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HEALTH INEQUALITIES: WHO IS THE MOST DISADVANTAGED AMONG THE UKRAINIAN WORKING-AGE POPULATION?

НЕРІВНОСТІ У ЗДОРОВ'Ї: ХТО Є НАЙБІЛЬШ ВРАЗЛИВИМ СЕРЕД НАСЕЛЕННЯ ПРАЦЕЗДАТНОГО ВІКУ В УКРАЇНІ?

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Abstract

Despite inequalities in health, it is a very well developed topic, and tackling health inequalities is one of the main challenges of modern public health policies, these are not much explored in Ukraine.

The European Social Survey data pooled together from 2004, 2006, 2008, 2010, and 2012 including 6,820 Ukrainian respondents of working-age. Self-reported health was used as a dependent variable and four groups of social determinants of health - as predictors. The multilevel binomial logistic regression analysis was conducted to investigate gender and social differences in subjective health. Both genders were analyzed together and separately.

Almost 60% of the Ukrainian working-age population reported poor health. Multilevel binomial logistic regression analysis showed that respondents who were female, married or had been divorced, and had children at home tended to report poor health; the probability of poor health is increasing with age and decreasing with the level of SES for both genders.

Existence of between and within gender groups' social inequalities in self-reported health as well as the most disadvantaged female subgroups are revealed among the Ukrainian working-age population.

Анотація

Попри те, що тема нерівності у здоров'ї є дуже добре розробленою і поширеною у науках про здоров'я у світі, проблема нерівності у здо-

Key words:

fself-reported health, health inequalities, social determinants of health, socioeconomic status, Ukraine.

Ключові слова:

самооцінка здоров'я, нерівності у здоров'ї, соціальні детермінанти здоров'я, соціально-економічний статус, Україна.

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ров'ї і надалі залишається однією з головних проблем сучасної політики в галузі охорони здоров'я та є недостатньо дослідженою в Україні.

Для дослідження було використано дані Європейського соціального дослідження (The European Social Survey) за 2004, 2006, 2008, 2010 та 2012 років, що включило 6820 українських респондентів працездатного віку. Самооцінку здоров'я було використано як залежну змінну, а чотири групи соціальних детермінант здоров'я - як предиктори. Для дослідження гендерних та соціальних відмінностей у самооцінці здоров'я проведено багаторівневий біноміальний логістичний регресійний аналіз. Обидві гендерні групи було проаналізовано і разом, і окремо.

Результати дослідження показали, що майже 60% населення працездатного віку в Україні оцінювали свій рівень здоров'я як поганий. Багаторівневий біноміальний логістичний регресійний аналіз показав, що жінки, одружені або розлучені, які мали неповнолітніх дітей, що проживали у домогосподарстві, були більш схильні оцінювати своє здоров'я як погане; крім того, вірогідність погіршення стану здоров'я зростає з віком і зменшується із зростанням соціально-економічного статусу для обох гендерних груп.

Отже, результати дослідження показали наявність соціальних нерівностей у здоров'ї, на основі самооцінки здоров'я, як між гендерними групами так і в середині них, а найбільш вразливими серед населення України працездатного віку є жінки.

Abbreviations

ESS: European Social Survey; **SRH**: Self-reported health; **SDH**: Social determinants of health; **SES:** Socioeconomic status; **IBM SPSS 24**: International Business Machines Corporation Statistical Package for the Social Sciences (Version 24.0); **ISCED**: International Standard Classification of Education; **ISCO88**: International Standard Classification of Occupations; **OR**: Odd ratios.

Background

As a result of the demographic crisis, Ukraine, a the largest country in Europe, has seen a decrease in population from 51,94 mln. in 1991 to 45,43 in 2014 and 42,76 in 2016 (excluding the temporarily occupied territories) (State, 2016). According to the State Statistical Service of Ukraine (State, 2016) the crisis includes low birthrates, high mortality levels, especially among working-age males, high levels of morbidity (an increase of chronic non-infectious diseases as well as infectious diseases during the last few years) which requires in-depth analysis of health inequalities in Ukraine for monitoring and possible policy interventions.

