

## The prevalence of minor psychiatric morbidity and its correlates in Poland \*

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*The paper presents the prevalence and socio-demographic correlates of minor psychiatric morbidity (MPM) of the Polish population assessed in the national health interview survey conducted by the Central Statistical Office in 1996. MPM was assessed using a questionnaire based on GHQ-12 and diagnosis of neurosis. The relationships between MPM and socio-demographic factors, such as gender, age, marital status, level of education, main source of income were analysed. MPM was noted in almost 25% of women and about 18% of men in Poland. A very strong and significant relation between the incidence of neurosis and MPM was estimated. Only small differences were noted in prevalence of MPM or neurosis between urban and rural population. Divorced and widowed respondents, irrespective of gender, have MPM and neuroses more frequently than those of other marital status do. Also higher prevalence of MPM and neurosis was noted in the non-working population and especially in disabled persons. There was a well-marked association between MPM and a level of education: the higher the level of education, the lower the frequency of minor psychiatric morbidity.*

*Key words:* minor psychiatric morbidity, national health interview survey, Poland

### Introduction

Measures of physical health are easier to assess, while it is much more difficult to define the criteria of mental health. Typical epidemiological tools used in psychiatry are not always useful, according to their high level of complication and extremely high costs of using them in a large scale. Although CIDI (Composite International Diagnostic Interview) questionnaire [1] raises hopes of globalisation of psychiatric studies, this tool will only be widely recognised if the procedure of examination is simplified. A shortened version of CIDI is being elaborated, which is likely to become a commonly accepted questionnaire.

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Given the above, there is still a trend towards including aspects of human mental state and quality of life into national surveys of health status of populations [2]. In connection with constant progress in psychiatric epidemiology, information collected in national surveys is a valuable supplement to statistical data from in- and outpatient institutions about prevalence of mental disorders. The survey, of which selected results are presented in this paper, provided unique information about mental state that can be used in the future to compare with results of epidemiological studies carried out by means of the CIDI questionnaire.

The principal objective of the national health interview survey of the Polish population, conducted by The Central Statistical Office in April 1996, was “recognition of population’s health status and health care in association with demographic and social characteristics, family situation, material and professional status, place of residence, with distinction of residence in areas of ecological danger” [3]. Among assessed aspects, questions characterising minor psychiatric morbidity, such as irritability, nervousness, indifference, fatigue, insomnia and question about diagnosis of neurosis were interesting from a psychiatric point of view. The aim of the presented analysis was to assess prevalence of minor psychiatric morbidity in Polish population of Poland, aged above 15, and to define its relation to basic demographic and social characteristics: gender, age, place of residence, marital status, level of education and way of earning a livelihood. The preliminary results of the analysis were published in *Psychiatria Polska* [4, 5].

## Method

### Subjects

It was a representative survey of the entire non-institutionalised Polish population. Stratified scheme of random sampling, involving two steps, was used. Urban and rural census tracks in each province were the strata. In first step the census tracks, and in the second – households in these tracks were randomly selected. All inhabitants in sampled households were interviewed. From the sample of 20051 households interviewers successfully visited 17652 households (88%), interviewed 47924 adults (an “adult” in this study means respondent aged 15 and above) and 14822 children (below 15 years of age).

Study results were weighed for the number of Polish population according to 5-year age group, gender and place of residence in a province.

61.8% of the study population lived in urban areas and 38.2% in rural areas. Amongst the urban population there was a majority of women – 52.2%, while the rural population was balanced on the score of gender.

Age structure of the population was as follows: 37% constitute people aged 20-44, 21% – aged 45-64, 11.2% – above 65. There is a higher percentage of people aged 18-65 in urban areas, while in rural areas there are more children below 14 years of age and people above 65. Marital status of population is as follows: 63% are married, 24.6% are single – unmarried, about 10% are people widowed, 3.2% are divorced or in separation [3].

### Procedure

The questionnaire used in the study consisted of 5 forms: concerning household, intended for adults, for children below the age of 15, for disabled adults and for disabled children. Questions of mental health were present in the adult population form, amongst others in items: self-assessment of health status, complaints, chronic diseases, and emotional state.

