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Association of Social Roles, Health, and Health Behavior of Elderly Women in Croatia

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Aim To explore the association between the social role and objective and subjective health measures and use of health care services in the population of women older than 65 years in Croatia.

Methods We used the data from the 2003 Croatian Adult Health Survey (Short Form 36 Health Survey). Two sub-populations, retired women and housewives aged over 65 years, were analyzed and compared according to anthropometric measures, health self-assessment, utilization of health care services, and socioeconomic status.

Results The final sample consisted of 791 housewives and 1151 retired women. Housewives had larger waist circumference (98.44 ± 13.9 vs 96.49 ± 13.5, $P = 0.002$, t test) and higher systolic blood pressure (152.88 ± 25.2 vs 147.79 ± 22.8, $P<0.001$, t test). On self health assessment, housewives had lower index on Mental Component Summary (MCS) (40.28 ± 12.5 vs 42.96 ± 12.4, $P<0.001$, t test).They also had lower self-assessed quality of life (40.28 ± 12.5 vs 42.96 ± 12.4, $P<0.001$, t test). Housewives performed regular breast check-ups significantly less often in the 12 months before the survey (7.5% vs 13.6%, $\chi^2 = 18.0350$, $P<0.001$), but they performed other forms of medical examinations, including general physical check-ups as often as retired women.

Conclusion Housewives differed from retired women of the same age in objective and subjective measures of health status, use of health care services, self perceived health, and self-assessed quality of life. These differences should be taken into account when planning public health measures for these age groups of women.

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Results of several national studies conducted in the Western Europe showed that previous and current socioeconomic factors had greater influence on the health of women than men (1,2). Employment status and family stability, as well as economic status in some countries (3,4), influenced fitness, disability, and appearance of disease. A study conducted in Poland revealed that employment had less positive effect on the health of women in Poland than in Western Europe (5).

Gender differences were found in health status, but also in the development of chronic diseases and disabilities. In Murcia Region, Spain, the prevalence of overweight in housewives was higher general women population (6). Housewives were shown to have a higher risk for development of cardiovascular diseases (7), breast cancer (8), and alcoholism (9). Health status of housewives is not only a direct indicator of the health of female population but also an indirect indicator of the health of the family in which a housewife lives. The influence of "mother housewife" on the health of children was proven for smoking, alcoholism, drug addiction (10), and non-insulin dependent diabetes mellitus (11). From the socioeconomic point of view, reassuming the status of a housewife decreases the possibility to use health care and negatively influences realization of health care rights (12). It was found that medical students showed stereotypical and partial attitudes toward housewives, as opposed to other groups of patients with equal symptoms (13).

According to 2001 census in Croatia, the proportion of people aged over 65 years was 15.6% (14). Their health was mostly determined and compared according to age and sex. Research into health of elderly population in Croatia used sex and place of residence as criteria (15-17). Psycho-social factors that influence the health of adult population in Croatia were not especially followed or investigated.

The age limit for retirement in Croatia is 65 years. In the population of women older than 65 years, we selected two groups according to their previous social and work status. One group comprised retired women, who had been employed and have their own source of income and the other group comprised housewives, who have never been employed and never had their own income.

The aim of this study was to explore the association between the social role and objective and subjective health measures and the use of health care services in the population of housewives and retired women older than 65 years in Croatia. The group of women older than 65 years has been mostly seen as a homogenous group and the health care needs of the subgroups were not especially analyzed. Also, we aimed to find whether the role of housewife had a positive or negative influence on women's health. The results could be used in the development and adjustment of public health programs and interventions, in order to make them more appropriate for specific needs of the population of women over 65.

Subject and Methods

Study design

We used data obtained by Croatian Adult Health Survey (CAHS) in 2003 (18). The survey was conducted and data analyzed according to the methodology developed by a Canadian Society for International Health (18,19) in cooperation with the Croatian Ministry of Health, Andrija Štampar School of Public Health, and Croatian Institute of Public Health.

