

Mental well-being and the presence of selected risk factors of cardiovascular diseases in elderly men during homelessness – a preliminary study

Samopoczucie psychiczne oraz obecność wybranych czynników ryzyka chorób układu krążenia u starszych mężczyzn w okresie bezdomności – badanie wstępne

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Abstract

Introduction. Cardiovascular diseases, which are the main cause of death in the world, are also the most common cause of death among homeless people. People affected by homelessness struggle with a number of health problems. Many suffer from mental disorders, including depression. **Aim.** The aim of the study was to assess the frequency of selected risk factors of cardiovascular diseases and to determine the mental well-being of older men during homelessness. **Material and methods.** The study was conducted among 40 men staying in a shelter for the homeless in Warsaw. The average age of the surveyed men was 60.7 ± 10.62 years. The research tool used was the Beck Depression Inventory (BDI) and own questions. **Results.** In the study, severe symptoms of depression were recorded in 20% of patients, 15% had moderate symptoms of depression, and 20% of respondents experienced mild symptoms of depression. Frequent feeling of stress was recorded among 13% of men, and 20% of respondents felt stress every day. Lack of physical activity was observed in 25% of people. 45% of people over 40 years of age declared smoking and 42.5% current alcohol consumption. **Conclusions.** Every second man in the study had symptoms of depression of varying degrees of severity. Additionally, a high prevalence of cigarette smoking and alcohol consumption was observed. (Gerontol Pol 2024; 32; 3-8) doi: 10.53139/GP.20243207

Keywords. homeless, men, risk factors for CVD, symptoms of depression.

Streszczenie

Wstęp. Choroby układu krążenia, które są główną przyczyną zgonów na świecie, także wśród osób bezdomnych stanowią najczęstszą przyczynę śmierci. Osoby dotknięte bezdomnością zmagają się z szeregiem problemów zdrowotnych. Wiele z nich cierpi z powodu zaburzeń psychicznych, w tym depresji. **Cel.** Celem pracy była ocena częstości występowania wybranych czynników ryzyka chorób układu krążenia oraz określenie samopoczucia psychicznego wśród starszych mężczyzn w okresie bezdomności. **Materiał i metody.** Badanie przeprowadzono wśród 40 mężczyzn przebywających w schronisku dla bezdomnych w Warszawie. Średnia wieku badanych mężczyzn wyniosła 60.7 ± 10.62 lat. Zastosowanym narzędziem badawczym był Inwentarz Depresji Becka (BDI) oraz pytania własnego autorstwa. **Wyniki.** W przeprowadzonym badaniu nasilenie objawów depresji w stopniu ciężkim zanotowano u 20%, u 15% występowały umiarkowane objawy depresji, natomiast 20% badanych odczuwało objawy depresji w stopniu lekkim. Częste odczuwanie stresu zanotowano wśród 13% mężczyzn, zaś 20% badanych odczuwało stres codziennie. Brak aktywności fizycznej zaobserwowano u 25% osób. Palenie papierosów powyżej 40 lat deklarowało 45% osób, a 42.5% obecne spożycie alkoholu. **Wnioski.** W badaniu tym u co drugiego mężczyzny stwierdzono występowanie objawów depresji o różnym stopniu nasilenia. Ponadto zaobserwowano częste rozpowszechnienie palenia papierosów i spożycia alkoholu. (Gerontol Pol 2024; 32; 3-8) doi: 10.53139/GP.20243207

Słowa kluczowe. bezdomni, mężczyźni, czynniki ryzyka ChUK objawy depresji.

Introduction

According to the World Health Organization, cardiovascular diseases (CVD) are the leading cause of death worldwide. Each year, 17.9 million people die from CVD, accounting for 32% of all deaths. The main CVD risk factors include: smoking, unhealthy diet, harmful use of alcohol, inappropriate physical activity, hypertension, high cholesterol and glucose levels, and social factors such as aging, income and urbanization [1]. People in the homelessness crisis also suffer from CVD, which is the most common cause of death is caused by psychosocial risk factors. Additionally, difficult social conditions, with frequent multi-morbidities, difficult access to medical care, and non-compliance with medical recommendations make the treatment of homeless people extremely complicated. It is estimated that the mortality rate due to cardiovascular diseases among the homeless is 61%-71% higher than in the general population [2].

Depressive disorders are associated with the presence of a specific set of symptoms in which depressed mood is an important element, but not the only one. The severity of the disease causes great suffering, which may lead to behavior that poses a threat to the patient [3]. Untreated depression may therefore cause premature death and also affect the frequency of suicides [4]. Many people experiencing homelessness suffer from mental disorders, including depression, and mental health problems may contribute to the development of addictions, which may result in the severity of mental problems. Such people may be more subject to social discrimination, also in health care facilities [5,6].