Minor psychiatric morbidity was assessed using a questionnaire based on the General Health Questionnaire (GHQ-12). After the pilot study, respondents found some questions too similar, hence few questions from GHQ-12 were excluded and 1 question about sleep problems was added. Finally the questionnaire consisted of 11 questions, which were asked exclusively directly to the respondent, while for other questions it was acceptable that one person answered for other persons from the same household. Because of that condition the sample decreased by 8475 individuals and comprised of 39449 respondents. The questions concerned the quality of sleep, possibility of concentrating on an activity, managing difficulties and decision making, feeling of being needed by other people, feeling of being wrong and guilt, emotional tension, self-confidence and self-esteem. Answers, giving four options, indicated whether a respondent recently did better in a given situation, the same way or worse than usually (he/she feels a given state more frequently, equally frequently, less frequently, does not feel it). Results 0-1 represented well being, 3-4 represented moderate deterioration of self-estimated mental health. Minor psychiatric morbidity (MPM) was defined when a respondent noted his/her state had worsened in at least four answers. The categories were introduced by the CSO to follow the scale used in Czech Republic [6]. Additionally, neurosis was stated when a respondent, in a series of questions about his/her current diseases confirmed a neurosis diagnosed by a physician.

In order to determine to what degree prevalence of MPM and neurosis were associated with the analysed socio-demographic variables, standardised prevalence ratios SPRs and their 95% confidence intervals were calculated [7]. SPR is a ratio, given as a percentage, of the number of cases of analysed health problem observed in a given category of an explanatory variable, to expected number of cases. This expected number of cases was calculated with the assumption that in each 5-year age group of the analysed subset of subjects, prevalence of the given problem was equal to an average for the total of the Polish population (standard), while the age structure of the subjects in the analysed category remained unchanged. Thus a greater (or smaller) number of cases observed than expected is exclusively a result of a greater (or smaller) prevalence of the given problem in the analysed subgroup than in the total population of Poland and not of differences in age structure. When calculating confidence intervals of SPRs we have taken into account a multi-stage sampling procedure and accordingly estimated variance of observed number of persons with a given value of explanatory variable. Differences between subgroups were considered statistically significant only when 95% confidence intervals of SPRs were not overlapping. Adoption of one standard population enabled to assess differences in prevalence of health problems within, as well as between the gender groups.

Interviews were not conducted in 2399 households, 38% of which because of lack of contact with inhabitants, 33% due to refusal and 29% because of other rea-

sons (e.g. dwelling was not inhabited or did not exist any more). In the households where interviews were conducted only 941 (1.5% of the residents) persons were not interviewed.

### Results

The prevalence of minor psychiatric morbidity and neurosis for each category of

Table 1  
Prevalence of minor psychiatric morbidity and neurosis  
by sex and socio-demographic status (SDS) (percentages)

SDS category	Minor psychiatric morbidity		Neurosis	
	Males	Females	Males	Females
All	18.2	24.7	7.1	14.9
Place of residence				
Urban	17.3	24.2	7.4	15.2
Rural	19.8	25.7	6.8	14.5
Marital Status				
Single	10.4	12.3	4.0	5.9
Married	19.5	22.7	8.1	16.1
Widower /Widow	35.8	43.3	10.6	19.3
Divorced	39.2	35.2	15.2	25.4
Source of income				
Employee in public sector	11.0	16.6	5.2	12.6
Employee in private sector	11.5	14.9	3.8	10.5
Self-employed	13.7	18.3	5.0	11.1
Farming	15.4	20.0	6.5	15.2
Retirement pension	26.1	36.6	9.9	18.6
Disability pension	40.1	46.4	20.3	33.6
Other pension	28.3	36.4	11.4	17.6
Unemployment pay	21.1	18.5	4.6	11.6
Maintained by others	10.5	15.3	3.2	8.0
Education				
Higher	14.1	17.0	5.7	10.8
Secondary	15.4	19.3	6.8	13.4
Vocational	16.5	20.6	6.6	15.4
Primary	21.3	29.7	7.9	16.9
Primary not completed	33.0	46.0	10.6	16.0

analysed socio-demographic factors were estimated (Tab.1).

In further tables and figures, standardised prevalence ratios for these conditions

were presented.

### Gender

Gender turned out to be one of the most significant factors determining prevalence of MPM and neurosis. Prevalence of MPM was by 1/3<sup>rd</sup> more frequent amongst women than men; also neurosis was twice as more frequent in women than in men.