In this paper, I address the problem of the gender and social inequalities in health in the Ukrainian working-age population.

The first possibility to check if gender is a determinant of health inequality is to look at a gender gap life expectancy. During 25 years of Ukrainian independence, there has not been a significant change in

average life expectancy. Life expectancy at birth in 2015 was 71,38 years (66,37 – males; 76,25 – females) with almost a ten-year gap in favor of females. In European region countries, life expectancy at birth is 80 years or more (World, 2016). The same gender gap in the EU countries is half - only 5,5 years (Eurostat, 2017). This supports the existence of social inequalities in health among the Ukrainian gender groups.

In this study, I am using Self-Reported Health (SRH) as an indicator of the general subjective health of the population. This indicator is one of the most popular in health research and is one of the health indices recommended by the World Health Organization for monitoring health outcomes. A lot of studies have shown that SRH is a good predictor not only of health status but also morbidity, mortality, and a measure of the use of health care services (Benyamini et al., 2003; Dominick et al., 2002; Guimarãeset al., 2012). Between and within countries inequalities are widely reported in many studies (Mackenbach et al., 2008; Espelt et al., 2008; Jakab & Marmot, 2012; Palència et al., 2014; Schütte et al., 2013). Studies have shown an association between reported health and such social determinants as demographic, socio-economic, behavioral, and psychological (Demirchyan et al.,2012; Bambra, 2011; Hankivsky, 2014; Sen, Iyer & Mukherjee, 2009).

Previous studies of post-communist countries have shown that such socio-economic and psychological factors such as smoking, alcohol consumption, hazardous working conditions, traffic accident mortality, late medical treatment has affected the health and lifespan of the population (Bobak et al., 2007; Bobak et al., 2000; Cockerham et al., 2017). Previous studies which are included in comparison analysis of Eastern European countries have shown a higher prevalence of poor self-estimated health (Heyns, 2005; Michalski, 1990).

Ukraine wasn't often included in health inequality studies conducted in Europe, and relatively little is known about the situation with social and gender inequalities in health among the Ukrainian population.

However, few studies have explored the relationship of self-reported health (SRH) with social determinants in Ukraine. Researchers from the UK (Gilmore, McKee, & Rose, 2002) studied socio-economic and psychosocial determinants of self-estimated health in Ukraine through a national survey conducted in 2000. Results have shown gender, socioeconomic, geographical, and psychosocial differences in health, including negative effects of unemployment on subjective health (Gilmore, McKee, & Rose, 2002). Another study (Platts & Gerry, 2016) used data from 2007 to examine social inequalities in health in Ukraine. The study has found educational inequalities in health. Also, that association between higher education and better estimated subjective health was partly affected by material and behavioral factors for both gender groups (Platts & Gerry, 2016). One more study (Cockerham et al., 2017) used data from 2011 and applied an intersectional theory to investigate the relation between SRH and barriers to healthcare in Ukraine. The study has shown that women have more barriers to health care, until in old age where both genders faces the same issue, in addition, the low SES women reported their health as been poorer compared to all others groups (Cockerham et al., 2017).

Existing literature is inconclusive, and further studies are needed regarding the social inequalities in health among the Ukrainian population as well as the gender gap in health and longevity.

My study is restricted to the working-age population because it is evident that health of the working-age population is crucial for economic development of the country and the public health system has to respond to the working age population's health needs. The purpose of this paper is to show social and gender inequalities in health. The goals of the present study are: 1) to explore the association of a series of potential social determinants of health (SDH) with SRH; 2) to identify and compare gender inequalities in health.

In this paper, I present the result of multilevel analysis.

Methods

Data

The paper is based on the European Social Survey (ESS) database [23], which is an academically driven, cross-sectional, pan-European social survey; Ukraine has participated in this survey during five rounds from 2004 to 2012 (data from the 2nd to the 6th round of the ESS was pooled together). According to the ESS instructions, the data was weighted by the post-stratification weight including that of design. The target dataset includes 6,820 Ukrainian respondents of working-age from 18 to 65-year-old males and from 18 to 60 for females. The data was analyzed using the IBM SPSS 24.

