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PRACA ORYGINALNA
ORIGINAL ARTICLE

STUDY OF THE LIFESTYLE OF ECONOMICALLY ACTIVE POPULATION OF THE CHERNIVTSI REGION: THE PREVALENCE OF RISK FACTORS AMONG BUSINESS ENTITIES IN THE MARKET

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ABSTRACT

Introduction: To reduce the burden of non-communicable diseases (NCDs) and premature mortality, it is necessary to influence the risks of their occurrence at all stages of life. Economically active population, which can be more at risk, is required the special attention.

The aim of the study is to investigate the prevalence for risk factors of major NCDs among the economically active population of the Chernivtsi region in the example of business entities in the market.

Materials and methods: The survey of the Chernivtsi business entities (n = 633) conducted in 2017-2018 on the territory of ME CSC (the Municipal Enterprise City Shopping Complex) "Kalynivskiy market" has been used in the research.

Results: There is the high level of the prevalence of the main risk factors for NCDs (unhealthy diet, lack of physical activity, smoking) among those working in the territory of the market. Only 17% consume a sufficient amount of fruit and fish. Only 35% of respondents systematically do physical exercises and special physical exercises. The most common unhealthy diet has been found among young men (25-44 years), in this group, about 40% are smoking. An acute problem of female smoking (25%) among market workers has been revealed. It is shown that, in general (taking into account passive smoking), 65% of respondents suffer from harmful effects of tobacco.

Conclusions: The established features of the lifestyle of workers indicate the need to make maximum efforts to focus on improving medical literacy and the formation of motivation to preserve health.

KEY WORDS: economically active population, non-communicable diseases, risk factors

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INTRODUCTION

Over the last decade, the burden of non-communicable diseases (NCDs) is increasing in the world. Every year, 15 million people aged 30-69 die from NCDs (cardiovascular, oncological, chronic respiratory and diabetes mellitus). More than 80% of these deaths occur in developing countries. One of the goals for achieving the objectives of sustainable development is to reduce the mortality rate from NCDs at the age of 30-69 by one third by 2030. The influence on the risks of NCDs is necessary at all stages of life [1]. The economically active population (15-69 years), which is most at risk, requires special attention. The WHO Global Conference on Issues related to NCD in Montevideo (2017) highlighted the dependence of premature mortality on economic, environmental and social determinants. To counteract a complex set of factors (tobacco use, inadequate physical activity, alcohol abuse, unhealthy eating) and the use of appropriate measures (taking into account gender peculiarities and the level of medical literacy), it is necessary to monitor their prevalence in the state and individual regions [2].

Individual risk factors have been studied regularly for a long time. For example, the Second Global Adult Tobac-

co Survey (GATS-2017) showed a significant decrease in the overall and daily prevalence of smoking in Ukraine compared to 2010 [3]. There is a need for a detailed study of the prevalence of all the major factors of the NCDs among the busy economically active population, which spends a significant part of life at work. People who work under stress or instability tend to smoke more, move less and eat inefficiently. The Global Health Action Plan for 2008-2017 considered the need to stimulate health promotion and comprehensive prevention of NCDs through popularization a healthy and regular diet, physical activity, and strengthening mental health and family health [4]. The results of sample household surveys on economic activity through direct inquiries usually have economic and social uses [5]. In the social aspect, the supply of labor and the use of human resources in the production process is evaluated, but the question of health is not included in such questionnaires. As wholesale and retail trade occupy a significant proportion of economic activity (the highest after industry, education, health care, and social assistance), lifestyle research and self-assessment of health workers in the markets are extremely topical.

THE AIM

To study the prevalence of risk factors for major NCDs among the economically active population of Chernivtsi region in the example of business entities in the markets.