### Age

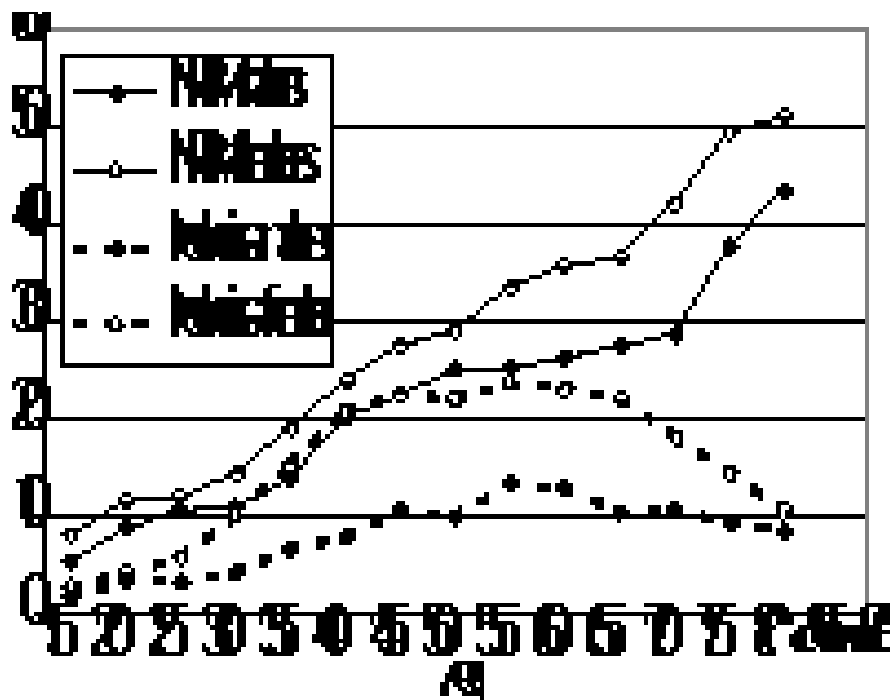


Figure 1 Prevalence of minor psychiatric morbidity (MPM) and neurosis by sex and age (percentages)

As it was expected, prevalence of MPM increased with age (Fig. 1).

In the youngest population (under the age of 25) MPM was prevalent in 6.9% of men and 9.8% of women, while amongst the eldest, aged above 75, prevalence was 40.4% and 50.4%, in men and women respectively. Neurosis was the most frequent in both men and women in the age group 55-64 years – 13.1% of men and 23.4% of women stated they had this health problem diagnosed by physician. The difference between prevalence of neurosis in men and women was also the greatest in the middle

age group.

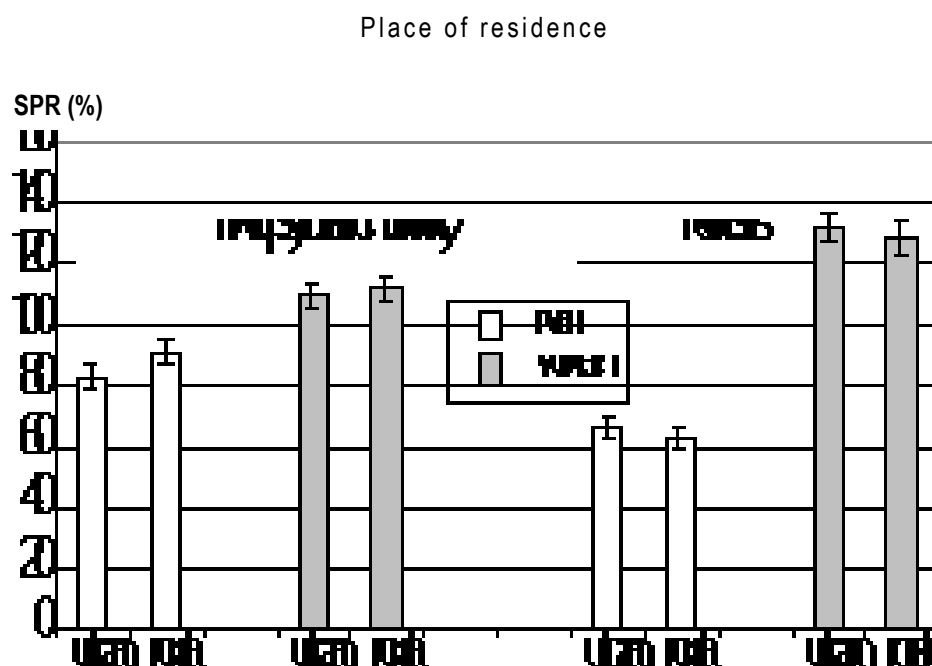


Figure 2 Age standardised prevalence ratio (SPR) and 95 % C.I. For minor psychiatric morbidity and neu place of residence

No apparent differences were found in prevalence of neither minor psychiatric morbidity nor neurosis between inhabitants of urban and rural areas (Fig. 2).