Variables

Outcome measure: SRH

Self-reported health is used as a dependent variable which measures subjective health because it reflects the subjective feeling of physical, psychological health and well-being. The respondents were asked to evaluate their health, in general, using five answering categories: very good, good, fair, bad, and very bad. SRH was dichotomized into two groups: good SRH which includes very good and good categories and poor SRH, which include all categories less than good.

Predictor variables

Four groups of SDH were used as predictors' variables:

Socio-demographic variables (gender, age of respondents were categorized into four age-groups (18-30, 31-40, 41-50, 51-60 for females (65 for males), and place of residence (urban/rural)).

The socio-economic status (SES) (included education, occupation and income of respondent).

Daily activity factors (using questions about if respondents have paid work, are unemployed, looking for a or not looking, doing housework, looking after children, are studying or retired).

Statistical analysis

In the study, I used a socio-economic status (SES) because many previous studies have been reporting that the relationship between health and socioeconomic factors explain a lot of the differences in SRH (Mackenbach, 2008; Dubikaytis et al., 2014; Richter, Moor,& van Lenthe, 2010; Tsimbos, 2010; Dinesen et al., 2011; Alvarez-Galvez et al., 2013). Principal Component Analysis was used as an algebraic operation for reducing dimensionality and computing one variable, combining three main parameters of SES: the highest level of education (which is expressed in terms of the International Standard Classification of Education (ISCED)), occupation (using the International Standard Classification of Occupations (ISCO88)), and subjective income (using the questions about how respondents felt about household income). A further factor variable was computed, using a regression method, and divided into five SES groups based on quintiles: low, upper low, middle, upper middle, and high.

The multilevel binomial logistic regression analysis was conducted to investigate gender and social differences in SRH using SDH. The results are reported in odd ratios (OR).

Firstly, males and females were pooled and analyzed together. A Univariate Model (Table 3) has shown ORs from a univariate logistic regression analysis for each variable for checking association with poor SRH. All associations except the place of residence (p=0.094) were statistically significant. As a result of the univariate analysis, the place of residence was excluded from further analysis. The multivariate analysis consists of five models. Four of them include four groups of SDH, Model 1 includes only the demographic characteristic, and Model 2 includes Model 1 (for adjusting by gender and age-groups) and SES. To understand how family factors and daily activities influence poor health, I conducted two more extent models, adjusted

for gender, age groups, and SES. Model 3 includes family factors, and Model 4 - daily activity factors. The Full Model includes all statistically significant predictors – SDH - entered in one step.

Secondly, to more deeply understand gender differences I divided the population into gender subgroups and ran logistic regression models separately for males and females. Models include all predictor variables which were included in the Full model conducted for both genders together.

Results

Descriptive statistic of the sample

Table 1 presents the descriptive statistic for the study variables. Almost 60 % of the Ukrainian working-age population reported poor health. The sample is almost equally divided between males (48.4%) and females (51.6%). The biggest age group was respondents under 30 years old (31.5 %), three others age groups were almost equal (31-40 years old – 20.4%; 41-50 – 24.4%; over 50 – 23.7%). Most respondents are live in the urban area (64%), have a partner (66%), have children living at home (58%), have paid work (60%), and do housework, looking after children (26%). Some of the respondents reported that had been divorced (14%), been unemployed and were actively looking for a job (7%) or not looking for a job (4%). Almost 77 % reported that they have from two to four family members living together in the household. A few respondents reported education as the main life activity (8%), and more than 12% of the Ukrainian working-age population reported being retired early than the official state's retirement age.

