Psychiatr. Pol. 2024; 58(4): 619–636
PL ISSN 0033-2674 (PRINT), ISSN 2391-5854 (ONLINE)
www.psychiatriapolska.pl
DOI: https://doi.org/10.12740/PP/OnlineFirst/159734

Prevalence and determinants of psychotropic medication use in Poland

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Summary

Aim. The aim of the study was to assess the prevalence of psychotropic medication use among adult population in Poland in past 12 months, and to analyse the relationship between psychotropic medication use and sociodemographic factors as well as mental health disorders experienced by respondents.

Method. Composite International Diagnostic Instrument (WHO CIDI 3.0) was used in Polish survey of general population aged 18–64. Respondents were randomly selected from the population register. Ten thousand interviews were completed with a response rate of 50.4%.

Results. In the general population, psychotropic medicines were used by almost 5% of the respondents in the past 12 months. These medicines were used more often by women, respondents from the oldest age group, with low level of education, retirees, unemployed, singles and residents of small and large cities. Among those experiencing mental health problems in the past 12 months, psychotropic medications were taken by up to 17% of the respondents. Pharmacological treatment was most often endorsed by over 40% of persons with symptoms of major depression and any mood disorders, while approximately 25% of respondents with major depression confirmed antidepressant use. Gender differences were small and mostly insignificant.

Conclusions. The results indicate the need to improve access to mental health treatment and to better educate general practitioners (GPs) for appropriate diagnosing and treatment of mental health disorders.

Key words: adults, psychotropic medication, mental health disorders

Introduction

Taking medications is a key element in the treatment of mental health disorders. However, research conducted around the world as part of the World Mental Health

Survey Initiative (WMH) shows that many people suffering due to severe mental health problems, such as anxiety disorders, mood disorders or drug addiction, are not receiving adequate treatment, including prescription of appropriate medicines [1 – 4]. These studies also show that the prevalence of psychotropic medication use, i.e. antidepressants, sedatives, antipsychotics and mood stabilisers, varies from country to country. Data collected in 2001 – 2003 among the general population in six European countries (Belgium, France, the Netherlands, Spain, Germany and Italy) showed that approximately 12% of respondents used these types of medicines in the past 12 months before the study, with the lowest percentages in Germany (about 6%) and highest in France (about 19%). The most commonly used psychotropics were anxiolytics, used by approximately 10% of the respondents, followed by antidepressants (3.7% of the respondents). Only approximately 1% of the study participants used antipsychotic medicines in the past year [1]. Moreover, according to European data, in the past 12 months approximately 33% of respondents who suffer due to mental health problems had taken at least one of the psychotropic medications listed in the questionnaire. Antidepressants, however, were used by only 21.2% of participants diagnosed with pure major depression [1].

Research from outside Europe brought similar results. Data from Israel indicated that approximately 7% of respondents from the general population used psychotropics in the past year, and the most commonly used were sedatives while the proportion of people using psychotropics among those experiencing mental health problems was 19.6% [4]. Similarly, a study in Brazil (São Paulo) found that about 6% of participants from the general population used psychotropic medications in the past year. Among those who confirmed mental health disorders in the year preceding the study (including anxiety, mood, impulse control and substance use disorders), the use of psychotropic medicines was reported by approximately 14% of respondents [3].

Women of all ages use medications much more often than men, and this applies to both pharmaceuticals taken on a doctor's prescription and those that are available over-the-counter [1, 2, 5, 6]. The literature provides the following explanation for differences between men and women in the frequency of medicine use. First and foremost, the prevalence of depression and anxiety disorders is higher among women than among men [1, 5, 7, 8]. In turn, addiction and impulse control disorders are more prevalent among men [2]. Depression and anxiety disorders are more often treated with pharmacotherapy than are problems with the use of psychoactive substances or other externalising disorders, and consequently, more women than men use psychotropics [2]. Non-medical factors are also important, i.e. the cultural message that a man – unlike a woman – should not complain of malaise [8]. For this reason, women are more likely to admit health problems – both mental and somatic – and seek medical help, even for mild illnesses or temporary ailments [5, 8]. In addition, general practitioners (GPs) are more likely to prescribe psychotropics than are mental health profession-

als [2, 9]. GPs are also less likely to recommend non-pharmacological treatment like psychotherapy, and women are more likely than men to report their health problems specifically to these doctors [2].