Indeed MPM was more frequent in rural areas, and neurosis in urban areas, yet the differences showed no statistical significance.

### Marital status

Both MPM and neurosis were significantly related to marital status of subjects (Fig. 3 and 4).

MPM as well as neurosis were clearly most frequent amongst divorced or separated respondents; the differences between this group and other groups were statistically significant. It is worthwhile noticing that divorced respondents were the only group in which prevalence of MPM did not differ in men and women. Prevalence of MPM amongst individuals who had lost their spouses was significantly higher in widows

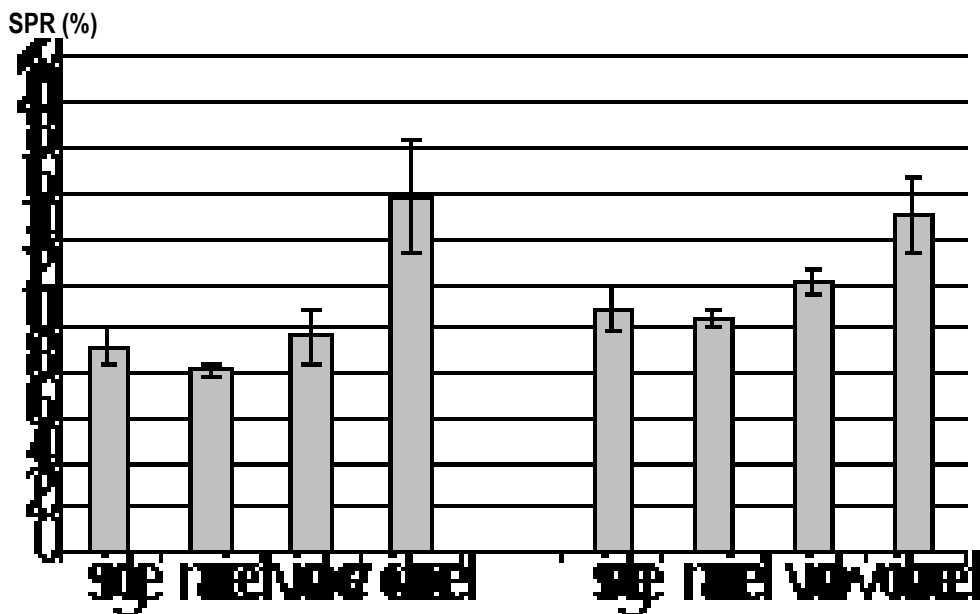


Figure 3 Age standardised prevalence ratio (SPR) and 95 % C.I. for minor psychiatric morbidity by sex and marital status