Table 1. *Descriptive statistic of the sample of the study population (N=6,820)*

Variables	Category	Number	Percent
Dependent variable			
Self-reported health	Good SRH	3,070	40.6
	Poor SRH	4,496	59.4
Independent variable			
Demographic factors			
Gender	Male	3,686	48.4
	Female	3,931	51.6
Age group	Under 30	2,403	31.5
	31-40	1,552	20.4
	41-50	1,856	24.4
	Over 51	1,805	23.7
Place of residence	urban	4,838	63.7
	rural	2,762	36.3

Table 1. (continuation)

Socio-economic status (SES)			
SES	High	1,272	19.4
	Upper middle	1,397	21.3
	Middle	1,306	19.9
	Lower middle	1,309	19.9
	Low	1,277	19.5
Family factors			
Live with partner	Yes	4,985	65.9
	No	2,584	34.1
Ever been divorced	Yes	867	14.1
	No	5,272	85.9
Children at household	Yes	4,380	57.5
	No	3,233	42.5
Numbers of family members	1	321	4.2
	2	1,548	20.4
	3	2,396	31.5
	4	1,889	24.8
	5	860	11.3
	6	386	5.1
	7+	206	2.7
Daily activity factors			
Paid work	Marked	4,567	60.0
	Not marked	3,050	40.0
Unemployed, looking for a job	Marked	519	6.8
	Not marked	7,098	93.2
Unemployed, not looking for a job	Marked	265	3.5
	Not marked	7,352	96.5

Table 1. (continuation)

Housework, looking after children, others	Marked	1,942	25.5
	Not marked	5,675	74.5
Education	Marked	608	8.0
	Not marked	7,008	92.0
Retired	Marked	942	12.4
	Not marked	6,674	87.6

The distribution of poor SRH

Table 2 presents the distribution of poor SRH across demographic, socioeconomic, family, and daily activity factors as explanatory variables. According to Chi-square test examination, all explanatory variables were statistically significant, except one - place of residence (p=0.94).

Such categories of respondents as female (65.2 %), the oldest age-group (83.5%), respondents living with a partner (63.5%), had been divorced (71.2%) and had children living at home (63.5%) reported significantly poor SRH. Compared with the high SES group (57.8%) the prevalence of poor SRH in the low SES (68.5%) was higher. Respondents with poor health were more likely to be those who were retired (86.9%), unemployed but not actively looking for a job (68.9%), and doing housework, looking after children (63.3%). Poor health (from 59% to 63%) was associated with those who reported fewer family members living together in the household (from 1 to 3).

Table 2. *The distribution of poor SRH across demographic, socio-economic, family, and main life's activity factors (N=6,820)*

Variables	Category	Poor SRH		Pearson Chi-Square	P
		N	%		
Demographic factors					
Gender	Male	1,952	53.2	113.16	<0.0001
	Female	2,544	65.2		
	Total	4,496	59.4		
Age group	Under 30	888	37.1	1014.67	<0.0001
	31-40	839	54.4		
	41-50	1,276	69.2		
	Over 51	1,493	83.5		

Table 2. (continuation)

Place of residence	Urban	2,815	58.7	2.80	=0.94
	Rural	1,669	60.6		
Socioeconomic status					
SES	High	703	55.6	51.12	<0.0001
	Upper middle	849	61.3		
	Middle	817	62.9		
	Lower middle	792	60.8		
	Low	876	69.1		
Family factors					
Live with partner	Yes	3,143	63.5	98.78	<0.0001
	No	1,326	51.6		
Ever been divorced	Yes	612	71.2	42.14	<0.0001
	No	3,116	59.5		
Children at household	Yes	2,760	63.5	70.75	<0.0001
	No	1,735	53.9		
Numbers of family members	1	200	62.9	99.126	<0.0001
	2	1,069	69.5		
	3	1,398	58.9		
	4	1,016	54.2		
	5	493	57.4		
	6	202	52.6		
	7+	112	54.1		
Daily activity factors					
Paid work	Marked	2,578	56.9	30.54	<0.0001
	Not marked	1,918	63.2		
Unemployed, looking for a job	Marked	277	53.9	6.99	=0.008
	Not marked	4,218	59.8		

Table 2. (continuation)

Unemployed, not looking for a job	Marked	182	68.9	10.27	=0.001
	Not marked	4,314	59.1		
Housework, looking after children, others	Marked	1,223	63.3	16.50	<0.0001
	Not marked	3,272	58.1		
Education	Marked	199	33.1	188.50	<0.0001
	Not marked	4,296	61.7		
Retired	Marked	811	86.9	333.79	<0.0001
	Not marked	3,685	55.6		