Moreover, self-medication of mental health problems with over-the-counter medicines is more common among women than among men [10, 11]. Earlier studies showed an inverse relationship between alcohol consumption and the use of prescribed medicines that affect mood [1]. Men are more likely than women to drink and abuse alcohol, and it is also known from the previous studies that men are more likely to turn to alcohol and/or illicit substances as a method of self-medication for psychological ailments, such as mood or anxiety disorders [12].

Age is also a factor conducive to medicine use. This is confirmed by the World Mental Health (WMH) Survey Initiative studies [1-4]. For example, a study that analysed differences in the psychotropic medication use among male and female participants, the WMH project participants from 10 European countries, found that regardless of gender, older age was a significant risk factor for taking such pharmaceuticals [2].

By contrast, data on other socioeconomic variables are inconclusive [1-3, 13]. Research conducted in the 1980s in the USA indicated a greater prevalence of psychotropic medication use among people with a higher socioeconomic status – although the impact of this factor was moderate compared to the health status, age and gender of the respondents [14]. It is worth noting, however, that the study cited here showing the association between high socioeconomic status and medicine use dates back nearly 40 years. During this time, there have been significant changes in the awareness of the lifestyle effect on health.

More recent studies conducted as part of the World Mental Health Survey Initiative indicate that psychotropic medications are more often used by less educated and low-paid or unemployed people [1, 3, 4]. For example, in the study in six European countries conducted by Alonso and co-authors [1] cited above, it was found that lower educational attainment was associated with higher psychotropic medication use [1]. There are also reports whose authors point to a possible link between the use of psychotropic drugs and unemployment status (lack of paid occupational activity) – especially among men [2, 5].

Aim of the study

The aim of the presented study was to assess the prevalence of psychotropic medication use among adult inhabitants of Poland as well as to analyse the relationship between the psychotropic medication use, sociodemographic factors and mental health disorders.

Characteristics of the EZOP I project

The data used in the present analyses come from the project 'Epidemiology of psychiatric disorders and the availability of psychiatric healthcare. EZOP I– Poland' conducted in 2010-2012. EZOP was the first nationwide survey of the mental health status of the Polish working-age population. The project used the methodology developed and tested within the World Mental Health Survey Initiative [15]. This methodology enables the planning and implementation of epidemiological studies on mental health and psychoactive substance use. Institutions that undertake research using this methodology must meet very stringent requirements regarding the adaptation of the research tool, sample selection, field research procedures and analysis of the results. Thanks to this, the collected research material allows for intercultural comparisons, which is of great scientific and practical importance, as it allows more fully to use the experiences of other countries in the field of mental health care [16, 17].

Method and material

In addition to a comprehensive report on the EZOP I study [16], an in-depth description of the methodology of this study has been published in the journal Psychiatria Polska [17]. Therefore, only a brief description of its methodology is included below.

Sample

The study was carried out on a random sample representative of the population of Poland aged 18-64. Participants were selected by the systematic sampling method within the distinguished strata, which took into account the size of the town, voivodeship, commune (in the case of rural areas) as well as gender and age of the respondents. A group of 24,000 respondents were randomly selected for the study, assuming that the response rate would be approximately 50%. Finally, 10,081 interviews were conducted, which accounts for 50.4% of the selected sample [16, 17].