MATERIALS AND METHODS

The survey of the Chernivtsi business entities ($n = 633$) conducted in 2017-2018 on the territory of ME CSC (the Municipal Enterprise City Shopping Complex) "Kalynivskiy market" has been used in the research. A specially designed questionnaire has been used, which included questions about eating habits, physical activity, bad habits and self-assessment of health. The research has been carried out personally by the author, which made it possible to ensure a unified approach to the survey, with elements of structured interviewing and observation. The structured survey consisted of three forms of questions that were convenient for filling in a limited time (outside customer service): closed, providing specific answers (gender, age, education, marital status, district of residence); alternatives with the even number of response options and structured with the list of responses provided. The questionnaires provided for an independent filling (6-10 min.). The general aggregate consisted of independent and hired workers in the whole territory of the mentioned markets evenly according to the existing distribution by sectors. 650 questionnaires have been collected, 633 of which have been selected for analysis. The 95% confidence level has been selected when determining the sample size. Sociological and statistical methods have been used. Before the interview, the necessary information was provided on each case of participation in the study.

RESULTS

"Kalinovsky market" is a place of work for a significant part of Bukovinians. Of the 633 people surveyed, there were 313 men (49.45%), with a mean age of 38.55 ± 0.20 and 320 women (50.55%), with a mean age of 42.75 ± 0.20 . The respondents were 488 (77.09%) residents of all neighborhoods of the city, 122 (19.27%) residents of the adjacent districts of the region, and 23 (3.63%) ones of the neighboring regions. The mean age of the respondents was 40.68 ± 0.14 years. The age distribution has been conducted according to the recommended for the economically active population (15-70 years old), taking into account the WHO classification (young (25-44 years old), middle-aged (45-59 years old) and elderly (60 and older). In our study, the largest proportion of the respondents - 82.3% were young and middle-aged people (25 to 60 years). It should be noted that there were more than half men of young age (25-44 years), and this age category was 44.06% among women. About half of all respondents have higher education: men - 54.63%; women - 41.88% ($p < 0.01$). According to the marital status, 70.18% are married, with a higher percentage of single men among the respondents under 25 years and widows among the women, especially at the age of 45-59

years (10.77%) and 60 years old and older (40.00%).

The study of the prevalence of the major risk factors for the NCDs allowed identifying the characteristics of nutrition, physical activity, tobacco smoking and alcohol consumption by the respondents. A study of eating habits showed that only 41.21% of workers monitor their diet, among young people - 34.58% of men and 52.94% of women. The most common was 3 meals a day (2.31 ± 0.05 meals). The sufficient amount of fruit (according to the respondents) is consumed more often by women than men (Fig.1), total 47.55%. The share of fruit consumption is the lowest for men 25-44 years (35.36%) and women over 60 years old (43.75%). Women consume more vegetables than men. There is a group of men 25-44 years old, in which the index is the lowest - 45.30%, in women of the corresponding group - 57.45%. Men consume more vegetables after 60 years 61.11%, which led to a corresponding contribution to the leadership of vegetables among the products they consume. The respondents do not include a sufficient amount of fish in their diet - 22.9%. The highest index of the consumption of the adequate amount of meat is observed in men up to 25 years old - 67.65%.

