Tobacco smoking in Poland in the years from 2003 to 2014

Multi-centre National Population Health Examination Survey (WOBASZ)

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INTRODUCTION

The health consequences of tobacco smoke exposure have been long known.1,2 Tobacco smoking is one of the main risk factors for death and diseases such as cancer, coronary artery disease, stroke, and noncancerous respiratory diseases,3-5 as well as one of the most important threats to modern civilization. This results both from the spread of this phenomenon and from the losses it causes to the societies and economies of individual countries.6 According to the World Health Organization (WHO), the number of deaths caused by smoking-related diseases exceeded 100 million in the 20th century,7,8 As regards Poland, every year approx. 70 000 deaths

ABSTRACT

INTRODUCTION The reduction of tobacco smoking remains a challenge for public health.

OBJECTIVES The main purpose of this study was to evaluate changes in the prevalence and patterns of tobacco use in the adult population of Poles in the years from 2003 to 2014. Furthermore, changes in the smoking addiction, the declared reasons for smoking, as well as readiness and motivation to stop smoking were assessed.

PATIENTS AND METHODS Based on data from the Polish studies WOBASZ and WOBASZ II, the analysis included 14 576 participants from the first study (6906 men and 7670 women) and 5696 participants from the second study (2578 men and 3118 women), aged between 20 and 74 years.

RESULTS According to the WOBASZ II study, 30% of men and 21% of women in Poland smoked, the rates being 9% and 4% lower for men and women, respectively, in comparison with the WOBASZ study (P <0.001). The average number of cigarettes smoked daily per smoker significantly decreased during the follow-up period among men (from 17.9 to 15.8 cigarettes per day) and women (from 13.7 to 12.1 cigarettes per day). The percentage of men who never smoked increased from 29.8% to 36.1% (P <0.0001), while the proportion of women who never smoked did not change. However, the percentage of those expressing unwillingness to quit smoking nearly doubled in WOBASZ II in comparison with WOBASZ.

CONCLUSIONS Although the smoking rates in Poland have declined over the past decade, smoking remains prevalent among men and women. Therefore, it is necessary to optimize tobacco control in Poland, including fiscal policy, counseling and tobacco addiction treatment, as well as promotional and educational activities, with a special emphasis on the female population.
are caused by smoking. In 2004 tobacco smoking accounted for 47% of all deaths caused by tumors among men, and it was the main cause of lung cancer among men aged 30 years or older. Among women in the same age group, 13% of tumor deaths and 73% of all deaths due to lung cancer were also related to tobacco use. The treatment of patients with tobacco-related diseases generates a significant part of the cost of health care services in Poland and imposes a considerable burden on the organization of the health care system. Long-term, expensive diagnostic procedures and treatment of diseases related to the use of tobacco products account for around 18 billion PLN (6.4 billion USD) annually. Losses in work productivity and employment, including disability and disability benefits, caused by the use of tobacco products are estimated to exceed 15 billion PLN (5.3 billion USD) every year.

The reduction of tobacco consumption and of associated costs is one of the biggest challenges for public health. Regular monitoring of various aspects of tobacco epidemic can provide reliable and effective tools to fight this threat at the systemic level. Data from epidemiological studies are the basis for a reasonable health policy.

The main purpose of this study was to evaluate changes in the prevalence of tobacco smoking among the adult population of Poles in the period between 2003 and 2014. Furthermore, changes in the smoking habits, the declared reasons for smoking, as well as readiness and motivation to stop smoking were assessed.

**Patients and Methods** The results were obtained from the Polish Nationwide Studies of Health Assessment, WOBASZ and WOBASZ II, which were repeated cross-sectional surveys. The first WOBASZ study was conducted between 2003 and 2005, and the second (WOBASZ II)—between 2013 and 2014. The methods, including the rules of sampling, the tools used, the research protocol, and the principles of project implementation, were described in detail previously. The survey data were collected in direct interviews by adequately trained interviewers. The first and second studies covered 14,769 and 6,170 respondents, respectively. The total participation rate was 74.6% for WOBASZ and 46.4% for WOBASZ II. After deleting incomplete records, the analysis included a sample of 14,576 participants (6,906 men and 7,670 women) from the first study and 5,696 participants (2,578 men and 3,118 women) from the second study, all aged between 20 and 74 years. The information collected in the studies comprised the respondents’ socio-demographic data and smoking characteristics such as the age of starting smoking, reasons for smoking, number of cigarettes smoked daily, intention to quit smoking, and motivations to stop smoking among smokers.

