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Health related quality of life (HRQoL)of older adults based on SF-36v2®Health Survey-an international comparison between two country in the pilot study.

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ABSTRACT

Background: The treatment and the care of elderly people requires monitoring its effectiveness which is possible through the HRQoL evaluation.
Purpose: The purpose of this study was to examine HRQoL of older adults in a comparative research from two country, including Physical Component Summary (PCS) scores and Mental Component Summary (MCS) scores. Materials/Methods: Cross-cultural survey were conducted among elderly people in a group of 99 elderly outpatients> 60 years. Patients were recruited in Poland (N = 50) and Turkey (N = 49). Data has been collected from March to September 2013. To evaluate the patient's quality of life we used the SF-36v2® (Short Form Health Survey)in the acute 1-week recall form, which describes the health status during the most recent week. Results: The average age of respondents was 71.06. Quality of life in all spheres was below the standard established by the developers of the SF-36. A statistically significant difference was observed for physical functioning such as group of patients from Poland outperformed the group of patients from Turkey (p = 0.006). In both groups the highest outcome was observed in the vitality dimension and the lowest in the role emotional dimension. In the Polish patients group physical and mental functioning was significant worse because of age .Whereas in the Turkish group PCS and MCS was similar but PCS for 75+was higher than in the youngest group. All scores by gender were lower than the norms in the both groups and risk of depression among men and women was comparatively high.
Conclusion: Despite the cultural and social differences our research shows that similar emotional problems in everyday social functioning and a high risk of developing depression occurred among both groups.

KEYWORDS HRQoL, ageing, aged people, physical and mental activity.

INTRODUCTION

Over the past hundred years aging societies appeared in Europe and all over the world. Percentage of elderly people is more than 20% in many countries in Western, South and North Europe . In Poland percentage of people over 65 is about 13,5% , whereas in Turkey 7.1% (Giannakouris 2008). While proportion of elderly population (65 years and over) was 7.7% in 2013, it is expected that this proportion will rise to 10.2% in 2023, , 20.8% in 2050 and 27.7% in 2075 according to the population projections (Elderly Statistics, 2013).

While the elderly is regarded as the "guards of culture" who are experience and assume serious social roles in training the second generation and preserving the culture in the traditional societies, they are considered as individuals who have lost their productivity, are a burden on the family and are expected to die as soon as possible (Er 2009).

The elderly are generally known as people who are aged over 65, walk with a walking stick and with difficulty, are humpbacked, have a hoarse voice. Besides, this period is associated with an increase in the diseases, addiction, confusion, loneliness, helplessness, wrinkles, stop of balding and graying hair (Er 2009). In parallel to the increase of the elderly population, it is a necessity to increase the geriatrics and gerontology trainings in the nursing education (Aksoydan 2009)

Currently, human life takes longer, the average life expectancy has increased from 75 to 79 years in the population of all countries of the European Union. In Poland, the life expectancy for men is 71 years and for women 79 years. According to the forecast Polish statistical office in 2020 the percentage of elderly in the population is expected to reach 22.4% and a quarter of them will be over 75 years of age. In the coming years is expected to accelerate this process - particularly in the period 2005-2020. Already in 2020, every fifth Pole will be ranked among the elderly, and in 2050 this share will approach European levels (35.6%) (Polish Central Statistical

Office, **2009)**. According to Eurostat, the situation is in this aspect a little better. In addition, demographic projections emphasize the continued growth of a subpopulation of "old old" (aged 75 years and over) (Giannakouris 2008). Unfortunately, longer life is not always associated with improved efficiency, health status and quality of life. The population of older people in the European Region is diverse in terms of health, physical and mental capability. Epidemiological studies indicate a deteriorating with age, functional abilities and health status (The European health report 2012 : charting the way to well-being.WHO, 2012).

Quality of life related to health is particularly important for the patient, but nevertheless of interest to health professionals, from the point of view of their clinically decisions.

It is an important subjective and objective measure of health. To define the quality of life, we need health assessment, taking into account the physical, mental, social and spiritual aspects of patient functioning. WHO definition of HRQoL covers the functionality of the basic areas of life, in the physical, psychological, social and self -assessment of health (The Reducing risks, promoting healthy life. WHO,2002).