The homelessness crisis is associated with a difficult and complicated life situation and the lack of satisfaction of basic human needs. Such people, who do not have a permanent place of residence, find safe addresses in public places, shelters, abandoned buildings or vehicles, and find it very difficult to find food. Often, these people, apart from lacking social support, also have no medical support. It is not possible to refer health problems to a specialist, which results in urgent hospitalizations. Therefore, people affected by homelessness struggle with a number of health problems. [7]. Additionally, an extremely difficult situation is the breakdown of social position and lack of help from family and friends, which may arouse strong emotions in the form of frustration and even aggression, and ultimately lead to social isolation, all of which is associated with the risk of premature death [8].

Aim

The aim of the study was to assess the frequency of selected risk factors of cardiovascular diseases and to determine the mental well-being of older men during homelessness.

Material and methods

A pilot observational study was conducted among 40 men staying in a homeless shelter in Warsaw. The research implementation time is June or July 2023.

The analysis included 40 correctly completed questionnaires, the average age of the surveyed men was 60.7 ± 10.62 years.

The study was conducted in accordance with ethical principles. Participation in the study was voluntary and anonymous. Participants had the right to withdraw from the study at any time without giving a reason.

The study was conducted after obtaining written consent from the director of the facility and the Bioethics Committee of the Medical University of Warsaw, number AKBE/185/2023.

The questionnaire included sociodemographic data of the study group: age, education, period of homelessness, number of diseases, number of hospitalizations, physical activity, smoking time, current alcohol consumption, contact with loved ones, and the occurrence of stress. Body weight and height were also measured and the BMI was calculated.

The Beck Depression Inventory (BDI) was used to assess the level of depression symptoms. The scale consists of 21 questions, each question requires one answer, according to the intensity of symptoms, which are scored 0–3. The assessment should focus on how you feel during a selected period of time: the last week or the last month. The questions refer to possible symptoms of depression, including: hopelessness, suicidal thoughts and sleep disorders. To interpret the result, you need to sum up all the points obtained from the answers, which means: 0-11 points - no depression; 12–26 points – mild depression; 27–49 points – moderate depression; 50–63 points – severe depression.

This scale is a screening test and cannot be used to diagnose depression. If scores above 11 are obtained, the examined person should be encouraged to consult a specialist, which was done during the examination [9].

The values of the Goodman-Kruskal τ coefficient and the γ coefficient were calculated for selected pairs of variables. The first coefficient τ takes values from 0 to 1 and shows the influence of the independent variable on the dependent variable. The values of the γ coefficient

were also calculated. This coefficient measures the monotonic relationship between two variables and has values ranging from -1 to 1. Positive values occur when an increase/decrease in the category of one variable is accompanied by an increase/decrease in the category of the other variable. Negative values occur when the direction of category changes for both variables is opposite.

Results

The average age of the men participating in the study was 60.7 ± 10.62 years old. The period of homelessness among 73% of the respondents was over 5 years, only 8% of the respondents were in the crisis of homelessness for less than a year. The respondents most often had secondary education (37.5%) and primary education (32.5). Of the respondents, 40% of people admitted

Table I. Sociodemographic variables and selected risk factors for CVD, the occurrence of stress and the level of depression according to the BDI

Parameter		%
A period of homelessness	< 1 year	8.0
	1-3 years	13.0
	< 3-5 years	8.0
	< 5 years	71.0
Education	Primary	32.5
	Occupational	25.0
	Secondary	37.5
	Higher	5.0
Number of diseases	None	12.5
	1	15.0
	2-3	40.0
	4-5	20.0
	6-7	10.0
	8-9	2.5
Number of hospitalizations in the last 5 years	None	15.0
	1-3	43.0
	4-5	22.0
	More than 5	20.0
BMI	Norm	70.0
	Overweight	25.0
	Obesity	5.0
Physical activity	None	25.0
	Physically active	75.0
Period of smoking	Non-smoker	5.0
	1-20 years	16.0
	21-40 years	34.0
	Above 40 years old	45.0
Current alcohol consumption	Yes	42.5
	No	57.5
Contact with the closest	Yes	22.5
	No	77.5
Stress occurrence	Never	32
	Seldom	35
	Often	13
	Every day	20
Beck Depression Inventory (BDI)	None	45
	Slight	20
	Moderate	15
	Severe	20

that they suffer from at least 2-3 chronic diseases, while 15% of people do not suffer from any diseases. Among the respondents, 43% of people admitted that they had been hospitalized more than 3 times in the last 5 years, and 15% of people had not been hospitalized even once during this time. 25% of the respondents were overweight. Lack of physical activity was observed in 25% of people. Smoking cigarettes for more than 40 years was recorded in 45% of people. 42.5% of respondents admitted to current alcohol consumption. Most respondents (77.5%) do not maintain contact with their loved ones. 20% of the surveyed men declared daily stress. Severe symptoms of depression were observed in 20% of people, while moderate symptoms occurred in 15% of men (table I).