The 2003 CAHS targeted adult population aged 18 or more years living in private households in Croatia and covered approximately 98% of the target population. Persons living in non-conventional households, institution staff, full-time members of the Croatian Armed Forces, and residents of certain

remote regions of the country were excluded from this survey. Taking into account also the anticipated non-response, a sample of 11 250 households was defined. As some of the units were out of the reach a total sample of 10 766 households was selected to participate in the CAHS.

Out of these selected households, a response was obtained from 9070 individuals, which resulted in an overall response rate of 84.3% (19).

One person per household aged 18 or over was randomly selected using the following simple random sampling approach. Interviewers were instructed to list the first and last names of everybody aged 18 or over living in the household. Using a vector of random numbers and based on the number of eligible persons, one individual was selected at random to participate in the survey. Data collection took place between April and June 2003 by 238 trained public health nurses from the County Institutes of Public Health as interviewers. The nurses conducted a structured face-to-face interview and collected anthropometric measures such as height, weight, waist circumference, pulse, and blood pressure at the end of the interview for all respondents.

Subjects

As a target group for this study we chose women older than 65 years. This was the age limit for retirement in Croatia. In the target population we compared retired women, who had been employed and have their own source of income and housewives, who had never been employed and never had their own income. In the total collected survey sample of 9070 individuals there were 2018 women older than 65 years. From this group, we analyzed 1942 women – 1151 retired and 791 housewives. Other 76 women had other status (entrepreneur, farmer, unemployed, or unknown).

Measurement and instruments

The survey questions were divided in categories as follows: anthropometric measures (blood pressure, pulse, height and weight, waist circumference, 9-silhouette scale), household (size, income, rooms), socio-economic status (characteristics, age, gender, marital status, education, occupation), self-perceived health (general health, activity, limitations, mental and physical problems), and health service use (access, use, visits to doctors, specialists, dentists, difficulties in accessing services, health insurance). The survey and questionnaire were adjusted and based on existing studies relevant for Croatia such as the Countrywide Integrated Non-communicable Diseases Intervention (CINDI) for non-communicable diseases (20). For health self-assessment, SF-36 questionnaire was used (18,21,22). The interviewed women were asked to assess the quality of life on the 1-11 scale, ranked from "1" (not satisfied at all) to "11" (fully satisfied).

Statistical analysis

Data analysis was performed with SAS statistical package (SAS Institute Inc., Cary, NC, USA; SAS (r) Proprietary Software Release 8.2 (TS2M0) Licensed to SRCE, Site 0082452004. We analyzed data on anthropometric measures, socio-economic status, health status, health care services, and SF-36 data for self-perceived health. Data collected with the SF-36 were analyzed and compared as Mental Component Summary (MCS) and Physical Component Summary (PCS) (21). Statistical analysis included the comparison of housewives and retired women data by use of χ^2 test or *t* test. *P* value <0.05 was considered statistically significant.

Results

The final sample consisted of 1942 women older than 65 years; 791 were housewives and

1151 were retired. Housewives had higher systolic pressure and heart rate than retired women (Table 1). The difference in diastolic blood pressure was not significant. Waist circumference was smaller in retired women than in housewives. Retired women were also taller than housewives. Weight and silhouette did not significantly differ between the two groups (Table 1).

Table 1. Anthropometric parameters, systolic and diastolic blood pressure, pulse rate, and silhouette in the women over 65, in the Croatian Adult Health Survey 2003*

Parameter	Social group/role (mean±SD) housewives (n = 790)	retired women (n = 1150)	P†	t
Height (cm)	160.17 ± 7.9	161.2 ± 7.0	0.001	-3.28
Weight (kg)	71.47 ± 13.1	72.04 ± 13.1	0.346	-0.94
Waist (cm)	98.44 ± 13.9	96.49 ± 13.5	0.002	3.09
Systolic blood pressure (mm/Hg)	152.88 ± 25.2	147.79 ± 22.8	<0.001	4.63
Diastolic blood pressure (mm/Hg)	84.30 ± 12.3	83.27 ± 11.4	0.056	1.89
Pulse rate (per min)	75.34 ± 11.4	74.22 ± 10.8	0.031	2.16
Silhouette*	5.23 ± 1.7	5.24 ± 1.6	0.878	-0.15