The multilevel binomial logistic regression analysis

The binary logistic regression analysis results for both gender groups analyzed together presents in **Table 3**. Firstly, the univariate logistic regression analysis has shown that all explanatory variables except the place of residence (urban/rural) were significantly associated with poor SRH (Univariate Model). Secondly, in all models gender, age and SES were important factors associated with poor reported health. The socio-economic status difference between the low SES and the high SES groups was revealed. Respondents from all SES groups were less likely to report poor health compared with the low SES group. Then, such categories of respondent as female, those who live with a partner, been divorced, and having children living at home tended to report poor health. Those who were unemployed but not actively looking for a job, doing housework, taking care of children as well as retired also were more likely to report poor SRH. As expected, those with paid work and also who had been unemployed but actively looking for a job are less likely to report poor health

Table 3. *Odd ratios for poor SRH for both gender groups together (Full Model)*

Variables	Category	Univariate Model		Model 1		Model 2		Model 3		Model 4		Full Model	
		OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI
Demographic factors													
Gender	Male	1		1		1		1		1		1	
	Female	1.65***	(1.50-1.81)	1.76***	(1.59-1.94)	1.99***	(1.78-2.22)	2.14***	(1.89-2.43)	1.88***	(1.68-2.12)	2.02***	(1.76-2.31)
Age group	Under 30	1		1		1		1		1		1	
	31-40	2.02***	(1.78-2.30)	2.03***	(1.78-2.32)	1.81***	(1.56-2.09)	1.51***	(1.27-1.81)	1.81***	(1.56-2.10)	1.50***	(1.26-1.80)
	41-50	3.81***	(3.35-4.33)	3.85***	(3.38-4.39)	3.56***	(3.08-4.11)	3.16***	(2.66-3.76)	3.51***	(3.02-4.07)	3.09***	(2.58-3.69)
	Over 51	8.60***	(7.40-9.99)	8.88***	(7.63-10.33)	7.91***	(6.72-9.32)	7.04***	(5.83-8.49)	6.28***	(5.22-7.56)	5.67***	(4.60-6.99)
Place of residence	Urban	0.92	(0.84-1.01)										
	Rural	1											
Socioeconomic status													
SES	High	0.56***	(0.48-0.66)			0.53***	(0.44-0.63)	0.49***	(0.41-0.60)	0.57***	(0.47-0.69)	0.53***	(0.44-0.65)
	Upper middle	0.71**	(0.60-0.83)			0.65***	(0.54-0.77)	0.62***	(0.51-0.75)	0.69***	(0.57-0.82)	0.65***	(0.53-0.80)
	Middle	0.76***	(0.64-0.89)			0.71***	(0.60-0.85)	0.66***	(0.54-0.81)	0.75**	(0.63-0.90)	0.69***	(0.57-0.85)
	Lower middle	0.69***	(0.59-82)			0.68***	(0.57-0.81)	0.70***	(0.57-0.86)	0.71***	(0.59-0.84)	0.73***	(0.60-0.89)
	Low	1		1		1		1		1		1	

Table 2. (continuation)

Family factors													
Live with partner	Yes	1.63***	(1.48-1.80)					1.45***	(1.22-1.72)			1.43***	(1.20-1.70)
	No	1						1				1	
Ever been divorced	Yes	1.68***	(1.43-1.97)					1.37***	(1.14-1.64)			1.37***	(1.14-1.65)
	No	1						1				1	
Children at household	Yes	1.49***	(1.36-1.63)					1.08	(0.92-1.27)			1.08	(0.92-1.28)
	No	1						1				1	
Numbes of family members		0.88***	(0.85-0.91)					0.90***	(0.85-0.94)			0.90***	(0.85-0.95)
Daily activity factors													
Paid work	Marked	0.77***	(0.70-0.83)							0.75***	(0.62-0.89)	0.80**	(0.66-0.98)
	Not market	1								1		1	
Unemployed, looking for a job	Marked	0.79***	(0.66-0.94)							0.72**	(0.57-0.94)	0.83	(0.61-1.12)
	Not market	1								1		1	
Unemployed, not looking for a job	Marked	1.53***	(1.18-2.00)							1.74***	(1.19-2.54)	1.97***	(1.26-3.08)
	Not market	1								1		1	
Housework, looking after children, others	Marked	1.25***	(1.12-1.39)							0.98	(0.85-1.14)	1.00	(0.86-1.18)
	Not market	1								1			

