Research Article

Factors Affecting the Quality of Life of the Elderly in Iraq and Turkiye and Differences Between the Two Cultures

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ABSTRACT

The aim of this study was to determine the quality of life (QOL) of the elderly living in Iraq and Turkiye and the effect of sociodemographic, health, economic, lifestyle and spiritual factors on the QOL in the elderly cross-culturally. The study was conducted with a total of 200 participants aged ≥65 years in Iraq and Turkiye with face-to-face interviews. The WHOQOL-OLD scale was used. Comparison tests for univariate group rank values were used to compare total scale scores. The mean total score for QOL was 77.70 ± 11.40 in Turkiye, and 65.47 ± 7.20 in Iraq. In Iraq, factors affecting low QOL were age 85 years and older, female gender, being single, low educational level, not having a regular salary, insufficient income, chronic disease, drug use and disability. Factors effective on high QOL were eating healthily, walking or exercising regularly, praying five times a day, and reading the Qur'an in Iraq. Factors affecting high QOL in Turkiye were having another income outside of a salary, not having chronic diseases, having a healthy diet, walking or exercising and thanking God. QOL was higher in older participants in Turkiye than those in Iraq.

Keywords: Aged, quality of life, cross-cultural comparison

1. Introduction

With the demographic change experienced in recent years, the world population is ageing and the numbers and proportion of elderly people in the population are increasing in all countries in the world (Katta, Krishna, Anegawa and Munuswamy, 2017, s.2). This means that people spend more years in old age, which is the last term of life. This life period may be difficult due to the increase in chronic diseases in old age, the loss of status and decreases in participation in society. For this reason, quality of life in old age has become an increasingly significant concept in recent years (Değer, 2020, s. 313).

Quality of life (QOL) is defined as a person's perception of their place in life in a cultural, social and environmental context. People's functionality levels, health conditions, psychological status and personal beliefs affect their quality of life. A person's life targets, expectations, norms and worries determine the limits of their QOL (Barakovic et al., 2020, s.3). Because every person has different expectations from life, the meaning of quality of life is different for every individual (Van Hoof, Beneken Genaamd Kolmer, de Vlugt, and de Vries, 2019, s.1).

A good QOL for the elderly is defined as living independently without requiring anyone, carrying out basic daily life activities properly and feeling good (De Oliveira, Souza, Rodrigues, Fett and Piva, 2019, s.37). Determining the QOL for the elderly is important in determining the policies to be implemented in relation to the elderly in society and evaluating the results of these policies (Değer, 2020, s.326). It is also used in the health field to reveal the costs and benefits of medical interventions applied to the elderly (Edisan and Kadıoğlu, 2011, s.8). It is useful in determining the quality of the medical method during patient care, follow-up and treatment processes. QOL is one of the most important indicators for geriatrics, gerontology and gerontology nursing. Maximum QOL is a significant goal for elderly care and is a measure of nursing quality to some extent (Sováriová Soósová, 2016, s. 484). QOL is useful for evaluating the physical functions and well-being of elderly people and is used as an index in assessing community health (Kim, Hong and Noh, 2018, s. 483).

In the current century, it is more important to live happily and with a higher quality of life rather than to live longer. As the QOL is the perceptions of people about life in their own culture (Barakovic et al., 2020, s.3); for this reason, it is very valuable to reveal the factors affecting the QOL of the elderly living in different cultures. Thus, recommendations, policies and practices that will make elderly people happy within their own cultures, increase their QOL and postpone their need for care can be proposed.

The aim of this study was to determine the quality of life of the elderly living in Iraq and Turkiye, the effect of sociodemographic, health, economic, lifestyle and spiritual data of the elderly on the quality of life, and to reveal the factors affecting the quality of life in the elderly cross-culturally.

2. Method

2.1. Subjects

The study was descriptive and cross-sectional. The study was conducted in community-dwelling older adult individuals aged ≥65 years in Iraq and Turkiye. A power analysis had been done before the study started, and it had been arranged with 100 subjects in each group, determined with 76.324% power. A total of 200 older adult individuals, with 100 older individuals living in the city of Babylon in Iraq and 100 older individuals living in the city of Çankırı in Turkiye, were selected as a sample. A sample selection method was not used in the study, and the elderly who could be reached and abided by the inclusion criteria were accepted into the study. The 65-84-year

age group was classified as a first group, and the ≥85-year age group was the second group. The elderly people were selected so that their age groups were similar in both countries. Inclusion criteria were being age 65 years and above, voluntary participation in the study, not being bedridden, and not having a mental health diagnosis. The study was made face-to-face, and informed consent was taken from all participants.

