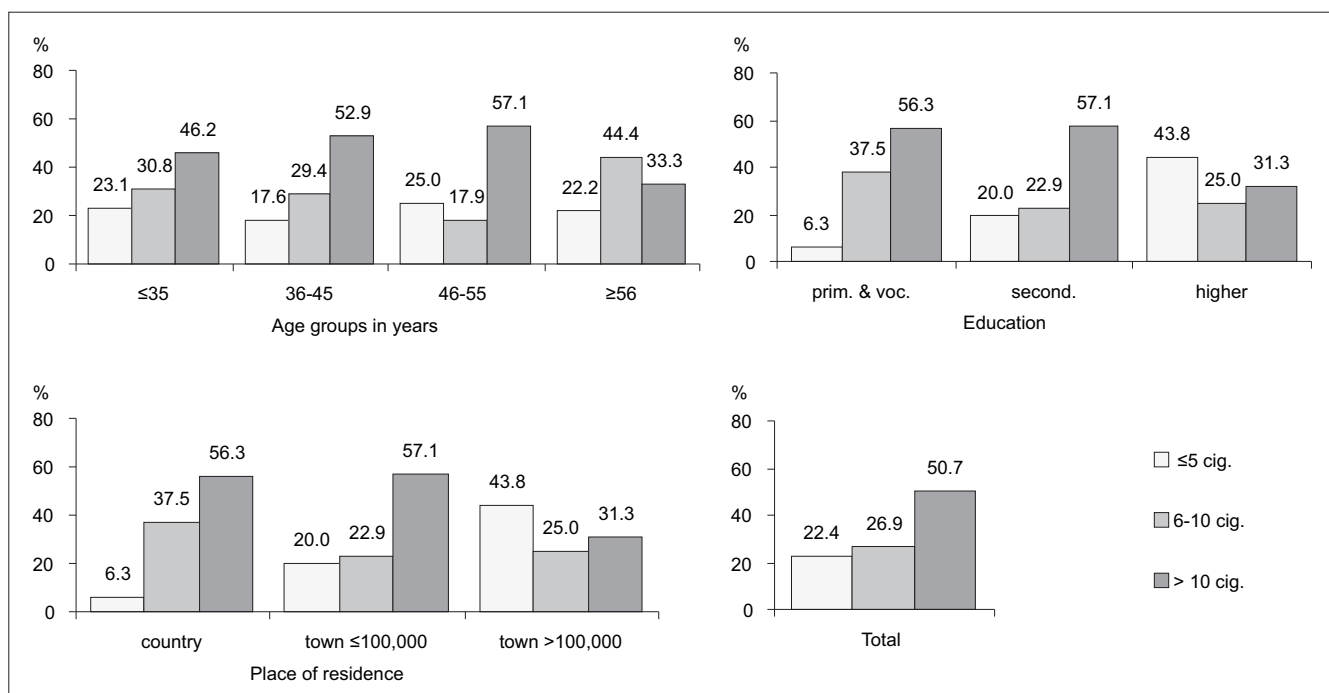


FIGURE 4. Number of daily smoked cigarettes – studied women by age, education and place of residence.

the age of 22 and later (≥22 years). These were mostly the oldest respondents (≥56 years of age), of lowest education (primary, vocational) and country dwellers. Small numbers of the categorized groups did not allow to assess the statistical relevance of the differences.

The analysis of the data presented in Figure 4 reveals that about 51% of the women smoked more than 10 cigarettes per day. The proportions in particular categories of age, education and place of residence were similar. Only in the oldest group (≥56 years of age), and in the groups of women with higher education and in big city dwellers (pop.>100,000) these proportions were slightly smaller.

The second biggest group were the women who smoked 6-10 cigarettes per day (26.9%). These were predominantly the oldest respondents (≥56 years), the ones with primary and vocational education, and country dwellers. women who smoked the smallest number, i.e. up to 5 cigarettes per day accounted for 22.4%. This rate of smoking was most commonly preferred by women with higher education and big city dwellers (pop.>100,000). Due to small numbers, statistical relevance of differences was not assessed.