Study procedure

The study was carried out using the CAPI (Computer-Assisted Personal Interview) mode of administration. The interviews consisted of two parts. In the first part, so-called screening section, respondents were asked about basic sociodemographic data and experiencing symptoms of mood disorders, various types of anxiety and situations where it was difficult for them to control emotions. The result of this part determines the further course of the interview. Positive answers to these questions automatically lead to the second part, i.e. a specific diagnostic section. Moreover, respondents who

meet the criteria of at least one disorder are asked questions from an extended sociodemographic section [16, 17].

Final diagnosis was made by the algorithm provided by the appropriate program available to the research team. However, neither the respondent nor the interviewer had access to the diagnosis performed by the CIDI. In sum, the described procedure makes it possible to diagnose mental disorders in a random sample of the general population.

Assessment of the prevalence of psychotropic medication use and mental health disorders

The CIDI questionnaire is based on the DSM-IV and ICD-10 criteria. It allows to assess the prevalence of specific mental disorders, their severity and to estimate the utilisation of health services.

In the Polish version of the questionnaire, 32 original sections of the CIDI 3.0 were used. The diagnostic sections included the following disorders: depression, mania, suicide attempts, neurasthenia, panic and generalised anxiety, phobias – specific, social and agoraphobia, post-traumatic stress disorder (PTSD), eating disorders, impulse disorders, alcohol and other psychoactive use disorders, attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder and behavioural disorders [16, 17].

The question on medication use was related to the use of pharmaceuticals available on a doctor's recommendation in the last 12 months and was formulated as follows: 'Please look at page 32 in your booklet. Which of the listed medications have you taken in the past 12 months?'

- Hypnotics (e.g. Stilnox or Selofen)
- Antidepressants (e.g. Bioxetin or Zoloft)
- Sedatives (e.g. Xanax or Lorafen)
- Amphetamines or other stimulants (e.g. Concerta, Adderal)
- Antipsychotics (e.g. Haloperidol, Risperdal)

Respondents did not select specific medications but indicated the entire group. The trade names given in parentheses served only as examples that could help the respondent and interviewer to categorise the medication into the appropriate group.

Statistics

The prevalence of psychotropic medication use in the past 12 months was assessed taking into account sociodemographic variables. Univariate logistic regression was used to analyse the relationship between psychotropic medication use and individual sociodemographic variables. Multivariate regression analysis was used to assess the

relationship between medication use and mental health disorders by gender factor. All analyses were carried out with the use of IBM SPSS Statistics 21.

Results

Characteristics of the study participants

The data on the sociodemographic characteristics of respondents are presented in Table 1. The percentages of women (50.4%) and men (49.6%) were very similar, with slightly more women.

Among the analysed age categories, the oldest i.e. participants aged 50-64 as well as the youngest (18-29) categories were the most numerous as they covered the widest age spans – 31.0% (95% CI: 30.4-31.7) and 28% (95% CI: 27.4-28.7), respectively. Two remaining categories which covered 10 years each were ranging from 22.2% (95% CI: 21.7-22.8) in age group 30-39 and 18.7% (95% CI: 18.2-19.2) in age group 40-49.

Most of the respondents received at least high school education as 38.3% completed high school (95% CI: 37.5-39.2), and 16.7% had university degree (95% CI: 16.0-17.4). Most of the respondents were also employed (59.4%; 95% CI: 58.5-60.3). Similarly, the majority were married (56.1%; 95% CI: 55.2-56.9). Most of the study participants lived in towns and cities, with the largest group of town-dwellers being people from small towns – up to 50,000 inhabitants (24.3%; 95% CI: 23.7-25.0). Village inhabitants accounted for slightly more than 1/3 of the respondents (37.8%; 95% CI: 37.2-38.5).