The study was approved by the Ethics Committee of Çankırı Karatekin University (Meeting Decision Number: 15, Date: June 8, 2020) and by the Training and Human Development Center Research Unit, Babel Health Directorate, Governorate of Babel, Republic of Iraq (No: 174, Date: February 10, 2020). The study was directed in accordance with the Declaration of Helsinki.

2.2. Evaluation Parameters

Aged Information Form: This form registered information about the participants, including their age, gender, marital status, education level, economic level (salary, enough income, other income), existence of diseases, disability condition, number of medications used, healthy eating opinions, walking or exercise habits, praying, wishing or thanking God, and reading the Quran. This form was composed by the researchers.

Module of World Health Organization Quality of Life for the elderly (WHOQOL-OLD): This scale was developed to measure the quality of life in elderly individuals by WHO. Studies in the intercultural field of this scale were conducted with elderly individuals in 22 countries, and Turkiye was included among these countries. These countries were located in the Middle East, Asia, Europa, South and North America (Power, Quinn, Schmidt and WHOQOL-OLD Group 2005, s. 2199). In addition, the validity and reliability study of the WHOQOL-OLD Scale was conducted in Turkiye. Researchers of this study declared it was a general-purpose improved quality of life scale for the elderly not only in Turkiye, but for a geographical area covering the Eastern Mediterranean and the Middle East for the first time (Eser, Saatli, Eser, Baydur and Fidaner, 2010, s. 38-39).

The scale consists of 6 domains and 24 items. These 6 domains are "sensory abilities, autonomy, past, present, future activities, social participation, death and dying and intimacy". Every scale item rating and scoring is made on a 5-point Likert scale with 1 point for 'not at all', 2 points for 'a little', 3 points for 'moderately', 4 points for 'much', and 5 points for 'extremely'. The maximum total score for the scale is 120, the minimum score is 24. A high score means a good quality of life (WHO, 2006, s. 54).

Reliability was made for the WHOQOL-OLD scale in the present study. Cronbach's alpha (α) coefficient was used for a reliability analysis. In the questionnaire, there is no item with a total correlation value of less than 0.20. For this reason, no item was removed due to the high reliability value of all 24 items. As a result of the application as a result of the item analysis, the result of 24 items was found in our favor. Then, the reliability coefficient of the questionnaire was examined. The ways to calculate the reliability coefficient differ according to the type of variables, source, and number of applications. The difference in the way of calculation also changes the interpretive meaning of the reliability coefficient. The reliability coefficient is the degree of purity from random errors and gives information about the amount of error involved in the measurement results. Reliability is required to take values ranging from 0 to +1, but the values must be close to +1. It is a desired result that the reliability coefficient is more than 0.70. Since each item of the measurement tool is scaled between 1 and 5 Likert-type, there is a reliability meaning in terms of cronbach's alpha (α) reliability and internal consistency. The cronbach's alpha (α) coefficient of the questionnaire used in the present study is shown in Table 1.

Table 1: The cronbach's alpha (α) coefficient of the WHOQOL-OLD scale in the present study

Sub-dimensions of WHOQOL-OLD	Cronbach alpha (α)		
	IRAQ	TURKIYE	TOTAL
Sensory ability	0,865	0,644	0,755
Autonomy	0,67	0,65	0,66
Past, present and future activities	0,766	0,784	0,775
Social participation	0,821	0,803	0,812
Death and dying	0,629	0,89	0,610
Intimacy	0,757	0,787	0,772
Total of quality of life scale	0,72	0,776	0,748

Cronbach alpha was calculated for the 24 items used in the application. Reliability coefficient of 0.72 in Iraq, 0.776 in Turkiye, and was found 0.748 for the full scale. Since this coefficient was above 0.70, the scale was accepted as appropriate (Table 1).