The generic and specific questionnaires are used to test the quality of life. The SF-36v2 ® Health Survey is one of the most known and used in medical and psychological research in the world (Maruish and Kosinski 2009). The use of the SF-36v2 ® Health Survey is very wide, has been used to compare the health status of groups of patients of different ages with similar medical problems, individual or population health assessment, health monitoring of patients at a given time, to assess the effectiveness and cost of treatment and in other important situations that require monitoring. Many studies are devoted to the relationship between chronic diseases and HRQoL, defined by the Physical Component Summary (PCS) and the Mental Component Summary (MCS) scores of the widely-used SF-36® Health Survey. Chinese researchers used the Short Form (SF)-36® Health Survey scale to assess the effect of pelvic floor muscle exercise (PFE) on aging males who received transurethral resection of the prostate (TUR-P) (Chen-Pang Hou. et al.2013). In the U.S. Bayliss et al. (2012)conducted a research on the effects of chronic disease patients' quality of life. Analysis of the literature points to deficiencies in the research areas such as quality of life of older people. We found a study from 1996 conducted in UK where the usefulness of the SF-36 questionnaire was assessed. The authors found out that the polypatology frequently present in elderly patients substantially limited the reliability of the SF-36 tool which performed better if the measure was taken twice (Hill et al.1996).

MATERIAL AND METHODS:

SAMPLE:

A cross-cultural survey was conducted among patients in the group of 99 elderly patients, recruited from Polish (N = 50) and Turkey (N = 49). Data was collected from March to September 2013.The inclusion criteria were age-geriatric patients >60 years who were recruited from outpatients in the Geriatrics Outpatient in Bydgoszcz and Izmir, with MMSE-12-item score >7points, what means that they are not identified with severe cognitive disorders (Folstein 1975, Kempen et al.1995). Patients studied did not have a mental disorder, awareness, and had no problems with verbal communication. Most of all Polish patients suffered from endocrine, nutritional, metabolic and circulatory system diseases. Diseases of the genitourinary, musculoskeletal system and cancer dominated in the Turkish patients group. Examinations were voluntary, patients received the verbal invitation to the participation and information about the purpose, and trained nurses which looked patients after filled in a questionnaire. Patients who volunteered to participate, signed an informed consent form which was included in the final survey. The study was conducted after obtaining a license from QualityMetric Incorporated.

TOOL OF ASSESSMENT: SF-36v2®

To evaluate the patient's quality of life we used the SF-36v2®)in the acute 1-week recall form, which describes the health status during the most recent week better than the standard form 1-week recall. Quality of life was defined through SF-36v2® PCS scores and MCS scores. The SF-36 was created in 1994, as a multipurpose, short health survey consisting of 36 items used to measure eight domains of health-related quality of life: Physical Functioning, Role Physical Functioning (role limitation due to physical health), Bodily Pain, General Health, Vitality, Social Functioning, Role Emotional (role limitation due to mental/emotional health) and Mental Health. The information obtained from patients in eight domains are aggregated into two summary measures: PCS and MCS measure. Each scale score ranges from 0 to 100, whereas a higher score indicates a better level HRQoL. The SF-36 is frequent used in the world because it is brief, psychometrically sound and available in over 120 translations (McHorney 1994)). The new, SF-36v2 Health Survey is improved version of HRQoL. The scales are the same as those developed for the SF-36, and the items that constitute them address the same general content found in the items of the original form (Ware 2008). The usefulness and reliability of the questionnaire has been well researched and documented for many languages including Polish and Turkey [Ware et.al.1998; Marcinowicz and Sienkiewicz 2003). Socio-demographically data was obtained by a questionnaire which contain following variables: age, gender, place of living, marital status, educational level. The questionnaire consist also questions about clinical diagnosis and duration of illness. The obtained data were statistically analyzed. The research results were subjected to statistical analysis using STATISTICA 10 program. A p value of less than 0.05 is considered as statistically significant.