Table 1. **Sociodemographic characteristics of the sample. EZOP I Project (*N* = 10,081)**

Gender	N	% (CI 95%)
male	4,883	49.6 (48.9 – 50.3)
female	5,198	50.4 (49.7 – 51.1)
Age		
18-29	2,895	28.1 (27.4 – 28.7)
30-39	2,119	22.2 (21.7 – 22.8)
40-49	1,874	18.7 (18.2 – 19.2)
50-64	3,193	31.0 (30.4 – 31.7)
Education		
university degree	1,621	16.7 (16.0 – 17.4)
high school	3,837	38.3 (37.5 – 39.2)

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vocational school	3,280	32.3 (31.4 – 33.2)
primary or middle school	1,283	12.1 (11.5 – 12.8)
Employment status		
employed	5,881	59.4 (58.5 – 60.3)
student	734	7.2 (6.7 – 7.7)
homemaker	574	5.5 (5.1 – 6.0)
retired	949	9.0 (8.5 – 9.5)
other, including unemployed and pensioner	1,943	18.9 (18.4 –1 9.4)
Marital status		
married	5,643	56.1 (55.2 – 56.9)
cohabiting	939	9.6 (9.1 – 10.1)
divorced/separated	576	5.9 (5.4 – 6.3)
widower / widow	514	4.8 (4.5 – 5.2)
single	2,384	23.4 (22.7 – 24.1)
Place of residence		
village/rural	4,287	37.8 (37.2 – 38.5)
city/urban up to 50,000 inhabitants	2,387	24.3 (23.7 – 25.0)
city/urban 50,000-200,000 inhabitants	1,587	16.8 (16.2 – 17.3)
city/urban with over 200,000 inhabitants	1,820	21.1 (20.6 – 21.6)

Sociodemographic characteristics and psychotropic medication use

In the past 12 months the vast majority of respondents (over 95%) did not use any psychotropic medications mentioned in the questionnaire. The greatest number of the study participants used sedatives (2.9%), hypnotics (2.2%) and antidepressants (1.5%) (Table 2). The use of amphetamines or other stimulant drugs as well as antipsychotic drugs was confirmed by less than 0.5% of the respondents. Overall, 4.8% of respondents used any psychotropic medication in the past year. More women than men used psychotropic medications; significant differences were found in the case of hypnotics (OR = 2.1; 95% CI: 1.6-2.8), antidepressants (OR = 1.5; 95% CI: 1.1-2.1) and sedatives (OR = 1.8; 95% CI: 1.4-2.3). There were no, however, significant differences between men and women in the likelihood of stimulant and antipsychotic use.

Table 2. **The last 12-month psychotropic medication use by gender according to psychotropic medication class. EZOP I Project (*N* = 10081)**

Psychotropic medication class	N (%)	Gender comparison OR (95% CI)
Sedative	287 (2.9)	1.8 (1.4 – 2.3)
Hypnotic	217 (2.2)	2.1 (1.6 – 2.8)
Antidepressant	149 (1.5)	1.5 (1.1 – 2.1)
Antipsychotic	46 (0.5)	1.4 (0.8 – 2.5)
Amphetamine or other stimulants	14 (0.1)	2.3 (0.8 – 7.2)
Any psychotropic medication	480 (4.8)	1.9 (1.6 – 2.4)

Table 3 displays the relationship between psychotropic medicine use (at least one mentioned in the questionnaire) and sociodemographic variables in the general adult population. As expected, the likelihood of psychotropic medication use increases with age. Compared to the youngest age group, the highest OR was found in the oldest age category, i.e. 50-64 years (OR = 3.6; 95% CI: 2.8-4.9). Respondents who completed primary or middle school at most were more likely to use psychotropic medications than participants with higher level of education (OR = 1.7; 95% CI: 1.3-2.5). Compared to the employed, homemakers (OR = 1.5; 95% CI: 1.0-2.2), retired (OR = 2.9; 95% CI: 2.2–3.8) as well as pensioners and the unemployed respondents (OR = 2.0; 95% CI: 1.6-2.5) were more likely to use psychotropic medications. Marital status was also a significant factor – compared to married participants, psychotropics were taken more often by divorced persons (OR = 1.8; 95% CI: 1.3-2.4) and widows/widowers (OR = 2.1; 95% CI: 1.5-2.9). Finally, compared to rural residents, the use of psychotropic medications was more common among residents of small towns – up to 50,000 residents (OR = 1.3; 95% CI: 1.0-1.7) and large cities (OR = 1.5; 95% CI: 1.2–1.9).