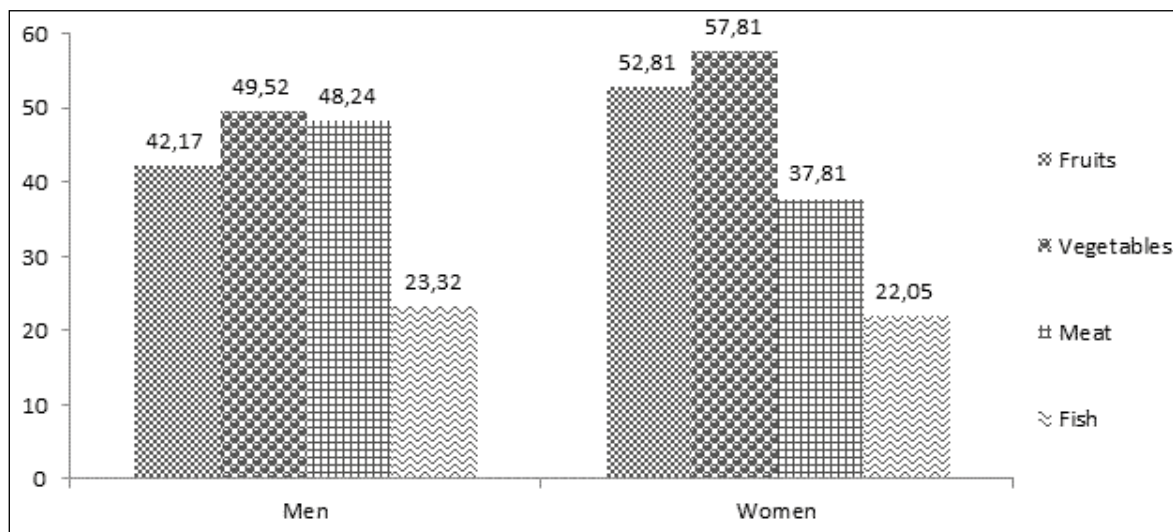
Vegetables are in the first place in the popularity ranking of food products among men. We emphasize that potatoes predominate among vegetables, but this vegetable is not included in the majority of international recommendations for useful products/vegetables. Consumption of meat products is in the second place mainly in the group up to 45 years old (maximum up to 25 years old). Consumption of fruit (insufficient consumption at the age of 25-44) is in the third place. Fish products are the next with a large margin (which most respondents motivate as inaccessible for them). Young men up to 45 years old eat fast food, but it is almost ignored at an older age. Fried meals, salt, fat, and sweets are among the restrictions. When detailing the nature of the nutrition, the highest frequency of consumption of fruits, vegetables and fish occur at the age of 40-44 years (24.14%) and 45-49 years (21.21%). Among men, the consumption of fruits, fish and vegetables is most closely correlated with the answer in relation to food control (direct strong connection $r = +0.99; +0.85; +0.78; p < 0.05$). Women also consume vegetables most often, but, unlike men, evenly in all age groups. Fruit is in the second place, meat products are in the third one with insufficient consumption of those and others after 60 years. Restriction of the fried, fatty, salty and sweet meal for women with age becomes more topical. Fast food is consumed mainly by women up to 25 years old, and it is completely ignored at an older age. For females, control of nutrition correlates with the consumption of fish, meat and fruit (direct strong connection $r = +0.99; +0.98; +0.81; p < 0.05$). Women aged 25-29 and 55-59 manage their nutrition according to these three indices the most (23.3% and 23.5% respectively).

426 respondents (67.30% of the sample) answered the question about the recognition of a sufficient level of their physical activity. 67.61% of the respondents recognized themselves as active, namely, among 220 men - 155 (70.46%) and among 206 women - 133 (64.56%). Women are inferior to men only in jobs with physical workload (Table I).

Table I. Types of physical activity and leisure (n=633)

Types of physical activity and leisure	Men (%)	Women (%)	Total (%)
Physical exercise during the day	13.74±1.95	10.0±1.68	11.85±1.29
Classes 4-5 times a week	10.22±1.72	9.38±1.63	9.80±1.63
Classes 2-3 times a week	9.27±1.64	8.13±1.53	8.69±1.12
Classes 1-2 times a week	8.31±1.56	6.88±1.42	7.58±1.05
Job with physical workload	39.94±2.78*	31.25±2.60*	35.55±1.90
Work on the farmland	29.71±2.59	35.63±2.68	32.70±1.87
Walking	39.30±2.77	44.69±2.78	42.02±1.96

*the difference between the indices is significant

**Fig. 1.** Consumption of the main types of products (%)

Every 7th person systematically does physical exercise, - every 5th (22.05%) in the age group 45-59, and every 2nd (50.0%) in the age of 60 and older. Among women, only one out of ten exercises regularly. The respondents in age groups up to 25 years old: 20.59% of men and 17.86% of women do special exercises 4-5 times per week; and the other respondents have classes 2-3 times a week and 1-2 times a week equally often, without a significant difference between sex and age. More men than women consider themselves active at work due to the age group of 25-44 years (44.76%). Work on the farmland is relevant for 45-59-year-olds: 42.50% of men; 43.70% of women (for women 60 and older - 46.88%). The respondents from older age groups are more likely to walk, in particular, more than half of women (56.25%). Weekends (mostly 1 day a week) are spent in front of a computer, surfing the Internet (49% of men, 26% of women), watching TV (30%) and housework (37% men and 67% women).