Participants in the survey were divided according to their smoking status into the following groups: regular smokers, occasional smokers, former smokers, and nonsmokers. A smoker was defined as a person who at the time regularly smoked at least 1 cigarette a day; an occasional smoker was defined as a person who smoked less than 1 cigarette a day; a former smoker was a person who had smoked in the past, stopped smoking, and did not smoke at the time of the survey; and a nonsmoker was a person who had never smoked cigarettes. Cigarette count was considered as the number of cigarettes smoked per person per day. The reasons for tobacco smoking were classified on the basis of the questionnaire into the following categories: social smoking, for pleasure, “it calms me down,” out of habit, other, hard to say. The possible categories for answers to assess the willingness to quit smoking were as follows: yes, no, undecided. For more in-depth analyses, the respondents were classified into 5 age groups: between 20 and 34, 35 and 44, 45 and 54, 55, and 64, and 65 and 74 years.

In the presentation of the results, the following descriptive statistics were used: rates of the occurrence of individual phenomena in the age groups, age standardized rates according to the structure of the Polish population as of December 31, 2013, crude means and age-adjusted means. For the purpose of comparing the rates between the studies and between age groups, the \( \chi^2 \) test was used. The differentiation of standardized rates was analyzed by setting 95% confidence intervals. The Wilcoxon test was used to compare the age of starting smoking and the numbers of smoked cigarettes between the age groups. The smoking status was differentiated between the studies based on the significance of the odds ratio.

All the analyses were carried out separately for men and women, using the statistical SAS version 9.2 (SAS Institute, Cary, North Carolina, United States). A \( P \) value of less than 0.05 was considered statistically significant.

**Results** In the WOBASZ and WOBASZ II studies, men declared themselves as regular smokers more often than women (Table 1). In the WOBASZ survey, regular smoking was declared by 39.0% of men and 23.8% of women. As regards WOBASZ II, the prevalence of regular tobacco smoking was 29.9% among men and 20.5% among women. Over a decade, the percentage of adult smokers aged between 20 and 74 years significantly declined in Poland, both for men and women (\( P < 0.001 \)). An increase in the proportion of never-smoking men was also observed, from 29.8% to 36.1% (\( P < 0.0001 \)).

In both surveys, smoking differed widely between age groups for men and women (Table 1). During the follow-up, there was a significant decrease in the proportion of smoking men in every age group, and there were significantly fewer smoking women in the age group of 35 to 44 years. In both surveys, the most frequent smokers were middle-aged men and women. The lowest number of smoking people in both studies, for men and women alike, was found in the group...
TABLE 1 Distribution of the smoking status (%) in WOBASZ II vs WOBASZ studies

| Smoking status       | WOBASZ, n = 6906 | WOBASZ II, n = 2578 | OR   | WOBASZ, n = 7670 | WOBASZ II, n = 118 | OR   |
|----------------------|------------------|---------------------|------|------------------|-------------------|------|
| Men                  |                  |                     |      |                  |                    |      |
| never smoker         | 2058             | 29.8 (28.7–30.9)    | 1.33 | 4386             | 57.2 (56.1–58.3)   | 0.2216 |
| former smoker        | 1910             | 27.7 (26.6–28.7)    | 1.17 | 1175             | 15.3 (14.5–16.1)   | 1.25 |
| occasionally smoker  | 247              | 3.6 (3.2–4.0)       | 0.83 | 285              | 3.7 (3.3–4.1)      | 0.0048 |
| regularly smoker     | 2691             | 39.0 (37.8–40.1)    | 0.67 | 1824             | 23.8 (22.8–24.7)   | 0.83 |
| Women                |                  |                     |      |                  |                    |      |

