

Gender-Specific Health-Seeking Behavior and Income Status among the Elderly Citizens of Serbia

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Abstract

We observed the National Health Surveys of Serbia, 2000 and 2006 for exclusively the subpopulation of all senior citizens aged 65 or more. Respondents reported important gender differences in terms of income level and marital status, while in other self-reported socioeconomic variables there were no major differences. Women tended to have their own elected physician far more frequently. In between 2000 and 2006, a statistically significant difference in self-assessed economic status of households was noted, as well as differences in terms of all other health-seeking behavior variables and self-perceived health variables. The Serbian example of growing inequalities between elderly men and women, gives us a clear hint of what is going on in Eastern European ageing populations. Pan-European strategies, to be embraced by the national governments, should definitely regard gender specific policies on ageing as one of the top long term priorities.

Keywords: Gender Specific, Health-Seeking Behavior, Income Status, Elderly Citizens, Serbia

JEL classification: I12, I14, I31

Introduction

The traditional post-socialist legislative framework in Central and Eastern European (CEE) countries tends to tolerate significant gender gaps in education, employment and income levels in favor of men (Dawn Metcalfe & Afanassieva, 2005). These gender inequalities brought women into a difficult position, particularly keeping in mind those with low earning capacity either due to poor education, lack of job experience, or both (Warren et al., 2001). Such a socioeconomic perspective used to be justified with the male dominance in labor markets and respectively higher wages in most countries. Serbia, as part of the Western Balkan market and a historical core of former Yugoslavia (Milic, 2008) is a peculiar case in the CEE region (Jakovljevic, 2013). Its transition began with a one decade delay compared to most CEE countries (Jakovljevic, 2014). Since 2001, amendments to the Pension and Disability Law were adopted extending for three years both male and female retirement age while these rules were subject to virtually no change since 1965 (Stanic et al., 2009). The age pension limit continued to extend over the course of next fifteen years (Republic fond for Pension and Disability Insurance, 2016). Current legislation regulates the evolving landscape of pension and retirement regulations towards 2023 (Vlada Republike Srbije, 2014). Its final goal is to extend working age policy until the age of 65 for both genders, and thus ultimately equalize male and female demands on healthy citizens capable of work (Stanic, 2010). It is obvious that natural vulnerabilities and the large natural biopsychological burden of maternity shall be ignored to a large extent with such an approach (Romeu Gordo, 2009). It is important to emphasize that most of these changes in the borderline EU regions were externally imposed by the official EU policies. This legal evolution takes place in line with the requested alignment of national legislations with the EU laws during the accession process of EU candidate countries. Keeping in mind that most dynamic change took place during the 2000-2007 time span (Jakovljevic et al., 2011), before the global recession, we decided to observe datasets created by the National Health Surveys of 2000 and 2006.

Methods

Data Set

The National Health Surveys of Serbia from 2000 and 2006 were observed for this article. A nationwide randomized and representative sample of adult citizens aged 65 years or more was accessed by some 200 trained field agents visiting households throughout the country and deploying a cross-sectional study design (Harkness et al., 2003). The authorities behind the project were the Ministry of Health of the Republic of Serbia and The Institute of Public Health of Serbia (Institute of Public Health of Serbia "Dr Milan Jovanović Batut," 2016). The entire sample consisted of all households listed by all enumeration areas of both Censuses in 2000 and 2006. Stratification and multi-stage sampling were used to provide randomization of respondents (Bennett et al., 1991). Applied questionnaires on life styles, demand for medical services and economic outlook were standardized and previously validated. Interviews were conducted in a face-to-face manner and carried out at each respondent's home address. All geographical regions of Serbia were homogenously presented.