Among the respondents 104 men (33.23%) and 80 women (25.0%) smoke. Among the rest (n=449), 89 men (42.58%) and 39 women (16.25%) used to smoke. The ratio of the number of smokers to those who has given up a bad habit among men is 1.17 (104/89), among women - 2.05 (80/39). The greatest number of smokers is among young people: men - 37.02% and women - 31.21%. When analyzing the prevalence of tobacco

smoking by age, it is necessary to allocate men aged 20 to 30 who smoke the most - 39.5%. Only from the age of 50, the proportion of male smokers decreases to 19.15% (Fig.2). Women between 20 and 30 years of age smoke the least (21.8%), mainly due to childbearing at this age. Later there are two peaks of the indices: aged 30 to 44 years (33.3%) and from 60 to 64 years (31.8%) (Fig.3). Women are not almost inferior to men by number of smoked cigarettes (men 16.39±0.27; women 12.85 ± 0.30) and smoking experience (men 13.24±0.24; women 15.22±0.33). Passive smokers are (out of 582 responses - 91.94% of the sample) 70.79% of respondents: 69.66% of men and 71.92% of women, 55.34% of them do not smoke.

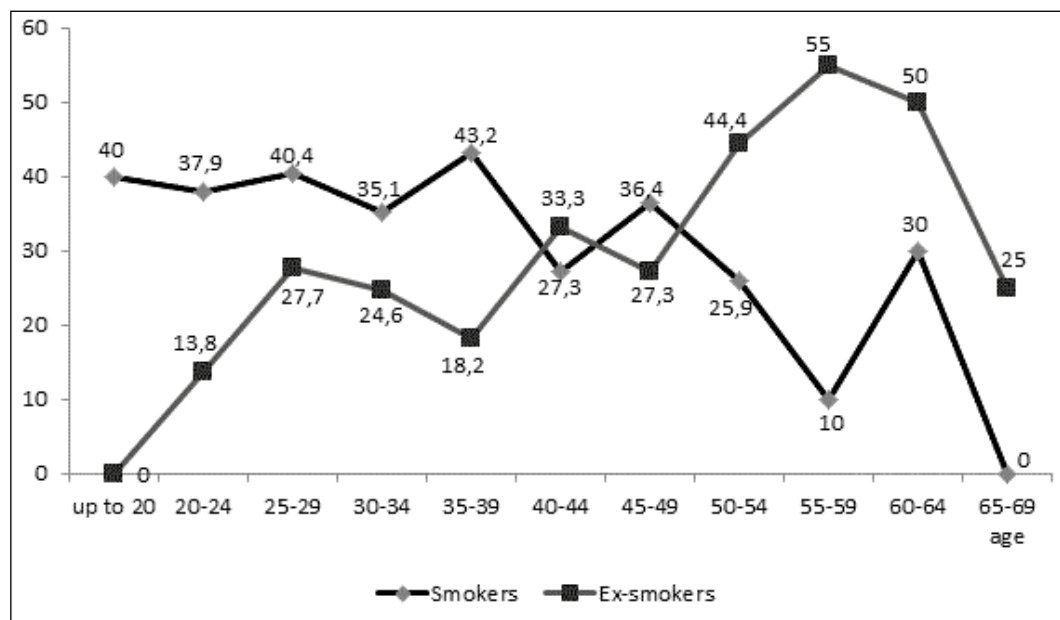
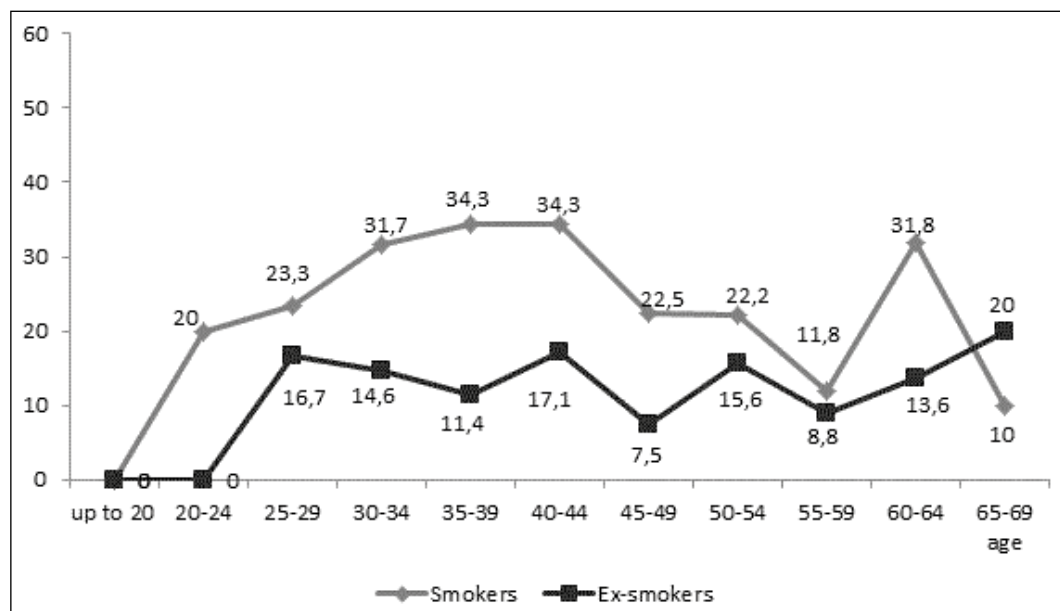
Alcoholic beverages are consumed by 525 respondents (85.64%), including 46.96% men and 33.20% women, who drink strong drinks; 25.88% of men and 40.94% of women drink wine, and 38.98% men and 15.0% women drink beer. 10.54% of men and 4.69% of women drink alcohol 3-4 times a week and more often; 28.75% of men and 13.75% of women drink it 1-2 times a week, the rest - 1-3 times a month and less often.

When analyzing the self-assessment of respondents' health by gender, it should be noted that the vast majority of employees feel good and satisfactorily. Among the rest of the respondents who feel bad or admit that their health has worsened recently, there are a significantly higher percentage of women than men (Table II).

Table II. Self-assessment of respondents' health by gender (%)