Abbreviations: CI, confidence interval; n, number of patients; OR, odds ratio

TABLE 2 Prevalence of smokers (%) in age groups in WOBASZ II vs WOBASZ studies

| Age group, y | Men | Women |
|--------------|-----|-------|
| WOBASZ       | WOBASZ II | OR       | WOBASZ | WOBASZ II | OR       |
|              | n     | % (95% CI) | n     | % (95% CI) | P value  | n     | % (95% CI) | n     | % (95% CI) | P value  |
| 20–34        | 751   | 39.5 (37.0–41.4) | 205   | 31.7 (27.9–35.1) | 0.71 (0.415) | 480   | 21.8 (19.9–23.3) | 131   | 18.1 (15.3–20.9) | 0.80 (0.3568) |
| 35–44        | 560   | 45.0 (42.0–47.6) | 158   | 30.4 (26.4–34.3) | 0.53 (0.0211) | 492   | 35.1 (32.4–37.4) | 110   | 18.3 (15.2–21.4) | <0.0001 |
| 45–54        | 769   | 45.6 (42.8–47.6) | 180   | 35.9 (31.7–40.1) | 0.67 (0.0182) | 593   | 32.5 (28.7–36.3) | 174   | 26.3 (19.8–32.8) | 0.75 (0.1203) |
| 55–64        | 399   | 36.3 (33.4–39.0) | 170   | 29.6 (25.9–33.3) | 0.74 (0.1233) | 207   | 17.2 (12.1–22.3) | 183   | 25.0 (21.9–28.1) | 1.6 (0.0585) |
| 65–74        | 212   | 22.7 (20.0–25.4) | 58    | 17.5 (13.4–21.6) | 0.72 (0.3937) | 52    | 5.2 (3.8–6.6)    | 41    | 10.3 (7.3–13.3)  | 0.3524 |
| 75–84        | –     | –       | 24    | 15.9 (10.1–21.7) | –     | –     | 7     | 3.0 (0.8–5.2) | –     |
| SR           | 2691  | 39.2 (36.8–41.6) | 771   | 29.9 (26.3–34.1) | <0.05 (0.66)   | 1824  | 23.9 (21.3–25.9) | 639   | 20.5 (16.5–23.7) | >0.05 |

Abbreviations: SR, standardized frequency for age; others, see TABLE 1

of oldest participants aged between 65 and 74 years. The tendency to quit smoking can be assessed to have increased as the participants from a selected age group in the first study moved to the next age group in the second study. Over 10 years, the percentage of smoking participants in the group aged between 35 and 44 years in the first study and in the group aged between 45 and 54 years in the second study decreased by about 9%. As for the other groups, an increasing tendency for men to quit smoking with age could be observed, whereas the opposite was true for women: there was an increase in the percentage of smoking women in the age groups between 55 and 64 years and 65 and 74 years. The distribution of motivations for smoking shows that the average number of consumed cigarettes per smoker significantly decreased in the follow-up period both for men (17.9–15.8 cigarettes/day) and for women (13.7–12.1 cigarettes/day). Among men smokers, the most cigarettes were smoked in the group between 35 and 54 years. Among smoking women, in the first study the most cigarettes were smoked in the age group between 35 and 54 years. Among the youngest age group (20–34 years) in both studies for men and women alike.

The average age of starting regular smoking increased in the second study in comparison with the first study by about 2 years among men (18 vs 20 years) and also by about 2 years among women (20 vs 22 years; P < 0.05). Data are presented in TABLE 4.

The most frequently declared reason for current tobacco smoking by men and women in both studies was the force of habit (TABLE 5), followed by the calming effect of smoking, “for pleasure”.

On average, men smoked more cigarettes per day than women (TABLE 3). The average number of cigarettes smoked daily per smoker
A large number of smokers, both men and women, declared the will to stop smoking (TABLE 4). The willingness to quit smoking was declared by more than 70% of the respondents. However, this percentage decreased by almost 10% in both groups in comparison with the period from 2003 to 2005. At the same time, the percentage of those expressing unwillingness to quit smoking nearly doubled in WOBASZ II compared with WOBASZ.