RESULTS AND DISCUSSION

We analyzed results from 99 subjects. Mean age of patients was almost similar: 72.3 for Polish patients and 69.1 for the Turkish. The average age of respondents was 71.06. Groups were gender matched. In the whole group 50 were women and 49 man. Regarding the level of education, respondents from Polish group were generally better educated than the Turkish group. In the Polish group, secondary education and vocational training dominated, while elementary education in the Turkish sample. Compared to the Polish group (54% people), more respondents from Turkey were married (87.8%). More patients in Turkey also came from the countryside. A larger group of Turkish patients suffered less than 5 years, while the Polish group more than 5 years. In the Turkish patients group most of respondents had an elementary education (71,4%), whereas in the Polish group patients had a secondary and professional education (respectively 40% and 30%). Most patients from Turkey(87.8%) were married whereas in Poland only 53%. The results are presented Table I.

Table II shows the comparison between the results of the SF-36v2 Health Survey regarding the Polish and Turkish sample. The analysis shows that the difference is statistically significant only in the physical functioning of patients p=0.006. In both groups the highest results were observed in the area of vitality and energy, and the lowest in terms of Emotional Role. We noted also high risk of depression in the both groups. Table III presents the results of the PCS and MCS scores grouped by age of the respondents. Physical and mental functioning significantly declined with age in Polish group.

There was not such a relationship in Turkish patients but the PCS for people over 75 years was higher than in younger patients. The results by gender in both groups were significantly lower than expected standards. All results obtained by the subjects in both groups were lower than expected standards, and the risk of depression among women and men was comparatively high. The results are presented Table IV. Analysis of the collected material in the range of SF-36 dimensions indicates no statistical difference between the two groups of patients. Only in physical functioning (PF) we observed a statistically better results in the Polish group (p = 0.006). Physical functioning in older people concerns the assessment of

limitations in various everyday activities, requiring more or less physical effort as climbing stairs, shopping, hiking walking at various distances, washing and dressing, bending and kneeling, and others. Physical functioning is gradually reduced with the progress of the aging process and the appearance of many specific diseases and conditions. Similarly, mental health deterioration in the study group was below average. Generally, PCS and MCS dropped significantly with age. In geriatric medicine, functional abilities are assessed by ADL and IADL scales (Activity of Daily Living and Instrumental Activity of Daily Living).

In the study groups the highest and most results were observed in the field of vitality, measuring the level of vital energy and fatigue (for the Polish group 46.5 and 46.93 for Turkish group). Although they are still below the average of determining the level of good health. Generally, a decrease of vital energy, restrictions on movement, frequent various pain and sleep disorders seriously disturb the functioning of older people at the same time lowering their quality of life. Low level in the field of Role Emotional (RE), which measures limitations in performing work and other outside work, useful activity for other people, were observed in both groups (RE for Polish and Turkish groups was respectively 36.55 and 31.73). Low level in this field indicates the emotional problems associated with social activity. Problems in the emotional range are also connected with low levels of Social Functioning (SF for Polish groups 40.82 and 37.88 for the Turkish group) and a high rate of risk of depression. Scientific reports indicate that mental health problems in the elderly are common and depression is the most common mental disorder occurring in this population. Statistical data are probably incomplete and the actual scale of the problem is likely higher. Some estimate that up to 50% of people suffering from depression in the population of seniors is not diagnosed. Same statistics are very different and range from 5 to 44% prevalence of this disease in the elderly. They show the percentage difference between those patients independent and living in their homes (1-12%) and those who are in hospitals and care institutions (44%). Depression disturbs quality of life and has an impact on the ability to manage their health, and nurses caring for elderly patients with various health problems have a great possibility of observation and assessment in this regard (Ostrzyżek and Kocur 2003).

Depression disturbs quality of life and has an impact on the ability to manage their health, and nurses caring for elderly patients with various health problems have a great possibility of observation and assessment in this regard (Thomas 2013). In the Polish group there was no significant difference in terms of equality in all spheres of life studied. The group of Turkish women had significantly lower scores on global mental component, vitality, social function, role emotional and mental health than men ($p < 0.05$).

CONCLUSIONS

1. General level of quality of life was below the standard established by the creators of the SF-36, which means the occurrence of worse health among patients
2. Similar emotional problems in everyday social functioning and a high risk of developing depression occurred among respondents, despite the cultural and social differences.
3. To improve the quality of life and functioning of older people could be put to increase psychological support formal and informal learning.