Table 3. **The last 12-month psychotropic medication use according to sociodemographic variables. EZOP I Project (*N* = 10,081)**

Gender	N (%)	OR (95% CI)
male	165 (3.3)	1
female	315 (6.2)	1.9 (1.6 – 2.4)
Age		
18-29	62 (2.2)	-
30-39	79 (3.6)	1.6 (1.2 – 2.3)

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40-49	101 (5.4)	2.5 (1.8 – 3.5)
50-64	237 (7.6)	3.6 (2.7 – 4.8)
Education		
university degree	67 (4.0)	-
high school	189 (4.9)	1.3 (0.9 – 1.7)
vocational school	140 (4.3)	1.1 (0.8 – 1.5)
primary or middle school	82 (6.7)	1.7 (1.3 – 2.4)
Employment status		
employed	217 (3.6)	-
student	8 (1.1)	0.3 (0.2 – 0.6)
homemaker	30 (5.4)	1.5 (1.0 – 2.2)
retired	89 (9.9)	2.9 (2.2 – 3.8)
other, including unemployed and pensioner	136 (7.1)	2.0 (1.6 – 2.5)
Marital status		
married	268 (4.7)	-
cohabiting	47 (4.8)	1.0 (0.7 – 1.4)
divorced/separated	48 (8.0)	1.8 (1.3 – 2.4)
widower / widow	47 (9.6)	2.1 (1.5 – 2.9)
single	71 (3.0)	0.6 (0.5 – 0.8)
Place of residence		
Village/rural	151 (4.0)	-
city/urban up to 50,000 inhabitants	126 (5.2)	1.3 (1.0 – 1.7)
city/urban 50,000-200,000 inhabitants	79 (4.7)	1.2 (0.9 – 1.6)
city/urban with over 200,000 inhabitants	124 (5.8)	1.5 (1.2 – 1.9)

Psychotropic medication use by mental health diagnosis and gender

Table 4 depicts the association between the use of hypnotics, antidepressants, sedatives and antipsychotics and identified mental health disorders. Amphetamine derivatives and other stimulants were not included in the analyses due to the low prevalence of their use.

Approximately 17% of respondents who experienced symptoms of any mental health disorder in the past 12 months used psychotropic medication at that time. Among these respondents, sedatives (10.9%) were the most prevalent followed by hypnotics (8.1%) and antidepressants (7.8%). A relatively small group of the study participants used antipsychotics (1.9%). Women experiencing mental health disorders were more likely than men to use psychotropic medication in general (OR = 1.7; 95% CI: 1.0-2.9) and hypnotics (OR = 2.0; 95% CI: 1.0-4.2). In the case of other psychotropic medications, the likelihood of use was slightly higher among women, but no statistically significant differences were found between women and men experiencing mental health problems in the past year.

Further analyses were conducted for disorders that turned out to be the most prevalent among the study participants, i.e. anxiety disorders, depression and mood disorders in general as well as alcohol use disorders. Approximately 18% of respondents with anxiety disorders used psychotropic medications in the past year, the most prevalent ones were sedatives (11.8%), hypnotics (9.2%) and antidepressants (9.2%). There were no statistically significant differences between men and women, although the likelihood of hypnotic and sedative use was slightly higher for women, and antidepressants for men with anxiety disorders.

Psychotropic drugs were used by approximately 44% of respondents suffering due to depression. Those participants most frequently used antidepressants (24.8%) and sedatives (24.3%), and slightly less often hypnotics (22.1%). Among people with any mood disorder, the most common were sedatives (24.8%), followed by antidepressants (22.7%) and hypnotics (21.6%). Also, in these analyses, no statistically significant differences were found between men and women, although the likelihood of taking psychotropic medication was slightly higher in women with symptoms of depression and any mood disorders (however at the verge of statistical significance; $p = 0.058$).