2.3. Statistics
The data obtained in this study were analyzed using the SPSS 25 package program. Normality tests for the data were done with the Kolmogorov-Smirnov test. Due to the data not having normal distribution, the Mann-Whitney U test was used for comparisons with two groups and the Kruskal-Wallis H test was used for comparisons with three or more groups. A value of 0.05 was used as the level of significance, and it was stated that there was a significant difference when $p<0.05$.

3. Results
The WOHQOL-OLD scale was applied to elderly participants in the two countries. The mean total score for QOL was found to be 77.70 ± 11.40 among elderly participants in Turkiye, and it was found to be 65.47 ± 7.20 among elderly participants in Iraq. The mean score for QOL was significantly higher in older participants in Turkiye than those in Iraq ($p < 0.05$). When the mean scores for the quality-of-life sub-domains are examined; the mean scores for the sub-domains of sensory ability, autonomy, past, present, future activities, social participation and intimacy were significantly higher for older people in Turkiye than those in Iraq ($p < 0.05$). There was no significant difference between countries in terms of death and dying scores (Table 2).

When the factors affecting the QOL in the older adults living in Iraq are examined; being 85 years and older, female gender, being single, and low educational level were factors affecting low QOL ($p < 0.05$). The QOL was lower in the elderly who did not have a regular salary and those whose income was not sufficient for their needs ($p < 0.05$). The QOL was low in those with chronic disease, drug use and walking impairment ($p < 0.05$). The QOL was high in those who think they eat healthily and those who walk or exercise regularly ($p < 0.05$). The QOL was high in those who prayed five times a day and read the Qur'an ($p < 0.05$) (Table 3).

In older adults living in Turkiye, the QOL was high for the elderly whose income was sufficient to meet their needs and who had an additional income other than their salary ($p < 0.05$). The QOL was high in the elderly without chronic diseases, those who thought they had a healthy diet, and who walked or exercised regularly ($p < 0.05$). QOL was high in the elderly who frequently invoked or thanked God ($p < 0.05$) (Table 3).

Table 2: Examination of quality of life with six sub-dimensions in the elderly participants and comparison between the two countries

n		Mean	Median	Min	Max	Sd	Mr	Mann-Whitney U test	
								U	P
Sensory ability	Iraq	100	7.88	8.00	4.00	18.00	2.93	73.4	
	Turkiye	100	10.97	10.00	5.00	18.00	3.12	127.6	2293	0.0001*
	Total	200	9.43	9.00	4.00	18.00	3.39		
Autonomy	Iraq	100	13.06	14.00	6.00	20.00	2.90	86.0	
	Turkiye	100	14.54	15.00	4.00	20.00	3.25	115.0	3546	0.0001*
	Total	200	13.80	14.00	4.00	20.00	3.16		
Past, present future activities	Iraq	100	11.45	11.00	6.00	17.00	2.35	80.7	
	Turkiye	100	13.74	14.00	6.00	20.00	3.69	120.3	3021	0.0001*
	Total	200	12.60	12.00	6.00	20.00	3.30		
Social participation	Iraq	100	9.08	9.00	4.00	15.00	2.67	76.5	
	Turkiye	100	12.08	12.00	4.00	20.00	3.58	124.5	2596.5	0.0001*
	Total	200	10.58	10.00	4.00	20.00	3.49		
Death and dying	Iraq	100	12.12	12.00	4.00	17.00	1.87	102.3	
	Turkiye	100	11.60	12.00	4.00	20.00	5.23	98.7	4819	0.656
	Total	200	11.86	12.00	4.00	20.00	3.93		
Intimacy	Iraq	100	11.88	11.00	6.00	18.00	2.30	74.5	
	Turkiye	100	14.77	15.00	7.00	20.00	3.30	126.5	2395.5	0.0001*
	Total	200	13.33	13.00	6.00	20.00	3.18		
Quality of Life	Iraq	100	**65.47**	66.00	49.00	83.00	7.20	69.3	
	Turkiye	100	**77.70**	78.50	54.00	98.00	11.40	131.7	1879.5	0.0001*
	Total	200	71.59	70.00	49.00	98.00	11.31		

Sd: Standard deviation, Mr: Mean rank, *Statistically significant p < 0.05

4. Discussion

When studies about the quality of life of the elderly in various societies around the world are examined, a study was conducted with 400 elderly individuals over the age of 60 in Iran. The validity and reliability of the WHOQOL-OLD scale in Persian speaking Iranian and elderly people with different cultures was investigated. The total quality of life overall score was 77.72±10.41 (Rezaeipandari, Morowatisharifabad, Mohammadpoorasl and Shaghaghi, 2020, s.3). The results of this study are consistent with the results from Turkiye in the present study (77.70 ± 11.40).