LIMITATION

The authors treat the current study as a pilot, hoping for their extension to a larger group of subjects from different cultures and communities. In the scientific literature found no comprehensive studies on the quality of life related to the large and inhomogeneous age group. Being aware of the progress of the aging population of Europe and the world, and incur increasing amounts of money on the protection needs of the elderly, it seems important to study the current problems in different spheres of life. Adaptation of adequate and purposeful support and care for different age groups can bring measurable benefits for the social functioning .

Table 1. Patient's characteristic (N=99).

Variables	Polish Sample N=50	Turkish Sample N=49	Total N=99
Age (years), mean (SD)	72.72 (6.49)	69.37 (7.34)	71.06 (7.09)
Gender (male), N(%)	22(44)	26 (53)	
(female), N(%)	28(56)	23(47)	
Educational level, N (%)			
Elementary education	12 (24)	35 (71.4)	47 (47.5)
Secondary education	20 (40)	9 (18.4)	29 (29.3)
Professional education	15 (30)	2 (4.1)	17 (17.2)
Higher education	3 (6)	3 (6.1)	6 (6.1)
Marital status N(%)			
Mary	27 (54)	43 (87.8)	70 (70,7)
Free	19 (38)	0 (0)	19 (19.2)
Widow/er	4 (8)	6 (12.2)	10 (10.1)
Place of living N(%)			
country	20 (40)	33 (67.3)	53 (53.5)
city	30 (60)	16 (32.7)	46 (46.5)

Table 2. The results of the SF-36v2 Health Survey.

Scores for Total Sample SF-36 dimensions	Polish Sample N=50 Mean /(SD)	Turkish Sample N=49 Mean /(SD)	*P*-value
PCS- Physical Component Summary	42.39 (8.65)	40.38 (10.38)	0.14
MCS-Mental Component Summary	42.18 (7.59)	40.11 (14.24)	0.41
PF-Physical Functioning	41.78 (10.19)	35.16 (12.7)	0.006
RP-Role Physical	39.42 (7.49)	35.6 (11.96)	0.06
GH-General Health	42.19 (6.9)	45.14 (11.34)	0.12
BP- Bodily Pain	42.94 (8.17)	42.55 (12.85)	0.86
VT-Vitality	46.5 (7.39)	46.93 (11.21)	0.82
SF- Social Functioning	40.82 (10.19)	37.88 (11.37)	0.18
RE-Role Emotional	36.55 (10.19)	31.73 (16.68)	0.10
MH-Mental Health	44.44 (11.7)	41.84 (14.23)	0.28
First Stage Positive Depression Screening:	54	53	
General population Norm	18	18	

Table 3. PCS Scores and MCS scores by age group.

Scores	Polish Sample N=50	Turkish Sample N=49	Norm	*P*-value
PCS scores				
55-64	46.74	40.15	46.91	0.08
65-74	43.58	39.69	45.48	0.21
75+	40.01	41.92	42.57	0.59
MCS scores				
55-64	46.42	42.09	51.48	0.52
65-74	40.28	41.71	54.88	0.70
75+	33.13	34.68	55.28	0.75

Table 4. Scores by gender.

Scores	Polish Sample Male/Female	Turkish Sample Male/Female	General population Norm Male/Female
PCS- Physical Component Summary	42.53/42.23	40.05/40.76	50.93/49.15
MCS-Mental Component Summary	44.04/41.07	43.89/35.85	50.87/49.14
PF-Physical Functioning	42.6 /41.03	36.09/34.12	51.23/48.83
RP-Role Physical	39.01/39.75	35.02/36.25	50.67/49.37
GH-General Health	43.65/41.29	46.45/43.65	50.72/49.32
BP- Bodily Pain	42.94/43.14	43.58/41.39	50.98/43.14
VT-Vitality	48.24/45.36	49.36/44.18	51.28/48.79
SF- Social Functioning	43.03/39.16	40.58/34.82	50.96/49.1
RE-Role Emotional	36.9 / 36.41	35.09/27.93	50.85/49.2
MH-Mental Health	46.23/43.5	44.47/38/87	50.93/49.12
First Stage Positive Depression Screening:	50/55	50/56	
General population Norm	15/19	15/19	

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