Respondents with symptoms of alcohol use disorders, including dependence, most often used sedatives (8.2%) and no statistically significant differences between men and women were found.

Table 4. **The last 12-month psychotropic medication use by gender according to mental health disorders. EZOP I Project (*N* = 10,081)**

	Any psychotropic medication		Sedatives		Hypnotics		Antidepressants		Antipsychotics	
	N (%)	Gender comparison OR (95% CI)	N (%)	Gender comparison OR (95% CI)	N (%)	Gender comparison OR (95% CI)	N (%)	Gender comparison OR (95% CI)	N (%)	Gender comparison OR (95% CI)
No disorder in the last 12 months	146 (4.1)	1.6 (1.2 – 2.3)	88 (2.5)	1.8 (1.2 – 2.8)	57 (1.6)	1.5 (0.9 – 2.6)	39 (1.1)	0.9 (0.5 – 1.8)	14 (0.4)	1.4 (0.5 – 3.9)
Any disorder	73 (17.3)	1.7 (1.0 – 2.9)	46 (10.9)	1.6 (0.8 – 2.9)	34 (8.1)	2.0 (1.0 – 4.2)	33 (7.8)	1,6 (0.8 – 3.4)	8 (1.9)	0.9 (0.2 – 3.6)
Anxiety disorder	77 (17.7)	1.7 (0.9 – 2.9)	52 (11.8)	1.3 (0.7 – 2.6)	40 (9.2)	2.2 (0.9 – 5.2)	40 (9.2)	0.9 (0.5 – 1.8)	8 (1.9)	0.6 (0.2 – 2.4)
Depression	54 (43.6)	1.9 (0.9 – 4.2)	30 (24.3)	2.5 (0.9 – 6.9)	27 (22.1)	2.1 (0.7 – 5.8)	31 (24.8)	1.9 (0.7 – 5.0)	6 (5.2)	0.8 (0.2 – 4.4)
Any mood disorder	66 (41.6)	1.9 (1.0 – 3.8)	39 (24.8)	1.7 (0.8 – 3.7)	34 (21.6)	1.6 (0.7 – 3.6)	36 (22.7)	1.6 (0.7 – 3.7)	8 (5.3)	0.8 (0.2 – 3.1)
Alcohol use disorder	16 (11.0)	2.5 (0.6 – 10.0)	12 (8.2)	1.7 (0.3 – 9.7)	7 (4.8)	4.9 (0.9 – 28.0)	5 (3.4)	4.3 (0.5 – 35.0)	1 (0.7)	-

Discussion

Prevalence of psychotropic medications in the general population

The presented study indicates that in the 12 months preceding the study psychotropic medications were used by slightly less than 5% of the Polish working-age population. In the European studies mentioned in the introduction section, carried out as part of the World Mental Health Survey Initiative in six European countries, approximately 12% of respondents used psychotropic medications, but these percentages varied from about 6% in Germany and 7.4% in the Netherlands to about 19% in France [1]. Poland is therefore a European country with a relatively low prevalence of psychotropic medicine use in the general population, and similarly to other countries, the highest percentage of respondents endorsed the use of sedatives.

The use of psychotropic medications in the general population and sociodemographic variables

As expected, psychotropic medications were used more often by women than men. Significant differences between them were not found only in the case of antipsychotics, which were used relatively rarely as in other countries where the WMH survey was carried out [1-4].

Psychotropic medications were most often taken by the oldest respondents, i.e. respondents between 50 and 64 years of age. This result is also not surprising, as it is confirmed by other studies conducted within the WMH [1, 3, 4] as well as many other studies showing that the use of psychotropics grows with age [cf. 18]. Elderly people may experience emotional problems and mental health disorders caused by limiting social contacts as a result of the death of spouses, siblings or close friends, and at the same time due to limited autonomy resulting from decreasing psychophysical performance [19].