In semi-urban areas of Thailand in Southeast Asia, the total QOL score of was 83.4 ±10.32 for elderly people (Wattanasoei, Binson, Kumar, Somrongthong and Kanchanakhan, 2017, s.22). In a study conducted in Campinas, São Paulo, Brazil, the total WHOQOL-OLD score was 57.6. The sample of this study consisted of frail elderly individuals and it is thought this may be the reason for the low score (Varela, Ciconelli, Campolina and Soarez, 2015, s. 426). In a study conducted to compare the QOL of the elderly living in an elderly nursing home and living in the community in Brazil, the QOL median score was found to be 71 for the elderly living in the elderly institution, and 67 for those living in community (Ferraz Teston and Silva Marcon, 2015, s. 58). This result is consistent with the present study.

When studies reporting the effect of sociodemographic data on QOL are examined, it was reported that quality of life is higher in elderly males than the females (Özyurt et al., 2007, s.121; Yu et al., 2019, s. 1628). Quality of life decreased with increased age and quality of life increased with increased education level (Özyurt et al., 2007, s.119; Aydın and Karaoğlu, 2012, s. 430). One study reported that age, gender and marital status influenced QOL in older people, but education level did not (Gobbens and Remmen, 2019, s.235). In another study, there was no influence of age

Table 3: Examination of some factors affecting quality of life in older participants

		IRAQ			TURKIYE		
Variant	Groups	N	Mean ± sd	P	N	Mean ± sd	P
Age	65-84	77	66.48±6.82	0.012*ε	80	77.48±11.43	0.476
	85+	23	62.09±7.53		20	79.70±11.51	
Gender	Female	40	60.03±5.86	0.0001*ε	58	77.69±11.67	0.799
	Male	60	69.10±5.54		42	77.71±11.14	
Marital status	Married	55	68.64±5.92	0.0001*ε	68	77.47±11.55	0.701
	Single	45	61.60±6.75		32	78.19±11.23	
Education	≤Primary	60	62.42±6.71	0.0001*ε	79	77.89±11.66	0.912
	≥Secondary	40	70.05±5.25		21	77.00±10.60	
Income	No/Older salary	15	57.20±6.38[a]		24	79.50±10.90	
	Retired salary	46	69.28±5.64[b]	0.0001*ᵚ	54	77.22±11.55	0.581
	Other/Spouse	39	64.15±5.99[b]		22	76.91±11.86	
Is your income enough?	Yes	74	66.70±6.74[a]		67	80.22±10.35[a]	
	Sometimes	19	63.47±7.37[a]	0.009*ᵚ	24	73.25±12.74[b]	0.015*ᵚ
	No	7	57.86±6.31[b]		9	70.78±9.55[b]	
Is there other income?	No	31	63.26±6.73	0.054	57	75.09±11.90	0.014*ε
	Yes	69	66.46±7.22		43	81.16±9.79	
Chronic disease	Yes	92	64.85±6.93	0.009*ε	76	75.20±11.57	0.041*ε
	No	8	72.63±6.61		24	82.13±9.79	
Disability	No	45	67.24±5.57[a]		76	77.96±11.04	
	Blind	21	65.95±6.01[a]	0.034*ᵚ	7	79.14±11.23	0.539
	Hearing impaired	12	65.50±8.46[a]		9	73.44±8.78	
	Walking impaired	20	61.50±9.08[b]		8	78.75±17.51	
Medication	No	7	71.14±5.52[a]		15	83.40±13.14	
	1-3 medication	77	65.57±6.99[b]	0.029*ᵚ	53	77.09±10.56	0.111
	≥4 medication	16	62.50±7.57[b]		32	76.03±11.43	
Do you think you eat healthily?	Yes	12	72.42±5.99[a]		66	79.94±11.36[a]	
	Middle	72	65.69±6.51[b]	0.0001*ᵚ	26	75.04±10.44[b]	0.007*ᵚ
	No	16	59.25±5.90[b]		8	67.88±8.06[b]	
Do you exercise or walk regularly?	No	37	60.89±7.17[a]		19	70.00±11.79[a]	
	Walking	58	67.88±5.59[b]	0.0001*ᵚ	48	77.10±11.18[b]	0.0001*ᵚ
	Exercise regularly	5	71.40±7.13[b]		33	83.00±8.67[b]	
Do you pray five times a day?	Yes	95	65.99±6.89	0,005*ε	77	78.17±10.66	0.429
	No	5	55.60±6.11		23	76.13±13.73	
How often do you wish or thank God?	Sometimes	13	62.31±8.23		4	67.25±6.13[a]	
	Usually	15	67.40±7.30	0,241	22	81.55±11.08[b]	0.035*ᵚ
	Every time	72	65.64±6.90		74	77.12±11.33[b]	
Do you read the Quran?	Yes	38	69.63±5.25	0,0001*ε	41	78.32±11.42	0.905
	No	62	62.92±7.06		59	77.27±11.45	