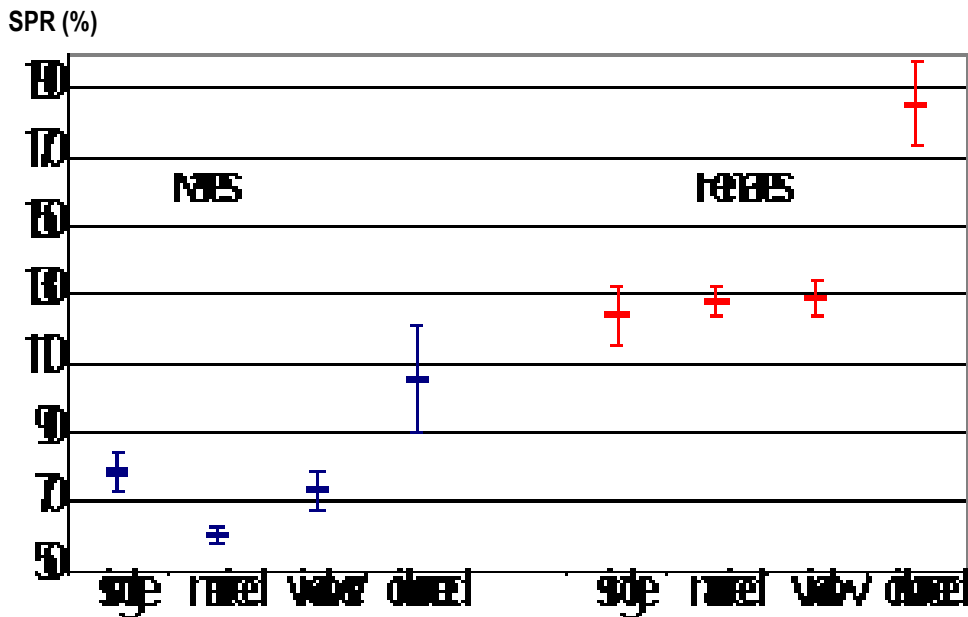


Figure 4 Age standardised prevalence (SPR) and 95% C.I. for neurosis by sex and marital status

and in widowers than in married respondents. Unmarried men had MPM and suffered from neurosis more often than married men did.

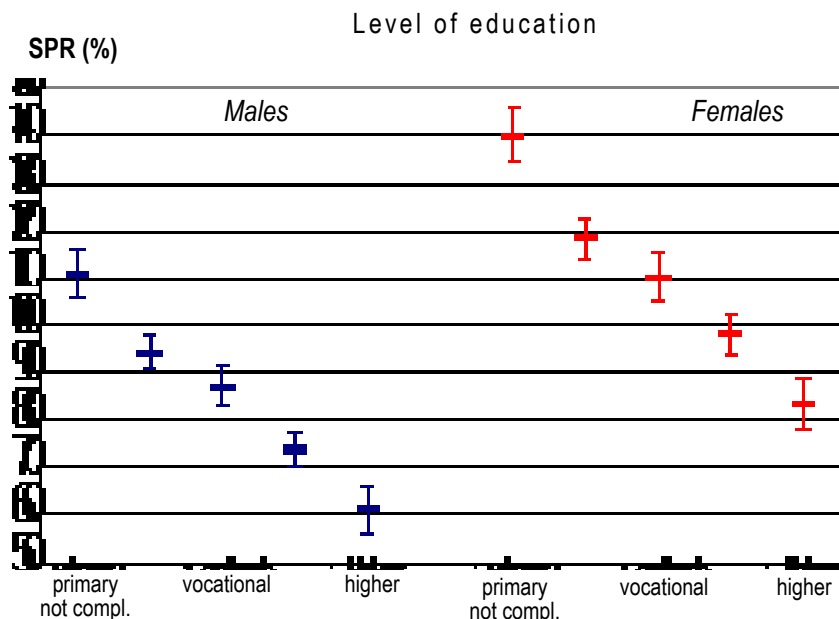


Figure 5 Age standardised prevalence ratio (SPR) for minor psychiatric morbidity by sex and education

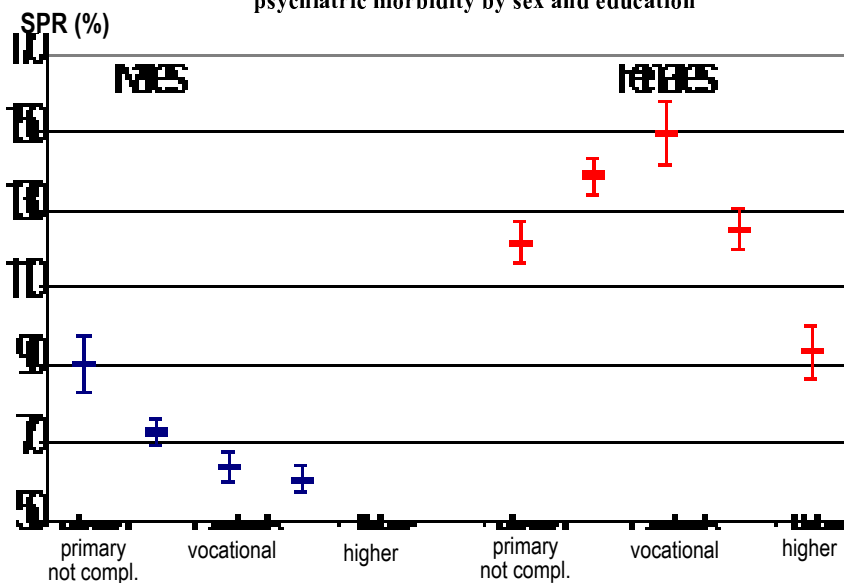


Figure 6 Age standardised prevalence ratio (SPR) for neurosis by sex and education



Level of education was significantly associated with the prevalence of both minor psychiatric morbidity and neurosis (Fig. 5 and 6).