In addition to the aforementioned mental health problems, loneliness may also be a factor that increases the risk of medicine use, as confirmed by a study among people aged 55-84, which found an association between feeling lonely and taking psychotropic medication [20]. Loneliness may also explain the results presented here, which indicate that, compared to the respondents in formal or informal relationships, those divorced and widowed were more likely to use psychotropics.

Prescribing psychotropic medications to the elderly may be fully justified. However, it should be remembered that age-related physiological changes affect the pharmacokinetics and pharmacodynamics of drugs, which increases the risk of side effects [19, 21]. In addition, elderly people also use medications for other ailments, and taking many different medications increases the risk of interactions and the associated negative health consequences [21]. Psychotropic medication use, including benzodiazepines, antidepressants, and antipsychotics, increases also the risk of falls which can lead to fractures and related problems [21].

Psychotropic medications were more prevalent among retirees, i.e. the oldest age group, who are also the most at risk of social isolation, including a sense of loneliness. Psychotropic pharmaceuticals were also used more often by participants from the category of 'other employment status, including unemployed and pensioners'. Similarly, in the research by Boyd and colleagues [2], the respondents from the 'other' category and the unemployed, especially men, were more likely to use psychotropic medications. As the authors of the cited study claim, this group of respondents includes part-time workers or precarious workers, i.e. employed on contracts known in Poland as 'junk contracts', and such status is associated with the risk of losing their job and therefore with higher job strain [2]. There is evidence that regardless of the level of social support, men experiencing higher job strain resulting from job insecurity use benzodiazepines significantly more often than women in the same occupational situation [2]. In addition, as indicated by data from European Union countries, including Poland, people with the lowest education are particularly at risk of unemployment [22], which to some extent explains why in our study psychotropic medication use was most prevalent among EZOP respondents who had lower education (at most completed middle school).

In sum, the presented study confirmed that deteriorated socioeconomic status (unemployment and low education, among others) is associated with psychotropic medication use, which is explained in the literature by the fact that people with a lower socioeconomic status do not have sufficient social support and at the same time experience a higher level of psychological distress. On the other hand, people with a higher social status are characterised by a positive attitude towards a healthy lifestyle, which fosters a care for repose and physical activity. They are also more likely to undertake action to prevent disorders and use alternative medicine rather than pharmaceuticals [4].

Finally, rural area residents, especially compared to the inhabitants of small and large cities, were less likely to use psychotropic medications, which is related to better access to psychiatric health care in cities [23] and the fact that Polish inhabitants living in small communities are generally less likely to seek medical advice [24].

Psychotropic medication use among respondents experiencing mental health disorders

Our analyses indicate that the majority of people who experienced severe mental health problems in the past year did not use psychotropic medication at that time, as about 17% of respondents with diagnosed disorders used these medicines. In comparable European studies, approximately one third of respondents (32.6%) used in the past 12 months at least one of the psychotropic medications that they were asked about in the study [1]. This suggests that pharmacological treatment is ordered less frequently in Poland, at least compared to more affluent European countries.

We found that pharmacological treatment, i.e. using at least one of the mentioned psychotropic medications, was most often endorsed by respondents diagnosed with

depression (approx. 44%) and mood disorders in general (approx. 42%). About a quarter of respondents (24.8%) with a diagnosis of depression consumed antidepressants, but they also used sedatives and hypnotics almost at the same frequency. Similar results were obtained in the above-mentioned European studies, in which the use of any psychotropic medication was reported by approximately 43% of respondents suffering due to depression of whom the use of antidepressants was confirmed by approximately 21% and sedative use was confirmed by 32.5% [1].

The authors of that study claim that these results raise doubts about the adequacy of current treatments for depression, where under-use of antidepressants is combined with the prescription of non-specific pharmaceuticals, such as sedatives [1]. Moreover, treatment of depression with sedatives (beznodiazepines) carries the risk of worsening depression and addiction, especially with long-term use of these medicines [18, 25]. In this context, it is also worth noting that in our analyses presented here, approximately 25% of respondents experiencing mood disorders confirmed sedative use.