Survey Sample Size and Structure

The 2000 survey contacted 4,315 households out of which 2,481 decided to participate. In 2006 some 11,233 households were contacted out of which 6,194 actually participated. These surveys interviewed a total of 9,921 adult citizens aged twenty or more and the 2006 survey interviewed a total of 15,563 citizens aged 20 or more. We observed exclusively the subpopulation of all senior citizens aged 65 or more which referred to a total of 5,363. In total there were 2,307 men and 3,056 women. Out of these 1,857 participants were interviewed in 2000 while 3,506 participants were interviewed in 2006. Mean population age in 2000 was 72.51 +/- 5.35 and 73.61 +/- 5.66 in 2006. Women were statistically significantly older compared to men ($t=3.370$; $p=.001$). Mean female age was 72.61 +/- 5.38 in 2000 and 73.91 +/- 5.73 in 2006, while mean male age was 72.37 +/- 5.29 in 2000 and 73.23 +/- 5.55 in 2006.

While observing these datasets and preparing this data report, the simplest descriptive statistics were used to point out to the existing gender differences in the third life age. Continuous numerical variables' central tendency was presented via arithmetic mean, while the standard

deviation was used as variability measure. Data acquired through nominal or ordinal scale of measurement were presented through their respective frequencies and in percentage terms depending on scale modalities. Simple chi-square (χ^2) and Fisher's exact test were used to question differences in distribution of frequencies across modalities between men and women, and the two cross-sections in 2000 and 2006. Determination of significant predictors was done through binary logistic regression with accepting significance level of 0.05.

Results

Respondents reported important gender differences in terms of income level and marital status while in other self-reported socioeconomic variables there were no major differences (Table 1). Women tended to have their own elected physician far more frequently which is in line with recently published nationwide evidence (Jakovljevic et al., 2016c). They did as well conduct far more regular medical check-ups on blood pressure, blood sugar, lipid profile, hemoglobin measurements and urine analysis (Table 1). There has been no significant gender difference in terms of eye sight control.

Between 2000 and 2006, a statistically significant difference in self-assessed economic status of households was noted ($\chi^2=27.047$; $p=.000$). Very poor economic status was reported in 2000 by a total of 12.3% respondents while in 2006 it was 11.7%. Poor economic status in 2000 was reported by 29.4% and by 28.2% in 2006. Back in 2000 medium economic household status had 49.8% respondents while 46.9% in 2006.

A chi square test showed that in terms of possession of personal contracted attending physician there was no significant difference between the two annual cross-sections (Table 2). Unlike this, in between 2000 and 2006 there are significant differences in terms of all other health-seeking behavior variables as well as self-perceived health variables.

Discussion

Population ageing as a global phenomenon dates back far deeper into the demographic history of mankind than it is broadly recognized (Bourdieu & Kesztenbaum, 2007). Its evolving landscape became clearly visible worldwide, ultimately affecting even the youngest of the emerging nations with a few decades delay (Rancic & Jakovljevic, 2016). European track record of ageing societies came to the focus of policy makers many years ago but all the strategies to cope with its huge consequences came short of comprehensive outreach (Jakovljevic, 2015b). Major international agencies such as WHO have adopted their own policies to contribute solving this complex puzzle (World Health Organization, 2015). South-East Europe as a myriad of ethno-religious traditions represents the true challenge in favor of weaker economic output and institutional capacities in health care and social protection of senior citizens (Jakovljevic & Laaser, 2015). A particularly striking labor market feature of the rising proportion of the elderly is effectively shrinking work force. Simultaneously the population of retired citizens, enjoying their pensions is steadily growing which adds to the burden of the society. Japan as the world's oldest large nation, in most advanced stage of ageing gives us the proper example of the future pathway for European nations (Ogura & Jakovljevic, 2014). Probably single most concerning fact is the one that this demographic transition is not slowing its pace; actually there are clear evidence of its acceleration around the globe (Lutz et al., 2008). Recent decades have accumulated surmounting evidence that population ageing in the long run increases health spending (Stojkovic & Milovanovic, 2015).