The most common reason (around 40% of the participants) for quitting smoking among smokers in both studies for men and women alike was the fear of illness (TABLE 7). The second most frequent reason for stopping smoking was the financial aspect (over 20% of participants in both studies). However, it must be noted that in the case of both the “fear of illness” and “financial aspects” the proportion of those motivations in the reasons for quitting smoking showed no change during the follow-up period. Other reasons proved to be far less important. Doctor’s orders as a reason for quitting smoking was only indicated by 3% of the men and women surveyed in both studies.

**Study strengths and limitations**  WOBASZ and WOBASZ II were descriptive, cross-sectional, population-based, epidemiological studies. Their strengths included a wide range, a large sample size, and the representativeness of the obtained data for Poland’s adult population. The age distributions in the randomly selected survey samples of WOBASZ and WOBASZ II were not significantly different. Moreover, the same questionnaire was used for both studies. Such a selection of research tools allowed obtaining fully comparable data.

The studies also had some limitations. The participation rates for WOBASZ and WOBASZ II ranged from around 75% to 47%, which is a result comparable to other epidemiological studies conducted earlier in Poland and ensures the credibility and reliability of obtained data. However, the results of the studies are only based on a survey questionnaire, which can lead to underestimation or overestimation of the findings. The analysis used no objective methods for verifying the tobacco smoking status of the respondents. However, it should be emphasized that such a study would require specialized equipment, appropriate logistic preparation and considerable financial resources. Survey methods are relatively inexpensive and allow for a relatively easy data collection and for examination of a large number of respondents, while proving to be reliable tools in most epidemiological studies.

### TABLE 3

| Age group, y | Men | | | Women | | |
|-------------|-----|-----|-----|--------|-----|-----|
|             | WOBASZ | WOBASZ II | P value | WOBASZ | WOBASZ II | P value |
| mean values (95% CI) | mean values (95% CI) | mean values (95% CI) | median (range) | median (range) | median (range) |
| 20–34 | 15.4 (14.9–15.8) | 12.8 (11.9–13.8) | <0.05 | 12.0 (11.4–12.5) | 10 (1–30) | 0.05 |
|          | 15 (1–50) | 10 (2–45) | | 10.4 (9.4–11.4) | 10 (1–30) | |
| 35–44 | 19.6 (19.0–20.3) | 17.1 (15.8–18.5) | <0.05 | 14.1 (13.5–14.7) | 15 (1–40) | >0.05 |
|          | 20 (2–50) | 20 (2–60) | | 12.5 (11.3–13.8) | 10 (1–30) | |
| 45–54 | 19.4 (18.8–19.9) | 17.6 (16.3–18.8) | 0.05 | 14.5 (13.9–15.0) | 15 (1–40) | <0.05 |
|          | 20 (2–60) | 20 (1–60) | | 12.7 (11.6–13.7) | 10 (1–40) | |
| 55–64 | 18.3 (17.4–19.2) | 16.8 (15.4–18.2) | >0.05 | 14.2 (13.2–15.2) | 15 (1–40) | <0.05 |
|          | 20 (1–80) | 20 (1–60) | | 12.2 (11.2–13.1) | 10 (1–30) | |
| 65–74 | 15.7 (14.5–16.8) | 14.4 (12.1–16.6) | >0.05 | 13.6 (11.4–15.8) | 10 (3–40) | >0.05 |
|          | 15 (1–50) | 15 (1–40) | | 13.8 (10.9–16.6) | 10 (4–40) | |
| total | 17.9 (17.5–18.1) | 15.8 (15.2–16.4) | <0.05 | 13.7 (13.4–14.0) | 13 (1–40) | <0.05 |
|          | 20 (1–80) | 20 (1–60) | | 12.1 (11.6–12.6) | 10 (1–40) | |