Persons suffering due to anxiety disorders reported less medication use than those with depression and mood disorders. Likewise, respondents who had problems with alcohol use also reported less medication use. This latter result is not surprising considering that the primary method of alcohol dependence treatment is psychotherapy, and pharmacotherapy is used here as a supportive method [26]. In the case of alcohol abusers, it is fully justified. It is known that combining psychotropics, even with small amounts of alcohol, is very risky, as it may cause a synergistic effect. In addition, alcohol enhances the sedative effect of antidepressants, benzodiazepines and hypnotics [19].

The analysis of differences in the use of psychotropic medication between men and women diagnosed with any mental health problems shows not many statistically significant differences, except for any psychotropic medications and for hypnotics, which were more prevalent among women. These results are partially consistent with data from international research using the WMH methodology, which found that 'some gender differences did remain significant among only those with any 12-month mood disorder, but almost no gender differences were observed in those with 12-month anxiety disorders' [2, p. 785]. As the authors of that study prove, the frequency of psychotropic use depends on the severity of the symptoms, and when the symptoms are severe, there are no differences in medicine use between men and women [2]. For example, in American studies, an increased level of depression severity was associated with more frequent antidepressant use, to the same extent in women and in men [2].

Study limitations

Half (50.4%) of the randomly selected participants took part in the study. It cannot be ruled out that people who experience mental health problems are more likely to decline to participate in any study. It should be remembered that mental illness is still associated with stigmatisation, which leads to hiding these health problems not only

from bystanders, such as interviewers, but also from the immediate environment [4, 27]. In addition, persons with severe health disorders may be less accessible because they may feel not that well as other respondents to be interviewed or may be in residential psychiatric treatment facilities.

Information about the medication use came from the respondents themselves. Thus, although the respondents and interviewers had booklets containing examples of trade names of the psychotropic medications the study participants may have had difficulties recalling the names of medications consumed in the past year, especially if they had used these medicines a few months before the interview. In fact, other studies show that about half of patients who have been prescribed psychotropic medication stop using them in the first year of treatment [2]. Moreover, this problem especially applies to women in a difficult social and economic situation [2].

The respondents were asked about the groups of medications taken and not about the specific names of the pharmaceuticals used, so it is not possible to present data on the drugs most commonly used in each group. The project also does not include sedatives, hypnotics, and antidepressants which are over-the-counter (OTC) and widely advertised. According to the Public Opinion Research Centre data OTC medicines and dietary supplements are consumed by the vast majority of adult Poles (89%). Painkillers and anti-inflammatory medicines are the most prevalent as well as those which relieve symptoms of colds or flus. Nevertheless, 13% of participants in these studies used sedatives and hypnotics at least 1-2 times in the past year [11].

Conclusions

The results of the study indicate a low prevalence of psychotropic medication use among adult Polish residents compared to most developed European countries. Moreover, the vast majority of people who experience mental health problems do not use pharmacological treatment. This is especially true for anxiety disorders. Conversely, some patients who receive medication are probably not treated properly, e.g. with the use of benzodiazepines, which can, after a prolonged period, lead to a worsening of the disorder and to addiction. The availability of psychiatric treatment is very limited. For this reason, there is a need for better education of psychiatrists as well as general practitioners for the correct diagnosis and treatment of mental health disorders, which is also postulated by researchers in other countries [18]. It is also necessary to ensure continuity of care between specialised psychiatric treatment and primary health care, as accessibility to psychiatric treatment is still limited, with a particular lack of outpatient treatment facilities. Determined and extensive mental health promotion efforts are also needed. As the authors of the EZOP I study report wrote, ‘Health care [...] is unable to decisively influence the mental health status of the population. [...] its impact on the sources of unsatisfactory mental health is limited. Decisive action is needed to promote mental health’ [28, p. 276].

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