[a,b] There was no significant difference between the same letters, ε Mann Whitney-U Test, ᵚ Kruskal Wallis Test; *Statistically significant p < 0.05

and gender on QOL (Khaje-Bishak, Payahoo, Pourghasem and Asghari Jafarabadi, 2014, s. 259). In the present study, these sociodemographic data did affect the QOL of the elderly in Iraq, but not in Turkiye.

The effect of income status on QOL in older adults was reported (Gobbens and Remmen, 2019, s. 236). In a study conducted in rural areas in China, the QOL of the elderly with poor economic status was found to be worse than the elderly who were rich (Rong et al., 2020, s.4). In a study of older women at low, middle and high economic levels in Korea, the elderly with low economic status had the lowest QOL (Kwon, Kim and So, 2020, s.4). In a study examining the importance of pension in old age, elderly people with low economic levels (poor wealth) were

included in the study. In these older adults, QOL of the elderly with a regular national pension was found to be significantly higher than those without this pension. This study is important as it emphasized the necessity of guaranteed income in old age (Ju et al., 2017, s. 1209). Compatible with the literature, a better economic situation improved the quality of life in Turkiye and Iraq in the present study.

In a study conducted in the Macau region, China, the effect of chronic diseases on the quality of life was reported in community-dwelling older adults. Arthritis, chronic bronchitis, visual disorders and fractures reduced quality of life in older people (Hu, Lei, Chao, Hall and Chung, 2016, s. 369). In another study, increasing chronic disease decreased quality of life; this decrease was more evident in the diseases which affected mobility (Öztürk, Simşek, Yümin, Sertel and Yümin, 2011, s. 281). In the present study, quality of life was low in older people with walking impairment in Iraq. In addition, quality of life in elderly with chronic disease was lower than those without disease.

In a study conducted in Nordic countries, total WHOQOL-OLD score was 90.41±14.61. Older adults who physically exercised regularly were included in this study. Of participants, 65% of the elderly exercised regularly for 1-5 years, only 3% exercised for 3-11 months, and others exercised for more than 5 years. The high score was thought to be due to physical exercise over a long duration (Almeida et al., 2020, s. 434). Physical activity alone improved quality of life, even in a study involving older women with different economic levels. This consisted of women who walked every day regularly (Kwon et al., 2020, s.6). Regular exercise increased functional capacity and QOL (Öztürk et al., 2011, s. 282). In a study, walking, physical exercise and dance increased the QOL in older adults (dos Santos Gomes et al., 2020, s. 583). A study conducted in rural China and a study conducted in Turkiye reported the assertive influences of bodily action on the quality of life in elderly individuals (Yuan et al., 2020, s. 465; Sarıkaya, Polat, Seydel and Eryılmaz, 2018, s. 85). In the present study, the quality of life in the elderly with regular physical activity in Iraq and Turkiye was higher, and this is consistent with other literature.