Table 2. (continuation)

Education	Marked	0.31***	(0.26-0.37)						0.87	(0.64-1.18)	0.61	(0.36-1.04)
	Not market	1							1		1	
Retired	Marked	5.30	(4.35-6.45)						1.51***	(1.16-1.98)	1.48***	(1.12-1.97)
	Not market	1							1		1	
Model characteristics												
Nagelkerke R^2				0.196		0.195		0.201		0.206		0.211
Correctly classificated caSes				68.3 %		68.8%		69.9%		69.2%		69.7%

****p<0.01, **p<0.05, *p<0.1*

Furthermore, the binary logistic regression analysis was conducted for males and females separately, and results are presented in **Table 4**. The logistic analysis has shown a positive relation between age groups and poor health for both genders (of the oldest age groups: males – OR=5.31, females – OR=6.03). As expected, the likelihood of estimated health as poor in the high SES is lower for both genders. Also, in this table, we can see that marital status is a disadvantage for health because married males and females are more likely to report poor health compared to single ones and also, odd ratios are greater in the female group. But then odd ratios to report poor health are greater for males if they have ever been divorced. The association between poor SRH and children living in the household was not found. As well, we can see that males with paid work or unemployed but actively looking for a job are less likely to estimate their health as poor. At the same time, females are more likely to report poor health if they are unemployed and not actively looking for a job or retired.

***Table 4**. Odd ratios for poor SRH by gender (Full Model)*

Variables	Category	Male (N=2,877)		Female (N=3,943)	
		OR	95%CI	OR	95%CI
Age group	Under 30	1		1	
	31-40	1.64***	(1.24-2.11)	1.34**	(1.06-1.72)
	41-50	3.45***	(2.60-4.37)	2.62***	(2.07-3.41)
	Over 51	5.41***	(3.98-7.08)	5.88***	(4.33-8.39)
Socioeconomic status	High	0.57***	(0.48-0.83)	0.51***	(0.47-0.88)
	Upper middle	0.67	(0.59-1.06)	0.69**	(0.53-0.98)
	Middle	0.64***	(0.42-0.70)	0.81	(0.76-1.42)
	Lower middle	0.65***	(0.48-0.80)	0.92	(0.64-1.23)
	Low	1		1	
Live with partner	Yes	1.46***	(1.09-1.89)	1.53***	(1.19-1.93)
	No	1		1	
Ever been divorced	Yes	1.41**	(1.10-1.88)	1.30**	(1.03-1.73)
	No	1		1	
Children at house	Yes	1.07	(0.86-1.35)	1.15	(0.90-1.49)
	No	1		1	
Numbers of family members		0.89***	(0.83-0.96)	0.90***	(0.83-0.97)
Paid work	Yes	0.48***	(0.33-0.69)	1.02	(0.77-1.28)
	No	1		1	
Unemployed, looking for a job	Yes	0.48***	(0.30-0.77)	1.07	(0.70-1.72)
	No	1		1	
Unemployed, not looking for a job	Yes	1.24	(0.58-2.52)	2.26***	(1.26-3.95)
	No	1		1	
Housework, looking after children, others	Yes	1.12	(0.87-1.41)	0.98	(0.79-1.22)
	No	1		1	

Table 4. (continuation)

Education	Yes	1.53	(0.74-2.99)	0.19***	(0.08-0.44)
	No	1		1	
Retired	Yes	1.03	(0.68-1.54)	1.68**	(1.10-2.65)
	No	1		1	
Model characteristics					
Nagelkerke R^2		0.211		0.182	
Correctly classificated cases		68.3		73.1	

****p<0.01, **p<0.05, *p<0.1.*

In summary, separate analysis of male and female groups showed a similar tendency regarding increased probability of poor health with increasing age as well as increased probability of poor health with a decreasing level of SES. Also, there is a higher likelihood of poor SRH connected with marital status and having been divorced. The strong gender difference is connected with employed status. There is a relation between having paid work or being unemployed but actively looking for a job and a lower likelihood of poor health (OR=0.48) which was statistically significant only for male groups. In female groups there is a statistically significant relation between the status "unemployed and not actively looking for a job" and the status "poor health" (OR=2.26).