**Abbreviations:** see TABLE 1

### TABLE 4

| Age | Men | | | Women | | |
|-----|-----|-----|-----|--------|-----|-----|
|     | WOBASZ, n = 2692 | WOBASZ II, n = 761 | P value | WOBASZ, n = 1825 | WOBASZ II, n = 634 | P value |
| mean age (SD) | mean age (SD) | (95% CI) | median (range) | mean age (SD) | (95% CI) | median (range) |
| age of starting smoking | 18.3 (3.7) | 19.7 (5.1) | <0.05 | 20.3 (5.0) | 21.9 (6.4) | <0.05 |
|          | (18.1–18.4) | (19.3–20.0) | | (20.1–20.5) | (21.4–22.4) | |
|          | 18 (6–65) | 19 (7–65) | | 19 (7–58) | 20 (12–63) | |

**Abbreviations:** see TABLE 1

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Women WOBASZ II 74.7 OR -93 -WOBASZ II % 1715 In the POLSCREEN (2002–2005) 7.4 The countries character % WOBASZ II 7.9 50.6 OR % 8.7 In contrast, the NATPOL 2011 survey, WOBASZ II 11.0 85.2 2290 41 1.6 21.5 30.3 17-22 13.6 The prevalence of tobacco smoking among men and women within individual countries can be conditioned by culture, customs, the types of commonly used products containing nicotine, but also by the range and effectiveness of implemented tobacco consumption control policies. In most European countries, as in Poland, men are more frequent smokers. The differences between the proportions of smoking men and women are minor in the countries of northern and western Europe, whereas they are larger in central and eastern Europe.

Poland belongs to a group of countries with a high prevalence of smoking, both among men and women.23 In the POLSCREEN (2002–2005) study,24 among the population of people aged 35 years or older reporting to a doctor, the prevalence of smoking compared to the WOBASZ study was lower—27.3% for men and 14.3% for women. Similarly, a lower percentage of smoking women (27.5%) than WOBASZ.

The differences in the prevalence of tobacco smoking between countries and between men and women within individual countries can be conditioned by culture, customs, the types of commonly used products containing nicotine, but also by the range and effectiveness of implemented tobacco consumption control policies. In most European countries, as in Poland, men are more frequent smokers. The differences between the proportions of smoking men and women are minor in the countries of northern and western Europe, whereas they are larger in central and eastern Europe.

Tobacco smoking in Poland in 2003–2014

DISCUSSION The prevalence of tobacco smoking and its intensity vary in the world according to the development phase of the tobacco epidemic in a given region.12,22 The countries characterized by the highest prevalence of tobacco smoking among men also included the countries of Central and East Asia as well as of central and eastern Europe (above 50%). Inhabitants of Africa, North and South America, and northern, western, and southern Europe smoked much less (10%–20%). The prevalence of tobacco smoking among men in Europe in such countries as Russia, Ukraine, Latvia, Bulgaria, and Greece was 50% or higher, while the lowest prevalence was observed among men in Sweden and England (below 20%). Women in Poland, Russia, Bulgaria, and Greece smoked most often (above 30%). The lowest number of smoking women was observed in Sweden, Romania, and Lithuania (below 20%).10,18

The differences in the prevalence of tobacco smoking between countries and between men and women within individual countries can be conditioned by culture, customs, the types of commonly used products containing nicotine, but also by the range and effectiveness of implemented tobacco consumption control policies. In most European countries, as in Poland, men are more frequent smokers. The differences between the proportions of smoking men and women are minor in the countries of northern and western Europe, whereas they are larger in central and eastern Europe.
TABLE 7  Declaration of the reason to stop smoking (% of smokers) in WOBASZ II vs WOBASZ studies