Until recently, gender perspective of population ageing was heavily neglected in the published literature (Kryspin-Exner et al., 2011). Ongoing prioritization in gender research in the EU science funding priorities gives a great impetus so that this knowledge gap could be filled in a foreseeable future (European Commission, 2015). South-East Europe and Serbia remain the regions with significantly lower output in gender related research. This article tends to discuss a simple insight into the two large scales, nation-wide surveys conducted at the bottom and medium years of Serbian transitional health reforms. Aforementioned deep and serious differences between the two genders can be interpreted in few ways. Although we observe an upper-middle income European economy, it was well noticed in a low-income south Asian setting that

there is straightforward connection between socioeconomic status and gender dependent health-seeking behavior (Ahmed et al., 2000). Similar findings were published in low-income settings on other continents as well, with Kenya being a typical example (Mudege & Ezech, 2009). In far more similar, middle-income, Post-Semashko health system of Georgia it was reported that lower utilization of medical services is deeply related to growing out-of-pocket payments (Gotsadze et al., 2005). Concerning the issue of affordability of medical care, particularly affecting women due to lower earning capacity (Dressel, 1988), was already a matter of academic attention in Serbia with regards to mental illnesses such as addiction disorders (Jakovljevic et al., 2015b). Eastern European health reforms were taking place since 1989 alongside substitution of former centrally-planned economies with free market oriented ones (Jakovljevic et al., 2016a). One of the many rising vulnerabilities was growing out-of-pocket spending effectively moving health care funding burden from central, state-owned insurance funds towards the ordinary citizens (Jakovljevic et al., 2016b; Preker et al., 2002). This trend was proven even in the most advanced emerging economies such as the BRICS (Jakovljevic, 2015a).

One peculiarity of the elderly citizens in most countries is their high demand for expensive medical care combined with falling personal income during retirement (Jakovljevic, 2016). This is strikingly most evident if we observe the so called „last year of life“. Single patient in end stage disease frequently consumes the value of medical services comparable to his/her entire lifespan consumption (Kovačević et al., 2015). Even far more concerning from a societal perspective is the need for long term care. Either we observe family care givers (Finley, 1989) of residential care (Ungerson, 2000), both are to a large extent driven by major non-communicable chronic illnesses (NCD) (Jakovljevic & Milovanovic, 2015). Of course, demand patterns and provision of services have to be gender sensitive since there are significant differences in needs between men and women (Lucas et al., 2000). Some of the NCDs with largest burden assessed through local cost-of-illness studies in the Balkans are COPD (Lazic et al., 2012), diabetes (Biorac et al., 2009), late life pregnancies (Jakovljevic et al., 2008), mood and addiction disorders (Jakovljevic et al., 2014), cancer (Jakovljevic et al., 2015a) and few others. Although these so called „prosperity diseases“ present substantial challenges, the promotion of healthy life styles, preventive measures and accessibility of medical technologies, allowed

us to actually contain any further increase in of many leading NCDs in many countries (Murray & Lopez, 1997).

Besides pessimistic scenarios on consequences of ageing there are grounds for optimism as well. Novel studies indicate that the labor market consisting of a larger share of senior, experienced, skilled workers might actually present comparative advantage (Gordo & Skirbekk, 2013). Some employers prefer to avoid constant investment into the recruitment, training and professional adaptation of highly mobile young work force rising the costs of doing business (O'Rand, 1996). Another positive characteristic of choosing workers in the third stage of life is that they are less likely to change firms (Van Dalen et al., 2010).

The Serbian example of growing inequalities between men and women in elderly age in only seven years time span, gives us a clear hint of what is going on in Eastern European ageing populations (Rašević, 2009). We have distinctively different medical needs and self-perception of health status. Men as the main revenue source for the family in these economies, report consistently higher household income estimates compared to women. This may be explained by their better insight into family finances or social stigma and an attempt to hide poverty. Health-seeking behavior as elsewhere in Europe, remains consistently more responsible among women (Gordo, 2006). Regardless of improved overall societal welfare, the large majority of citizens continues to report insufficient revenues for decent family living. The Relative setback in medical services demand and consumption in 2006 might be explained by rising out-of-pocket spending for health care (Lewis, 2007). Therefore affordability of medicines, outpatient and hospital services have worsened for the ordinary citizens and particularly those living close to poverty line. Future responsible policies in the EU borderlands should include broader investment in NCD control, healthy ageing life style promotion and both residential and home based long term care. Although unique in human history, the third demographic transition is here to stay (Chawla et al., 2007).