State of health	Men	Women	Total
Good	34.51±2.70	27.19±2.49	30.81±1.84
Satisfactorily	55.59±2.81	49.06±2.80	52.29±1.99
Deteriorates	8.63±1.59*	19.38±2.21*	14.06±1.38
Bad	1.28±0.64*	4.75±1.18*	3.00±0.68

*the difference between the indices is significant

**Fig.2.** Frequency of smokers and ex-smokers (%) among men in age intervals**Fig.3.** Frequency of smokers and ex-smokers (%) among women in age intervals

Sources of information on health issues were reported to be the same for men and women. The Internet is leading (60.35%), followed by television (30.96%) and health workers (27.80%). However, more often men use information from friends (22.36%).

DISCUSSION

At the beginning of the activity, "Kalynivsky market" provided work to the residents of Chernivtsi Region, who had lost their jobs through the transformation of the socioeconomic system, the closure of most industrial enter-

prises and the collapse of the collective farms. “Kalinovsky market” remains a place of work for a significant part of Bukovinians. At first, there were people who differed on age, education, specialty, life experience, but at the moment it is a specific socio-cultural community of workers. It can be argued that their way of life has been formed under the influence of the immediate social environment, as well as the organization of work and conditions created on workplaces. In the market, women generally work on a par with men. The significant proportion of widows (10% in middle-age, up to 40% after 60 years old) found out by us reflects male super mortality in the region in particular and in Ukraine as a whole. It is noteworthy that among the male respondents in all age groups there are significantly more people with higher education. In studying the self-assessment of health, we have found that men are less likely to see deterioration in health or a poor state of health, which may be due to their tendency to inadequately assessment of their own health [6].