Data on the duration of regular smoking are shown in Figure 5.

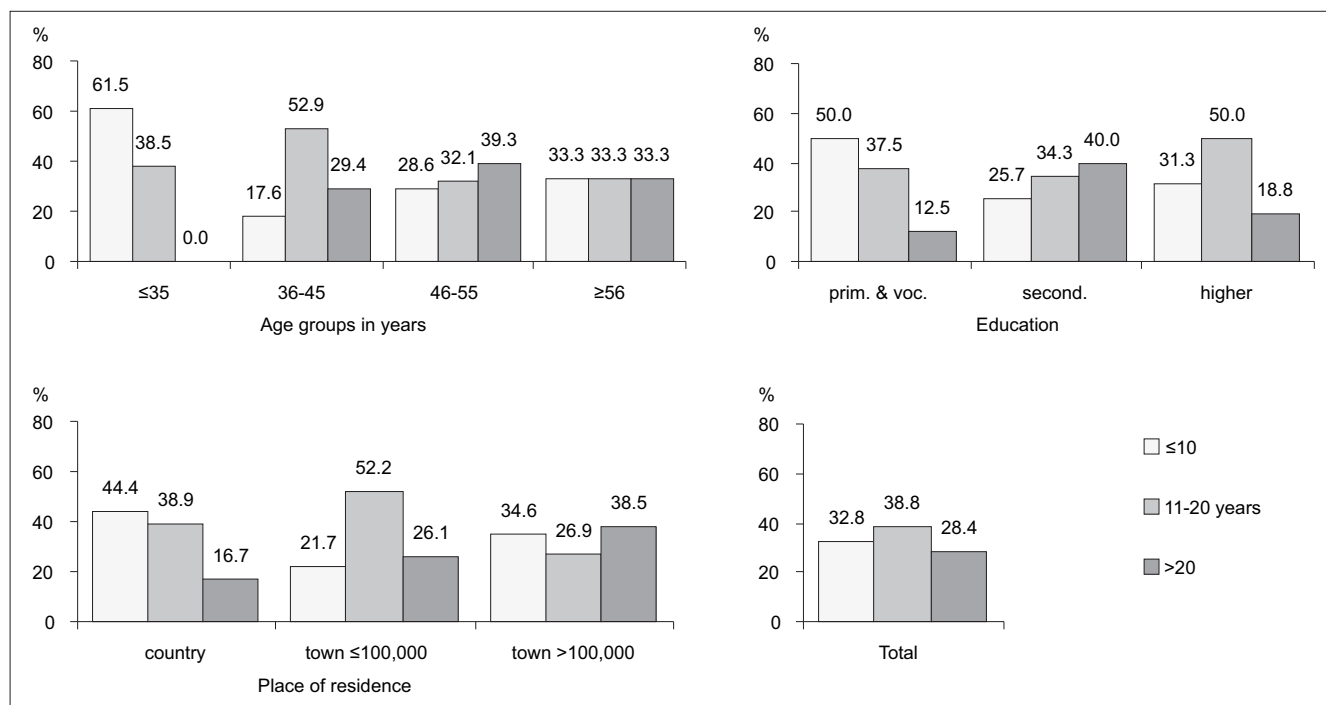


FIGURE 5. Number of years of regular smoking – studied women by age, education and place of residence.

The analysis of the data shows that in the subpopulation of smoking women, most persons (38.8%) had smoked for 11–20 years. The proportions of the respondents in groups defined by age, education and place of residence were similar, except for women aged 36–45, patients with higher education, and dwellers of cities with >100,000 inhabitants, where the proportions were much higher.

A slightly smaller group of the women (32.8%) had smoked cigarettes for 2–10 years. In this category, the largest proportions occurred in the youngest group (≤35 years), women with primary or vocational education, and country dwellers. 28.4% admitted having had the habit of regular smoking for over 20 years (>20 years). The longest period of regular smoking as given by the patients was 40 years. Age, education and place of residence did not diversify the proportions.