*In the Croatian Adult Health Survey 2003 questionnaire, the 9-silhouette scale was included. Participants chose 1 of the 9 somatotypes they found most appropriate to describe their figure.
†*t* test.

All interviewed housewives and retired women had their family physician and there was no difference between the groups in the frequency of visits to physicians in primary health care, dentists, and gynecologists. There was no difference between the groups in the number of hospitalizations in the previous year or in the number of visits to private general practitioners. However, retired women more often visited private dentists ($\chi^2_1 = 3.8970$, $P = 0.048$), but not private gynecologists. In addition, housewives less often used health care services of specialists, either those under the contract with the Croatian Institute for Health Insurance (CIHI) ($\chi^2_5 = 18.6715$, $P = 0.002$) or specialists in private practice ($\chi^2_1 = 15.9883$, $P<0.001$). Housewives less often used the services requiring additional fee ($\chi^2_1 = 15.9883$, $P<0.001$) and less often used additional health insurance (26.8% housewives vs 46.6% retired women, $\chi^2_1 = 76.7351$, $P<0.001$). There was a difference between housewives and retired women in performing preventive medical examinations. Housewives went to regular medical breast examinations significantly less often than retired women in the previous 12 months (7.5% vs 13.6%, respectively, $\chi^2_2 = 18.0350$, $P<0.001$), although they underwent other forms of medical examinations, including general physical checkup as often as retired women.

Housewives had lower index on Mental Component Summary (MCS), indicating lower mental health status and overall mental well-being, and lower self-assessed quality of life (Table 2). There was no significant difference between the two groups of women in Physical Component Summary (PCS) index.

Table 2. Self-assessed health of housewives and retired women assessed by SF-36, in the Croatian Adult Health Survey 2003

Parameter	Women (mean±SD) housewives (n = 765)	retired women (n = 1114)	P*	t
Physical Component Summary	37.62 ± 10.8	38.29 ± 11.0	0.190	-1.31
Mental Component Summary	40.28 ± 12.5	42.96 ± 12.4	<0.001	-4.59
Quality of life (1-11 range)	5.74 ± 2.7	6.10 ± 2.7	0.057	-2.83

**t* test.

In comparison with retired women, the proportion of housewives who smoked was significantly smaller (88.4% vs 77.17%, $\chi^2_2 = 40.4740$, $P<0.001$), but there was no difference in alcohol consumption between the two groups of women.

Housewives and retired women differed in social parameters. There were 92.5% of housewives and 65.9% of retired women with completed primary school, incomplete lower education, or without education ($\chi^2_5 = 250.3706$, $P<0.001$). The results of self-assessment of household standard showed that 62.7% of housewives and 49.3% of retired women ($\chi^2_1 = 49.3279$, $P<0.001$) thought their living standard was below average. On the scale of total household income, 24.8% of housewives and 8.0% of retired women had an income of less than HRK 1000 a month (HRK

1 = US $0.16), whereas the distribution of income showed that housewives lived, on average, in households that were better off ($\chi^2_7 = 124.4875$, $P<0.001$). There were 38.4% of housewives and 49.5% of retired women ($\chi^2_9 = 38.7896$, $P<0.001$) living in a single-person household, 36.5% of housewives and 22.8% of retired women were married, and 59.6% of housewives and 65.1% of retired women were widows ($\chi^2_3 = 71.8934$, $P<0.001$).