When examining the effect of spirituality and religion on QOL, fifteen studies were examined between 2002 and 2017 in the literature. There were effects of spirituality, religious observance and frequency of church attendance on QOL in older adults in ten studies, but there was no effect in five studies (Abu et al., 2018, s. 2780). Attendance at religious activity and inner piety increased psychological well-being and quality of life in older adults (Tsaousis, Karademas and Kalatzi, 2013, s. 146). Religious belief and worship participation increased the quality of life in hemodialysis patients with chronic renal failure (Rusa et al., 2014, s. 916). In hemodialysis cases in Saudi Arabia, the effect of intrinsic religious beliefs and religious coping usage on quality of life was positive (Cruz et al., 2017, s.128). A similar study was conducted in Tehran, Iran and spiritual/religious factors were found to be associated with quality of life in hemodialysis patients with diabetes or other comorbid diseases (Saffari et al., 2013, s. 272). The effect of religious loyalty on QOL in patients who have diabetes was reported in another study (Ali Alzahrani and Sehlo, 2013, s. 844). These studies focused on patients, but studies of elderly people living in the community were insufficient. There is a need for studies that will reveal the effect of spirituality on the quality of life in the elderly living in the community. It is thought that the present study will contribute to the literature in this field.

When the total score and sub-dimensions for the quality of life are examined between the two cultures, except for the death and dying subscale score, scores for all the other dimensions in the elderly in Turkiye were found to be higher than the elderly in Iraq. The reasons for this are thought to be directly related to the health conditions and lifestyles of the elderly. The total number of

older adults with chronic disease and disability was higher in Iraq than in Turkiye. In addition, the number of elderly people who regularly walk and exercise was higher in Turkiye. Moreover, the number of elderly people with a regular pension was higher in Turkiye and elderly who did not have a salary received the 'older salary' from the government. In Iraq, on the other hand, the number of elderly people on salaries was less and there were more people living on other income. All of this are thought to cause the higher quality of life in Turkiye.

From the researchers' general point of view, life in Iraq is difficult because it lacks the necessities of life that every person needs. The large financial deficit experienced by the state, which led to a decrease in the monthly income of a large number of citizens, the weakness of the elderly care program in the Iraqi Ministry of Health, and the lack of recreational facilities, negatively affect the psyche of the elderly and thus increases complications of their chronic diseases and there is an absence of social care and health that the elderly need. Therefore, the quality of life in Iraq is very low compared to other countries.

4.1. Limitations

There are some limitations to the study. The major limitation is that the study coincided with the COVID-19 pandemic. Curfews were declared in Turkiye for the elderly. Data could not be collected at that time. Data could be collected in August and September when the curfew was lifted, but restrictions were placed on the elderly again. The face-to-face survey was very difficult to implement, because the elderly were afraid of getting sick and social distancing was required. There were no restrictions in Iraq, but similar difficulties were encountered with data collection. This situation prevented the sample size from being larger. The second limitation is that the samples were collected from only one city in both countries. This study can be called an intercultural study of different cities. Therefore, the study results cannot be generalized to all of the two countries.

4.2. Strengths

The strongest aspect of the study is that it has not been seen any comparison study of quality of life of the elderly between the two countries in the literature before. Additionally, all data were collected by the researchers and the results are reliable.

5. Conclusion and Implications

The most striking outcomes of the study were the effects of economic status, chronic diseases, regular walking and exercise, and religious attendance on quality of life. These results were common results affecting the quality of life in both countries. Economic conditions, diseases and exercise-related results are supported by other literature in the discussion section. Religious activities were also supported by the literature. However, it was observed that the literature on this subject was scarce, was limited to people with some diseases, and there is a need for studies including a large number of elderly people in society.

The present study revealed the factors affecting the quality of life of the elderly in general. Each of these factors should be studied in more detail. It is thought that the present study will provide a basis for detailed studies to be carried out in the future and will set an example for studies that will reveal the agents affecting the quality of life of the older adults living in different cultures.

It is thought that the results of the present study and social policies to be planned according to the results of this study will be important to ensure sustainable community improvement in a further world where the average age is anticipated to be high, and especially in developing countries.