In the study, it was observed that the increase in the intensity of stress and symptoms of depression was strongly related to each other and influenced the level of depression ($\gamma = 0.731$). The level of stress was also associated with the duration of smoking ($\gamma = -0.463$). A longer period of smoking also influenced the level of depression symptoms ($\gamma = -0.417$). In this study, an increase in physical activity was strongly associated with a decrease in the number of hospitalizations ($\gamma =$

-0.766) as well as with a decrease in the number of diseases ($\gamma = -0.710$). The increase in physical activity was also associated with a reduction in the intensity of stress ($\gamma = -0.572$) and the level of depression symptoms ($\gamma = -0.944$). Respondents who had a greater number of diseases were accompanied by a decrease in alcohol consumption ($\gamma = -0.355$). However, the length of the period of homelessness was associated with alcohol consumption ($\gamma = 0.768$), and alcohol consumption was associated with reduced contacts with loved ones ($\gamma = -0.313$). Detailed data is provided in table II.

Discussion

Homeless people face many barriers in access to health care [10], and the increased risk of mental illness in this group of people [11,12] is associated with the incidence of cardiovascular diseases [13].

The aim of this study was to assess the prevalence of selected risk factors for cardiovascular diseases and to determine the mental well-being of older men during homelessness. In our study, a total of 55% of men experienced depression symptoms of varying degrees of severity. However, 20% of men declared feeling everyday

Table II. Values of τ and γ coefficients for selected sociodemographic variables, CVD risk factors, stress level and depression

Independent variable (X)	Dependent variable (Y)	t	g
Age	Stress occurrence	0,184	-0,400
Age	Depression level	0,134	-0,316
BMI	Stress occurrence	0,034	-0,585
BMI	Depression level	0,041	-0,849
Smoking	Hospitalisation number	0,074	-0,350
Smoking	Stress occurrence	0,065	-0,463
Smoking	Depression level	0,140	-0,417
Physical activity	Hospitalisation number	0,033	-0,766
Physical activity	Number of diseases	0,044	-0,710
Physical activity	Stress occurrence	0,017	-0,572
Physical activity	Depression level	0,172	-0,944
Stress occurrence	Hospitalisation number	0,062	0,346
Stress occurrence	Number of diseases	0,046	0,357
Stress occurrence	Depression level	0,260	0,731
Homelessness period	BMI	0,073	-0,341
Homelessness period	Stress occurrence	0,161	0,320
Homelessness period	Alcohol consumption	0,198	0,768
Education	Smoking	0,065	-0,293
Number of diseases	BMI	0,108	0,455
Number of diseases	Stress occurrence	0,060	0,342
Number of diseases	Alcohol consumption	0,059	-0,355
Number of diseases	Contact with relatives	0,029	-0,313

stress. According to the data presented in the systematic review by the authors Gutwiński et al. major depression was found on average in 12.6% of cases. However, study outcome estimates ranged from 0% to 40.6% [14]. Different results than those obtained in our study were obtained by Laporte et al., in which depression affected 4.5% of respondents, while mild and moderate symptoms of depression were found in 15.8% of respondents [15].

When analyzing the occurrence of risk factors for cardiovascular diseases in the study group, it was observed that cigarette smoking affected as many as 95% of the respondents and alcohol consumption occurred in 42.5% of the people. In the Baggett & Rigotti study, the prevalence of cigarette smoking was lower than in our study and amounted to 73%, and this was directly related to the problem of alcohol consumption [16]. Results similar to those obtained in our study were obtained by Goździk et al., where 69.9% of respondents smoked cigarettes every day or occasionally, while 47.7% consumed alcohol. In that study, people with a higher need for mental health services were more likely to consume alcohol, but their stress levels were lower than those who did not consume alcohol [17]. Also consistent with the reports of Gutwiński et al. one of the most common problems of people in the crisis of homelessness were alcohol abuse disorders, and their frequency was on average - 36.7%, with the results ranging from 5.5% to 71.7% [14], while according to Laporte et al. alcohol addiction among the homeless was 21% [15].

Interesting information is provided by a study by Rota-Bartelink & Lipmann, where a quarter of respondents stated that depression or mental health problems contributed to their homelessness. However, people who were previously homeless reported symptoms of depression more often than people who had never been homeless (69%; 57%, respectively), and 61% of people indicated that the cause of depression was the loss of their home. Moreover, the authors of this report pointed out that the majority of people who found themselves in a homelessness crisis for the first time were elderly [18]. Therefore, implementing a homeless-friendly policy, ensuring access to medical services, and housing support would help improve the situation of people in the homeless crisis.

Conclusions

1. Our findings indicate the prevalence of symptoms of depression and stress in the group of homeless men. The risk of cardiovascular disease is also high, mainly due to the prevalence of smoking and alcohol consumption.
2. This condition requires further monitoring and identification of people with health and mental problems, and it is also necessary to plan help for this group of people.

Conflict of interest

None

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