Conclusions

The Serbian example of growing inequalities between men and women in elderly age gives us a clear hint of what is going on in Eastern European ageing populations and it is clear that there is distinctively different medical needs and self-perception of health status. According to the above mentioned study it can be noticed that health-seeking behavior remains consistently more responsibly performed among women.

Key issues

- Health-seeking behavior remains consistently more responsible among women.
- Women tend to have their own elected physician far more frequently than men.
- Women conduct far more regular medical check-ups on blood pressure, blood sugar, lipid profile, hemoglobin measurements and urine analysis.
- No significant gender differences were noted in terms of eye sight control.

Author Contributions

All authors listed MJ, LRG, MV and MK, have made substantial, direct and intellectual contribution to the work, and approved it for publication.

Declaration of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Acknowledgments

This Data Report was prepared based on the National Health Surveys of 2000 and 2006 conducted for the population of Serbia (excluding Kosovo) that was carried out by the Ministry of Health of the Republic of Serbia and the Institute of Public Health of Serbia „Dr Milan Jovanovic Batut“.

Jakovljevic M., Romeu-Gordo L., Vukovic M., Krstic M. 2017. Gender-Specific Health-Seeking Behavior and Income Status among the Elderly Citizens of Serbia. *Eastern European Business and Economics Journal* **3(1)**: 67-86.

Funding Statement:

ISCH COST Action IS1409 Gender and health impacts of policies extending working life in western countries has financially supported the data mining, extraction and writing of this Data Report through its Short Term Scientific Mission.

Ministry of Education Science and Technological Development of The Republic of Serbia has supported these efforts by its Grant OI 175 014.

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Appendix

Table 1.
The frequency distribution between men and women by categories of demographic variables, healthcare behavior and self-reported health status in the older population (f - frequency)

Variable	Category	Women f (%)	Men f (%)	Total f (%)	p (χ^2)
Time (age)	2000	1074 (35.1)	783 (33.9)	1857 (34.6)	.359 (.842)
	2006	1982 (64.9)	1524 (66.1)	3506 (65.4)	
Marital state	married / living with a partner out of wedlock	1231 (41.5)	1682 (76.0)	2913 (56.3)	.000 (614.874)
	unmarried	62 (2.1)	24 (1.1)	86 (1.7)	
	divorced	118 (4.0)	35 (1.6)	153 (3.0)	
	widower / widow	1555 (52.4)	471 (21.3)	2026 (39.1)	
Self estimate of the household income level	very bad	423 (13.9)	216 (9.4)	639 (11.9)	.000 (33.937)
	bad	898 (29.4)	636 (27.6)	1534 (28.6)	
	moderately	1408 (46.1)	1158 (50.2)	2566 (47.9)	
	good	286 (9.4)	262 (11.4)	548 (10.2)	
	very good	37 (1.2)	33 (1.4)	70 (1.3)	
Do you have your own doctor?	no	1222 (41.1)	1032 (46.6)	2254 (43.5)	.000 (15.790)
	yes	1751 (58.9)	1181 (53.4)	2932 (56.5)	
The last time of measurement of blood pressure in health centre	never	108 (3.6)	88 (4.0)	196 (3.8)	.001 (16.073)
	more than 5 years	298 (10.0)	253 (11.4)	551 (10.6)	
	more than 1-5 years ago	612 (20.7)	536 (24.7)	1148 (22.1)	
	over the past year	1954 (23.9)	1336 (22.1)	3290 (23.1)	
The last time of	never	222 (7.5)	174 (7.9)	396 (7.6)	.000 (18.139)

Continue of table 1.
The frequency distribution between men and women by categories of demographic variables, healthcare behavior and self-reported health status in the older population (f - frequency)