Prevalence of MPM consistently decreased with the increase of level of education in both sex groups and the difference between particular categories of education was statistically significant in the majority of cases.

Prevalence of neurosis, on the other hand, was characterised by a slightly different relation to level of education in men and women. In men the prevalence of neurosis consistently decreased with the higher level of education, while in women neurosis was the most frequent in women with vocational education. In extreme categories, i.e. in women with above secondary or incomplete elementary education, neurosis was significantly less prevalent. Yet, similarly as in men, neurosis was diagnosed least frequently in women with a college or university education.

### Source of outcome

The way of earning a livelihood was analysed in the following nine categories: employee in public sector, employee in private sector, self-employment, farming, retirement pension, disability pension, other pension, unemployment pay, being maintained. A clear association was observed indicating a greater prevalence of MPM amongst

Table 2

Age standardised prevalence ratio (SPR) for minor psychiatric morbidity by sex and source of income

Source of income	Males		Females	
	SPR	95% C.I.*	SPR	95% C.I.*
Employee in public sector	58.3	(54.3, 62.3)	67.3	(62.9, 91.7)
Employee in private sector	70.3	(64.9, 75.7)	90.8	(84.0, 97.6)
Self-employed	70.5	(63.5, 77.5)	95.7	(82.3, 109.1)
Farming	77.2	(71.7, 82.7)	99.9	(93.4, 106.4)
Retirement pension	73.7	(71.0, 76.4)	104.1	(100.6, 107.6)
Disability pension	142.8	(136.8, 148.8)	158.7	(152.6, 164.8)
Other pension	132.6	(120.6, 144.6)	125.2	(118.7, 131.7)
Unemployment pay	134.3	(123.9, 144.7)	121.0	(111.6, 130.2)
Maintained by others	107.6	(99.6, 115.6)	110.3	(104.1, 116.5)

\*95% confidence interval

non-working people (regardless of the gender), with the highest SPR amongst people on disability pension (Tab. 2).

Amongst professionally active people differences are relatively small; only men living on farming had MPM significantly more often than employees of public sector. It should be noted that SPR of MPM was similar in non-working men and women.

Table 3

Age standardised prevalence ratio (SPR) for neurosis by sex and source of income

Source of income	Males		Females	
	SPR	95% C.I.*	SPR	95% C.I.*
Employee in public sector	46.0	(42.6, 49.4)	109.8	(104.2, 115.4)
Employee in private sector	42.4	(37.9, 46.9)	115.8	(106.4, 125.2)
Self-employed	42.9	(37.3, 48.5)	95.7	(81.1, 110.3)
Farming	56.1	(51.0, 61.2)	127.6	(117.8, 137.4)
Retirement pension	61.4	(58.6, 64.2)	115.3	(111.0, 119.6)
Disability pension	126.9	(120.5, 133.3)	212.4	(203.8, 221.0)
Other pension	104.8	(90.6, 119.0)	136.6	(128.2, 145.0)
Unemployment pay	54.7	(48.1, 61.3)	142.2	(128.2, 155.6)
Uninsured by others	76.1	(68.0, 84.2)	122.5	(114.6, 130.4)

\*95% confidence interval

In the case of neurosis difference between professionally active people and non-working is clearly smaller than in case of MPM, especially in women (Tab. 3).

SPRs were significantly greater in women than in men in all income categories.

Finally, a very strong and significant relation between neurosis and MPM must

SPR (%)

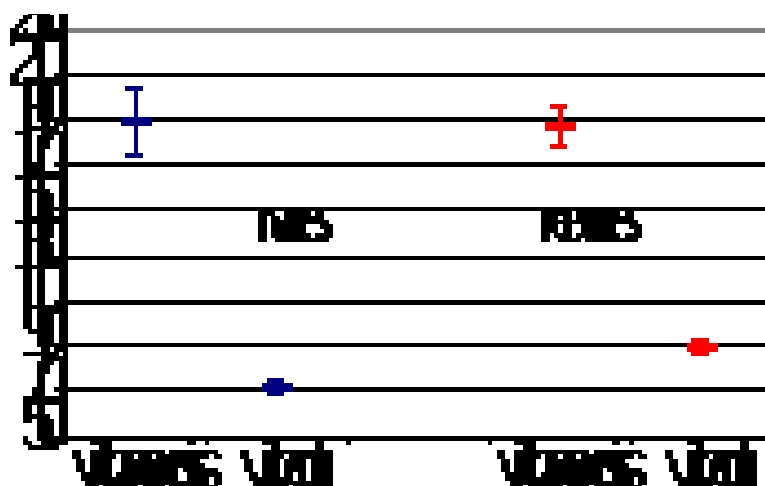


Figure 7 Age standardised prevalence ratio (SPR) for minor psychiatric morbidity by sex and presence of neurosis