Discussion

This paper investigates the association of SRH with various determinants and aims to identify social and gender inequalities in health among the Ukrainian working-age population. The results of the study provide evidence of the association of SRH with some demographic, socio-economic, family-related, and main life activity conditions. Almost 60% of the Ukrainian working-age population reported poor health. Significant differences were observed in the level of health across all SDH included in the study. The first part of the study which applied traditional income theory showed that genders, age, SES, employment status seem to be important factors associated with reported poor health status. According to "gender paradox" in mortality and morbidity (Liu, 2014), females estimate their health worse in almost all studies in different countries despite a longer lifespan. As well as in previous Ukrainian sudies (Cockerham et al., 2017; Gilmore, McKee,& Rose, 2002; Platts & Gerry, 2016) my research showed that although Ukrainian females live longer than males more than ten years, they are more likely to report poorer health compared to males because of higher rates of morbidity. At the same time, Ukrainian males estimated their health better but have a shorter lifespan because of unhealthy lifestyles (Cockerham, Hinote & Abbott, 2006; Cockerham et al., 2006).

As was expected SRH is decreasing with age which is similar to another study (Gilmore, McKee,& Rose, 2002). In contrast, the study showed that marital status is a disadvantage for health among both genders of Ukrainian working-age population because findings in the Gilmore et al. study were reporting a positive correlation between good family relations and SRH (Gilmore, McKee,& Rose, 2002).

The socioeconomic status difference in SRH between the low SES and the high SES groups was revealed. The result is supported by the other studies conducted in Ukraine (Cockerham et al., 2017; Gilmore, McKee,&

Rose, 2002), the likelihood to estimate health as poor in the low SES group is higher for both genders. In addition, one more study reported that association between education and health status was in part affected by material factors (Platts LG & Gerry, 2016).

The study showed gender differences in the association between employed status and SRH. It was revealed that males who have paid work (or being unemployed but actively looking for a job) have a smaller probability of reporting poor health (OR=0.48). For females there is a relation between the status "unemployed and not actively looking for a job" and a higher probability of reporting poor health (OR=2.26). The study of Gilmore et al. also found that employed respondents estimate their health better.

Strengths and limitations

The ESS is the only open source database which gives the opportunity to analyze SRH in Ukraine. To my knowledge, this is the first study which explores the gender and social inequalities in health in the Ukrainian working-age population. This study contributes to the existing literature on health inequalities in the Ukrainian population by analyzing intersections of social identities such as gender, place of residence, education, SES, occupational, employment and marital status in order to reveal gender and social inequalities in SRH. However, the study has some limitations which need attention. First of all, for this analysis cross-sectional data was used for checking association between gender, SDH, and SRH. Another limitation is that the number of valid cases included in specific analysis differs because of dissimilar patterns of non-response to questions for analyzed variables. Also, for simplicity of statistical analysis SRH was dichotomized into two groups: good and poor SRH and was not analyzed based on the five-point scale. Additionally, only four groups of SDH which were available in the ESS were included in the analysis.

Conclusion

The analysis showed that gender, age, SES, marital and employed status were important factors associated with poor reported health. Then, categories of respondents such as females, those who live with a partner, divorced, and have children living at home tended to report poor health. In addition, the separate analysis of male and female groups showed a similar tendency regarding increased probability of poor health with increasing age as well as a decreasing level of SES. Also, there is a higher likelihood of poor SRH connected with marital status and divorce. The strong gender difference exists in employed status because unemployed females are more than twice as likely to estimate their health as poor.

Availability of data and materials

The dataset supporting the conclusions of this article is available in the European Social Survey repository, *http://www.europeansocialsurvey.org/*.

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