determination of sugar in blood in health centre	more than 5 years	382 (12.8)	354 (16.0)	736 (14.2)	
	more than 1-5 years ago	874 (29.4)	691 (31.2)	1565 (30.2)	
	over the past year	1495 (50.3)	994 (44.9)	2489 (48.0)	
The last time of determination of fat in blood in health centre	never	259 (8.7)	206 (9.3)	465 (9.0)	.000 (18.572)
	more than 5 years	394 (13.3)	355 (16.0)	749 (14.5)	
	more than 1-5 years ago	872 (29.4)	702 (31.7)	1574 (30.4)	
	over the past year	1445 (48.7)	950 (42.9)	2395 (46.2)	
The last time of determination of hemoglobin in blood in health centre	never	231 (7.8)	190 (8.6)	421 (8.1)	.000 (20.304)
	more than 5 years	407 (13.7)	369 (16.7)	776 (15.0)	
	more than 1-5 years ago	889 (29.9)	711 (32.1)	1600 (46.0)	
	over the past year	1443 (48.6)	943 (42.6)	2386 (46.0)	
The last time of urine analysis in health centre	never	154 (5.2)	132 (6.0)	286 (5.5)	.000 (20.239)
	more than 5 years	408 (13.7)	363 (16.4)	771 (14.9)	
	more than 1-5 years ago	885 (29.8)	719 (32.5)	1604 (30.9)	
	over the past year	1523 (51.3)	999 (45.1)	2522 (48.7)	
The last time of measurement of weight in health centre	never	927 (31.3)	583 (26.4)	1510 (29.2)	.001 (16.210)
	more than 5 years	803 (27.1)	666 (30.1)	1469 (28.4)	
	more than 1-5 years ago	681 (23.0)	547 (24.8)	1228 (23.7)	
	over the past year	555 (18.7)	413 (18.7)	968 (18.7)	

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Continue of table 1. The frequency distribution between men and women by categories of demographic variables, healthcare behavior and self-reported health status in the older population (f - frequency)	The last time of visual check-up in health centre	never	456 (15.4)	283 (12.8)	739 (14.3)	.061 (7.374)
		more than 5 years	910 (30.7)	689 (31.2)	1599 (30.9)	
		more than 1-5 years ago	977 (32.9)	771 (34.9)	1748 (33.8)	
		over the past year	626 (21.1)	466 (21.1)	1092 (21.1)	
	The last time of hearing aid in health centre	never	1042 (35.2)	541 (24.6)	1583 (30.6)	.000 (67.513)
		more than 5 years	806 (27.2)	714 (32.4)	1520 (29.4)	
		more than 1-5 years ago	729 (24.6)	629 (28.6)	1358 (26.3)	
		over the past year	386 (13.0)	319 (14.5)	705 (13.6)	
	Self-reported health status	bad	414 (13.9)	244 (11.0)	658 (12.7)	.000 (165.170)
		pretty bad	857 (28.8)	410 (18.5)	1267 (24.4)	
		moderately	1209 (40.7)	907 (40.9)	2116 (40.8)	
		pretty good	399 (13.4)	495 (22.3)	894 (17.2)	
		good	95 (3.2)	161 (7.3)	256 (4.9)	
	Self-assessment of weight	emaciated	584 (19.7)	399 (18.0)	983 (19.0)	.014 (8.477)
		I am not thin nor obese	1865 (62.9)	1479 (66.7)	3344 (64.5)	
		obese	517 (17.4)	338 (15.3)	855 (16.5)	
	Self-assessment of physical activities	bad	2182 (73.8)	1306 (59.2)	3488 (67.6)	.000 (128.212)
		good	685 (23.2)	768 (34.8)	1453 (28.1)	
		excellent	88 (3.0)	133 (6.0)	221 (4.3)	

Table 2.
The frequency distribution between 2000 and 2006 by categories of healthcare behavior and self-reported health status in the older population (f - frequency)