be noted. People with neurosis diagnosed by a physician, both men and women, had MPM over twice more often than people without neurosis (Fig. 7).

On the other hand, over 1/5<sup>th</sup> of subjects with a declared diagnosis of neurosis have their mental state assessed as good. It is worthwhile emphasising that MPM had the same prevalence (after eliminating differences in age structure) in men and women with neurosis, while in people without neurosis it was more frequent in women.

### Discussion and conclusions

Study of the health status of Polish population was one of national surveys conducted in many European countries, according to the guidelines of EC and WHO [8], amongst others in the Netherlands [2] and Czech Republic [6]. Data from the study will enable comparison with the results from studies in other countries and should encourage intensifying epidemiological studies carried out by means of the CIDI questionnaire. Undergoing reforms, the Polish health care system calls for a better assessment of the health status of the population that needs more epidemiological studies of better quality. It concerns in particular those health problems of high prevalence that are underdiagnosed, but their consequences constitute a burden in many aspects of societal life. As far back as in 1978 American President's commission for mental health identified in their report the lack of reliable data concerning health status of American society as a possible cause of failure of efforts directed to elaborate a programme of reform of psychiatric health care. As a consequence of this report a study project known as the National Comorbidity Survey was conducted in 1990-92 [9].

Sociologists and psychiatrists try to draw conclusions about emotional condition of the Polish population from such indirect indicators as suicide ratio or number of consultations in mental health dispensaries or admissions to psychiatric hospitals. These indices are yet very deceptive, because they illustrate only the most serious psychopathological disorders, usually characterised by a stable level. Additionally they do not include statistics from the developing sector of private medical services.

The situation concerning psychological and psychiatric problems is quite different in the general population than in treated patients. The extent of problems is different and so is the prevalence and intensity of disorders. Although the study conducted by the Central Statistical Office in 1996 dealt with psychiatric aspects only partially, questions included in the questionnaire allow for the formation of a view on the mental condition of Polish population of the latter part of 90's. Structure of questions afforded possibilities for self-assessment of the health related problems, forming a picture of mental state, with additional questions about the occurrence of neurosis confirmed by a physician. A great value of the study has been a high representativeness of respondents, coming from different social and age groups, as well as the fact that the study was carried out in a period of main economic transformations in the country.

The results show that minor psychiatric morbidity was noted in almost 1/4<sup>th</sup> of women (one woman in ten aged under 25 and every second woman aged above 75) and about 18% of men. Neurotic disorders were reported by 7.1% of men and 14.9% of women and in the age group 55-64 in 13.1% and 23.4% of men and women, respectively. A very strong and significant relation between the existence of neurosis and MPM was noted, which may suggest in these subjects the occurrence of disorders

close to major depression, yet not fulfilling appropriate criteria. Gender turned out to be one of the most significant factors determining prevalence of MPM and neurosis. This is a usual finding noted, with more or less variation, in many population studies. Although no significant differences were noted in prevalence of MPM or neurosis between inhabitants of urban and rural areas, yet the common opinion of lesser stressfulness of rural environment becomes a myth. This finding should prompt specialist supervision and local administration to improve the extent of psychiatric services and their availability in rural areas.

It is not surprising that the emotional condition of non-working individuals, especially disabled people, is worse than that of professionally active population. Arising excess of worse emotional status in rural than in urban areas is also confirmed by a greater prevalence of MPM in men living on farming in comparison to those employed in the public sector.

As expected, divorced and widowed respondents, irrespective of gender, had MPM and neurosis much more often than married and unmarried people.

An interesting phenomenon, similar to trends observed in Western countries, is an apparent relationship between occurrence of neurosis and minor psychiatric morbidity and education level. It is especially evident in men, in whom a higher level of education is inversely associated with prevalence of disorders. It can be therefore concluded that education is a kind of shield protecting from the analysed mental morbidity.

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