| Reason to stop smoking | WOBASZ | WOBASZ II | OR (95% CI) | P value | WOBASZ | WOBASZ II | OR (95% CI) | P value |
|------------------------|--------|-----------|-------------|---------|--------|-----------|-------------|---------|
| current complaints     | 6.4 (5.3–7.5) | 8.5 (6.2–10.8) | 1.36 <0.05 | 6.5 (4.2–6.8) | 6.9 (4.6–9.2) | 1.27 >0.05 |
| fear of illness        | 42.4 (40.2–44.6) | 37.5 (33.5–41.5) | 0.82 >0.05 | 42.1 (39.4–44.8) | 43.1 (38.7–47.5) | 1.04 >0.05 |
| medical recommendations| 3.3 (2.5–4.1) | 3.3 (1.8–4.8) | 1.00 >0.05 | 3.1 (2.1–4.1) | 3.3 (1.7–4.9) | 1.07 >0.05 |
| friends’ insistence     | 0.3 (0.1–0.5) | 0 (0–0) | – | 0.3 (0–0.6) | 0 (0–0) | – |
| family’s wish          | 5.0 (4.0–6.0) | 8.9 (6.6–11.2) | 1.86 <0.05 | 6.0 (4.7–7.3) | 4.8 (2.9–6.7) | 0.79 <0.05 |
| financial aspects      | 23.1 (21.2–25.0) | 25.2 (21.7–28.7) | 1.12 >0.05 | 23.9 (21.5–26.3) | 24.2 (20.4–28.0) | 1.02 >0.05 |
| firm resolution        | 16.4 (14.7–18.1) | 13.2 (10.4–16.0) | 0.78 >0.05 | 15.6 (13.6–17.6) | 14.8 (11.6–18.0) | 0.94 >0.05 |
| other                  | 3.1 (2.3–3.9) | 3.5 (2.0–5.0) | 1.13 >0.05 | 3.6 (2.6–4.6) | 2.9 (1.4–4.4) | 0.80 >0.05 |

Abbreviations: see TABLE 1

smoking men constituted 37.3% and smoking women—28.2%.7

The WOBASZ study showed a decrease in the prevalence of smoking both for men and women, but the decrease was much steeper among men than among women. According to the NATPOL study,26 in the period from 2001 to 2011 a similar decrease in the prevalence of smoking was found—by 12% for men and 3% for women.

In the majority of the world’s most advanced economies, the number of smokers is on the decrease.7 According to the WHO,24 in the period from 2000 to 2010 the prevalence of smoking among men and women decreased in 125 countries (72%) and 156 countries (88%), respectively. If such trends persist, in 2025 there will be an estimated 1.1 billion smokers in the world. According to the WOBASZ II study, in Poland smoking mostly concerns the middle-aged population. Similar results were obtained in the NATPOL 2011 study26 as well as in other Polish studies.14,29

In the GATS study conducted in Poland in the years from 2009 to 2010,27 most men and women smoked in the age group between 30 and 39 years (above 30%). Similarly, the survey showed the lowest prevalence of smoking among people below 20 years of age. At the same time, the high prevalence of tobacco smoking among women of childbearing age, in the age group between 20 and 40 years, is alarming. Therefore, the high proportion of smokers in this group can also significantly influence the health of future generations.

The world populations are characterized by significant differences in tobacco smoking intensity measured by the number of cigarettes smoked per smoker. Greece, Ireland, Italy, France, Switzerland, and countries of eastern Europe, including Russia, are the European countries with high consumption of cigarettes, where people smoke above 20 cigarettes a day. People in Sweden, Estonia, and the Netherlands smoked the lowest amount of cigarettes (below 20 a day).19,21,30 The POLSCREEN study24 reported an average of 16 cigarettes smoked daily by men and 13 by women, which is consistent with the results of the WOBASZ II survey. Similar values were obtained in other Polish studies.14,29,31 Interesting findings included the relationship between the number of smoked cigarettes and age, as well as a decrease in cigarette consumption over the period of 10 years.

Beginner smokers usually smoke a small number of cigarettes daily, increasing this number with the duration of the habit and their increasing addiction to nicotine, whereas people of older age (around 60 years) favor reduction and cessation of smoking, which is consistent with findings from other studies.32,33 The most common interpretation of this relationship is that with age the health of participants worsens and the incidence of symptoms (including symptoms of tobacco-related diseases) increases, which may encourage smokers to reduce their tobacco consumption.34 The reduction in the number of cigarettes smoked by men observed in the older age groups in the WOBASZ and WOBASZ II studies is promising, but we cannot exclude that it is partly associated with the rapidly growing interest in and prevalence of e-cigarettes available on the Polish market since 2008.25–31 This may reduce the number of traditional cigarettes smoked. According to the study on the use of e-cigarettes from 27 European countries among
The current prevalence of tobacco smoking and the state of the tobacco epidemic in the population is a result of different processes such as initiation, continuation, and quitting tobacco smoking. The average age of smoking initiation depends on the country, income, education, or age of the respondents. Smokers from Spain, Denmark, Portugal, and England reach for cigarettes at the youngest age (before 17 years old), while smokers from Greece, Estonia, and Lithuania begin to smoke at the oldest age (19 years old).