## DISCUSSION

According to estimated data by GUS, based on national research into the state of health of Polish population, in 2004 the proportion of smoking women was 23.1% [4]. A higher percentage was obtained in my own survey, namely 31.9%. Other authors had similar results. M Misiuna and D Szcześniewska estimate that in 1996 among the population of Praga (the district of Warsaw) in the age 18–64, 37.8% were smokers, where 33.6% were women [6]. J. Pawłęga et al., when analysing selected elements of lifestyle of women, the dwellers of the Cracow Province, indicate that in the reference group of studied women 31.5% were smokers, while among those suffering from ovarian carcinoma the proportion of smokers was smaller, namely 28.4% [7]. The analyses carried out by R Chmara-Pawlińska and A Szwed indicate that 31.6% of women at menopause and in the preceding period were smokers [8].

However, not all research studies report such consistent results [9–12]. W Stelmach et al. indicate in their study on the influence of socio-economic factors, lifestyle and stress on incidence of obesity in post-productive age that only 13.5% of the examined women were smokers or had smoked before [9]. Other results obtained by M Sygit et al. state that as much as 47% of female nurses employed in health care institutions were smokers [10], while in the research by M Połocka-Molińska and M Biskupska, all the respondents (female patients of surgical wards of the Wielkopolskie Oncology Centre in Poznań) declared active smoking [11].

The differences in the percentage of smoking women in the presented studies probably resulted from different selection of studied population and individual approach to the manner of presentation of obtained results.

The problem of early beginning of smoking is more and more often raised in the literature of the subject. The results of my own research show that most smoking women (74.6%) started the habit at a young age, i.e. before 21 (up to 18 years of age – 35.8%, aged 19 to 21 – 38.8%). It is noteworthy that the youngest age when they started smoking was 14 (two respondents). Similar results were obtained by S Kałucka: among the patients, who were smokers with chronic diseases (males and females), persons who started smoking before the age of 20 prevailed (72.9%) [2]. Other data in this respect were obtained by D. Żołnierczuk-Kieliszek; according to this author “...ninety percent of smokers take their first cigarette before the age of 21, and 60% do it as early as before 14...” [13].

In the group of smoking women, remarkable intensity of smoking was noticed. A half of the analysed group (50.7%) smoked over 10 cigarettes per day; among them two respondents smoked about 30 cigarettes. It is difficult to compare these results with those obtained by other authors due to a different manner of presentation. Nevertheless,

they are worth presenting. According to experts of GUS, among female smokers every third person was heavily addicted (smoking at least 20 cigarettes daily) [4]. According to A. Majchrowska, in 2004 "...as many as 2.5 thousand cigarettes were smoked per one citizen of Poland..." [3]. According to estimates by J. Kocur and A. Grzybowski, each smoking woman in Poland smokes, on average, 14 cigarettes per day [14].

My own research indicates that for the largest group of the people (38.8%) the overall period of the habit was 11-20 years, and 28.4% of the persons had smoked for more than 20 years. Similar results were obtained by S. Kałucka, the average calculated for the three age groups of the studied women 30.46 years of smoking [2]. Other data were obtained by J. Kocur and A. Grzybowski – the average duration of the habit in the studied women was 19 years [14], whereas in the opinion of GUS experts, in 2/3 of smoking women the habit has lasted for at least 10 years [4].

In the light of the obtained results and the data presented by other authors it should be stated that women's smoking is an alarming phenomenon. Too many Polish women are still addicted to smoking.

## CONCLUSIONS

The obtained results allowed for formulation of the following conclusions:

1. Smoking women constitute nearly a third (31.9%) of the studied population.
2. Most women (74.6%) begin smoking before 21 years of age.
3. About half (51%) of smoking women smoke more than 10 cigarettes per day.
4. With respect to the duration of the period of active smoking, the women smoking for 11 to 20 years constitute the largest group in the studied population (38.8%).
5. It is necessary to intensify actions aimed at fighting the habit of smoking, especially among minors, and to offer comprehensive aid to persons who want to get rid of this addiction.

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