Research on eating habits has shown that the most frequent characteristic of nutrition is the consumption of available vegetables. The greatest direct correlation is observed between the control of nutrition and the consumption of fruit, fish, vegetables among men and fish, meat and fruit among women, indicating the need for additional efforts and funds to provide them. Only 54 men ($17.25 \pm 2.14\%$) and 57 women ($17.81 \pm 2.14\%$) confirmed the adequate consumption of fruit and fish at the same time. The choice of a particular product was due to the unwillingness for healthy eating, because of their preferences and opportunities. Thus, with differences in the nutrition of men and women of all ages by the level of consumption of the most important products for the prevention of NCDs, they are equal in the same and extremely low figures.

Regarding physical activity, it should be noted that only 35% of the respondents are trying to keep their level of physical activity (physical exercise and special physical exercises). Peculiarities of the work in the market, i.e. lifting loads, seasonal work on the farmland, walking, are not characteristic for a sedentary way of working life. Young men (25-44 years), who constitute the biggest part of the age distribution and who have the lowest rates of consumption of fruit, vegetables, fish and the restriction of their consumption of fast, salty, fried and sweet food, are of concern, and more than a third of them are heavy smokers. This circumstance gives grounds for recommending active preventive measures in this age category since young people are exposed to persistent risks for the emergence of dangerous NCDs. The ratio of the number of those who smoke to those who had abandoned testifies to the extremely unfavorable situation with the refusal of the harmful habit among women, and in all age groups. Close communication between the workers supports harmful habits, and the prevalence of passive smoking increases the number of people who suffer from the harmful effects of tobacco smoke twice - 412 people ($65.09 \pm 1.89\%$). When studying the consumption of alcohol by the respondents, we did not specify the dose, so as not to reduce their commitment to the survey. Indirectly, the level of abuse could

be judged by the amount of advice provided by the doctor regarding the harmfulness of alcohol. 39 ($12.46 \pm 1.87\%$) men and 6 ($1.88 \pm 0.76\%$) women reported such advice. The alertness of doctors about alcohol abuse by women is obviously underestimated.

In assessing the sources of health information, the Internet is the leader (60.35%), health workers provide knowledge to only 27.80% of the respondents. The availability of reliable sources of information [7] is known to be a prerequisite for the formation of a conscious attitude to disease prevention (health promotion, reduction of risk factors).

CONCLUSIONS

1. The research has proved the high prevalence of NCD risk factors among those working in the markets (unhealthy diet, lack of physical activity, tobacco smoking). At the same time, the self-assessment of health is rather optimistic - more than 80% rated it as good or satisfactory.
2. 41% of the respondents reported that they manage their nutrition. At the same time, only 17% consume enough fruit and fish. Young men (25-44 years) have the unhealthiest diet.
3. About 70% of the respondents consider themselves physically active, however, only half of them systematically do physical exercises and special physical exercises, the rest relate physical activity with the peculiarities of daily work.
4. Smoking is a widespread harmful habit, a third of men and a quarter of women smoke. The ratio of smokers and people who have given up it indicates the acute problem of women smoking among market employees. It is shown that 65% of the respondents are exposed to harmful effects in general (taking into account passive smoking).
5. Almost half of men and one third of women consume strong alcoholic beverages, moreover, women prefer wine and men prefer beer. About 40% of men and 20% of women consume alcohol 1-2 to 4-5 times a week.
6. The established peculiarities of the way of life of the workers testify to the need to make maximum efforts to increase the medical literacy and the formation of motivation to preserve health.

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