In Poland, in the GATS study, the average age of initiation of regular smoking was 18.4 (SD, 3.6) years for men and 20.0 (SD, 4.7) years for women (P < 0.01). In 2010 in other countries, the average age of smoking initiation among women was 17.1 years in Sweden, 17.9 years in Ireland, 18.1 years in France, 18.6 years in Italy, and 19.6 years in the Czech Republic. Sweden had the highest percentage of women who started smoking at a very young age, 29.3% declared starting smoking between 14 and 15 years of age and 12.0% started smoking before the age of 14. The Czech Republic was characterized by the lowest percentage of early smoking initiation—13.7% of the respondents started smoking at the age between 14 and 15 years and 1.4% started smoking at the age of less than 14 years old. The highest percentage of women declared starting smoking between 16 and 17 years of age in all countries but Sweden. According to the GATS study, women also began smoking at a later age than men. Men become smokers when they are younger than 17 in Ukraine and England, and when they are older than 20 in China, India, and Vietnam. Women start smoking when they are younger than 17 in England, and when they are more than 20 in most of other countries. The differences in respondents’ age of smoking initiation in various countries may reflect the phases of the tobacco smoking epidemic in individual countries and the differences in the tobacco control measures.

According to the WOBASZ II study, most of the respondents began smoking at around 20. Women started smoking later than men, and, importantly, the age of regular smoking initiation in both groups has increased. However, the lack of change in the percentage of women who never smoke is worth noting. The emancipation of women and their higher earnings, thus increased purchasing power with regard to goods, including tobacco products, might have had an impact on smoking patterns among women. Moreover, it could be also due to easy access to tobacco products, low prices, advertising, and promotion, which constitute the front line action of the tobacco industry to maintain and increase the number of their customers. Aggressive marketing may also be responsible for the increase in the percentage of women declaring the “for pleasure” category as the reason for smoking. It could also be a reason for the lack of interest in quitting tobacco smoking. It is difficult to unambiguously answer the question why women did not change their health behavior. Increasing addiction of smokers (TABLE 6) and the minor proportion of doctor’s orders among the reasons for quitting smoking are attributable to low efficacy of educational activities and insufficient involvement of medical professionals in the diagnostic and therapeutic process. As emphasized by Zhu et al, the so called “minimal intervention”—doctors recommending their patients to quit smoking at any visit—is the easiest approach that may significantly increase the rates of smoking cessation. This intervention is crucial for public health and it is important to maximize its effectiveness by offering professional help in quitting smoking (for example, medicines or behavioral support), which in turn increases the percentage of successful attempts to quit smoking.

The scope of as...
well evaluated in terms of the cost and are under‑financed. Also teachers are not regularly trained in the direction of conducting tobacco control education. Other difficulties include the intensive advertising and promotion carried out by tobacco companies, as well as early tobacco initiation and high social tolerance for tobacco smoking among youth.

Regulations related to the control of tobacco product use represent an important element of the strategy to reduce the health and the socio‑economic consequences of tobacco smoking. However, good legislation in health care will not suffice to improve the health situation in the country unless it causes changes in the social behavior of the citizens. It must be stressed that such actions should be supported by information and educational campaigns.

In conclusion, the current knowledge on cigarette smoking and the results presented in this paper should support the antitobacco strategy. The prevalence of tobacco smoking in Poland, despite its downward trend, is still high. Significant smoking differentiation was observed depending on age. Most smokers were middle‑aged people. During the follow‑up, the number of cigarettes smoked daily per smoker decreased. The rising tendency to quit smoking among men and women is favorable, but the follow‑up showed a downward trend. The later start of smoking is also favorable. The current activities in the field of tobacco use control in Poland need strengthening in a few areas, including tobacco use monitoring, support in tobacco cessation, fiscal policy, as well as education and alerting the citizens to the hazards associated with the smoking habit.11,12

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