Discussion

The present study confirmed that housewives had higher average systolic blood pressure and waist circumference than retired women. These findings indicate that housewives are at increased risk of cardiovascular disease and related complications. Among 5 main causes of death in Croatian women, 4 belong to the group of cardiovascular diseases, accounting for 50.9% of all causes of death. The only non-cardiovascular cause, in this top five group, is breast cancer, accounting for 3.2% of all causes of death (23) With respect to cardiovascular disease, our results are similar to those reported from Spain and Sweden (6,7). To the best of our knowledge, we could not find information on the health of housewives in post-communist transition countries such as Croatia.

Furthermore, the recorded higher risk of cardiovascular diseases as well as increased blood pressure and waist circumference indicate that housewives generally have a less attentive attitude toward health when compared to employed women. This was confirmed by our results, ie the lower use of public health preventive programs and specialist health care services.

Although there were no differences in the use of services of primary care, there were differences in the use of specialist primary care, indicating the disparity in the quality of applied treatments.

Preventive breast examination was another important indicator of the status of housewives in the health care system. Although breast cancer was highly ranked as a cause of death and morbidity in women (23), our study showed that housewives underwent fewer preventive breast examinations. The reason for this situation might lay in the status and behavior of housewives, but also in attitude of health care services toward housewives as patients. This possibility was confirmed by the study on stereotypes that medical students form about housewives. It was found that students had worse attitude toward housewives than toward other women with the same symptoms (13).

The reasons underlying the differences between housewives and retired women in the use of health care, especially services that need to be paid additionally, could be due to differences in income. However, this reason cannot be easily associated with preventive breast examinations, which are covered in full by CIHI and can be done in primary health care facilities for free.

The explanation for these differences partly lies in self-assessment of health and in overall awareness of own health. Housewives self-assessed their mental health as worse than retired women. Housewives also assessed a worse quality of life. However, there were no differences in self-assessed physical health. This finding is especially important if linked to the differences in self-assessed financial status, according to which 62.6% of housewives and 49.1% of retired women considered their living standard below average. Assessment of the quality of life was in accordance with the finding that on the scale of total household income, 24.4% of housewives and 7.9% of retired women live with less than HRK 1000 (US $173) a month. Health-related behavior

can be explained by differences in formal education, since housewives had significantly lower education level.

Overall, housewives had lower education, lived in worse economic conditions, used health care services less, and assessed their quality of life as worse than retired women.

The influence of family on health has been examined in various political and social contexts, such as Poland, Iran, and the UK (5,24,25).

The differences we found in health status and use of health care services were in accordance with the results of other studies showing a more difficult position of housewives and the injustice of health care system (2-4).

From public health point of view, the inequalities in the use of preventive medical examinations are especially disturbing, since studies from other countries (Spain, Sweden, and Brazil) found significant differences in the prevalence of preventable diseases (6-8).

Our results showed that within the group of women aged 65 and over, it is possible to recognize subgroups that differ in their subjective and objective health status and use of health care services. The understanding of the causes of these differences is an important scientific and professional challenge for future research. However, the large difference between "objectively" assessed health state and self-assessed needs is especially important for public health interventions. This difference shows the importance of following-up women according to their social role and the necessity to investigate the requirements of the population over 65 years.

There are a few limitations or potential biases of this study. There are some widows who have never been employed, but now have survivor's benefits. Although categories for several types of employment status (employed, unemployed, housewife, entrepreneur, farmer, or unknown) were included in the questionnaire, sometimes it was not easy to estimate how much women in the rural areas were involved in the regular job on the farm where they live.

The differences between housewives and retired women in Croatia in systolic pressure, waist circumference, use of health care services, and particularly preventive examinations indicate the importance of life roles (employed woman or a housewife) for overall health. The influence of these social roles on health and health-related behavior was presented in this article, but the results indicate the necessity of a more systematic public health approach to the population of women from the perspective of their employment and family status. Such an approach must ensure enough information on particular target groups and investigate the health conditions and behavior, especially the choice of a role.

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