Variable	Category	Measurement time		Total f (%)	p (χ^2)
		2000 f (%)	2006 f (%)		
Do you have your own contracted attending physician?	no	805 (44.7)	1449 (42.8)	2254 (43.5)	.172 (1.778)
	yes	951 (55.3)	1937 (57.2)	2932 (56.5)	
The last time of measurement of blood pressure in health centre	never	114 (6.3)	82 (2.4)	196 (3.8)	.000 (86.247)
	more than 5 years	208 (11.6)	343 (10.1)	551 (10.6)	
	more than 1-5 years ago	303 (16.8)	845 (25.0)	1148 (22.1)	
	over the past year	1174 (65.3)	2116 (62.5)	3290 (63.5)	
The last time of determination of sugar in blood in health centre	never	227 (12.6)	169 (5.0)	396 (7.6)	.000 (165.392)
	more than 5 years	327 (18.2)	409 (12.1)	736 (14.2)	
	more than 1-5 years ago	420 (23.3)	1145 (33.8)	1565 (30.2)	
	over the past year	826 (45.9)	1663 (49.1)	2489 (48.0)	
The last time of determination of fat in blood in health centre	never	264 (14.7)	201 (5.9)	465 (9.0)	.000 (179.538)
	more than 5 years	337 (18.8)	412 (12.2)	749 (14.5)	
	more than 1-5 years ago	433 (24.1)	1141 (33.7)	1574 (30.4)	
	over the past year	763 (42.5)	1632 (48.2)	2395 (46.2)	
The last time of determination of hemoglobin	never	241 (13.4)	180 (5.3)	421 (8.1)	.000 (186.119)
	more than 5 years	357 (19.9)	419 (12.4)	776 (15.0)	
	more than 1-5 years ago	434 (24.2)	1166 (34.4)	1600 (30.9)	

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Continue of table 2.
The frequency distribution between 2000 and 2006 by categories of healthcare behavior and self-reported health status in the older population (f - frequency)

in blood in health centre	over the past year	765 (42.6)	1621 (47.9)	2386 (46.0)	
The last time of urine analysis in health centre	never	183 (10.2)	103 (3.0)	286 (5.5)	.000 (175.642)
	more than 5 years	335 (18.6)	436 (12.9)	771 (14.9)	
	more than 1-5 years ago	437 (24.3)	1167 (34.5)	1604 (30.9)	
	over the past year	842 (46.9)	1680 (49.6)	2522 (48.7)	
The last time of measurement of weight in health centre	never	620 (34.7)	890 (26.3)	1510 (29.2)	.000 (103.337)
	more than 5 years	450 (25.2)	1119 (30.1)	1469 (28.4)	
	more than 1-5 years ago	315 (17.6)	913 (27.0)	1228 (23.7)	
	over the past year	404 (22.6)	564 (16.7)	968 (18.7)	
The last time of visual check-up in health centre	never	340 (19.0)	399 (11.8)	739 (14.3)	.000 (96.270)
	more than 5 years	513 (28.6)	1086 (32.1)	1599 (30.9)	
	more than 1-5 years ago	494 (27.6)	1254 (37.0)	1748 (33.8)	
	over the past year	445 (24.8)	647 (19.1)	1092 (21.1)	
The last time of hearing aid in health centre	never	616 (34.6)	967 (28.6)	1583 (30.6)	.000 (72.910)
	more than 5 years	489 (27.5)	1031 (30.4)	1520 (29.4)	
	more than 1-5 years ago	370 (20.8)	988 (29.2)	1358 (26.3)	
	over the past year	305 (17.1)	400 (11.8)	705 (13.6)	
Self-reported health status	bad	380 (21.1)	278 (8.2)	658 (12.7)	.000 (317.072)
	pretty bad	246 (13.6)	1021 (30.6)	1267 (24.4)	

Continue of
table 2.
The
frequency
distribution
between
2000 and
2006 by
categories of
healthcare
behavior and
self-reported
health status
in the older
population (f
- frequency)

	moderately	716 (39.7)	1400 (41.3)	2116 (40.8)	
	pretty good	333 (18.4)	561 (16.6)	894 (17.2)	
	good	130 (7.2)	126 (3.7)	256 (4.9)	
Self- assessment of weight	emaciated	300 (16.6)	683 (20.2)	983 (19.0)	.002 (12.585)
	I am not thin nor obese	1185 (65.2)	2169 (64.2)	3344 (64.5)	
	obese	327 (18.1)	528 (15.6)	855 (16.5)	
Self- assessment of physical activities	bad	884 (49.3)	2604 (77.3)	3488 (67.6)	.000 (500.406)
	good	849 (47.3)	604 (17.9)	1453 (28.1)	
	excellent	61 (3.4)	160 (4.8)	221 (4.3)	