References

Abu, H. O., Ulbricht, C., Ding, E., Allison, J. J., Salmoirago-Blotcher, E., Goldberg, R. J., & Kiefe, C. I. (2018). Association of religiosity and spirituality with quality of life in patients with cardiovascular disease: a systematic review. *Quality of Life Research : An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, *27*(11), 2777–2797. https://doi.org/10.1007/s11136-018-1906-4

Ali Alzahrani, H., & Sehlo, M. G. (2013). The impact of religious connectedness on health-related quality of life in patients with diabetic foot ulcers. *Journal of Religion and Health*, *52*(3), 840–850. https://doi.org/10.1007/s10943-011-9529-x

Almeida, B., L., Souza, M., E., B., F., Rocha, F., C., Fernanes, T., F., Evangelista, C., B., & Ribeiro, K., S., M., A. (2020). Quality of life of elderly people who practice physical activities. *Cuidado E Fundamental. 12*, 432–436. http://dx.doi.org/ 10.9789/2175-5361.rpcfo.v12.8451.

Aydın, S. ve Karaoğlu, L. (2012). Gaziantep il merkezinde yaşayan yaşlıların yaşam kalitesi düzeyi ve etkileyen faktörler. *Turkish Journal of Geriatrics, 15*(4): 424–433.

Baraković, S., Baraković Husić, J., van Hoof, J., Krejcar, O., Maresova, P., Akhtar, Z., & Melero, F. J. (2020). Quality of life framework for personalised ageing: a systematic review of ICT solutions. *International Journal of Environmental Research and Public Health*, *17*(8), 2940. https://doi.org/10.3390/ijerph17082940

Cruz, J. P., Colet, P. C., Alquwez, N., Inocian, E. P., Al-Otaibi, R. S., & Islam, S. M. (2017). Influence of religiosity and spiritual coping on health-related quality of life in Saudi haemodialysis patients. *Hemodialysis International. International Symposium on Home Hemodialysis*, *21*(1), 125–132. https://doi.org/10.1111/hdi.12441

De Oliveira, L., Souza, E. C., Rodrigues, R., Fett, C. A., & Piva, A. B. (2019). The effects of physical activity on anxiety, depression, and quality of life in elderly people living in the community. *Trends in Psychiatry and Psychotherapy*, *41*(1), 36–42. https://doi.org/10.1590/2237-6089-2017-0129

Değer, T., B. (2020). Yaşlılarda yaşam kalitesi ve ölçekleri. D. Say Şahin (Ed) *Yaşlanmaya sağlık sosyolojisi perspektifinden multidisipliner yaklaşımlar* içinde (s. 313–326). Bursa: Ekin yayınevi, Türkiye

dos Santos Gomes, A. C. M., de Araujo Medeiros, K., Maciel Soares, A. K., Alves Barbosa Costa, R. de R., Leal Vieira, K. F., & Rufino de Lucena, A. L. (2020). Quality of life among elderly participants in social centers: an integrative review. *Revista de Pesquisa: Cuidado E Fundamental, 12*(1), 579−585. https://doi.org/0.9789/2175-5361.rpcfo.v12.8834

Edisan, Z. ve Kadıoğlu, F., G. (2011). Sağlıkla ilgili yaşam kalitesi ölçekleri: etik açıdan bir değerlendirme. *Turkiye Klinikleri J Med Ethics. 19*(1), 8–15

Eser, S., Saatli, G., Eser, E., Baydur, H. ve Fidaner, C. (2010). Yaşlılar için Dünya Sağlık Örgütü yaşam kalitesi modülü WHOQOL-OLD: Türkiye alan çalışması Türkçe sürüm geçerlilik ve güvenilirlik sonuçları. *Türk Psikiyatri Dergisi, 21*(1), 37–48. http://www.turkpsikiyatri.com

Ferraz Teston, E., & Silva Marcon, S. (2015). Comparative study of quality of life of elderly living in condominiums versus community dwellers. *Investigacion Educacion En Enfermeria*, *33*(1), 53–62. https://doi.org/10.17533/udea.iee.v33n1a07

Gobbens, R. J., & Remmen, R. (2019). The effects of sociodemographic factors on quality of life among people aged 50 years or older are not unequivocal: comparing SF-12, WHOQOL-BREF, and WHOQOL-OLD. *Clinical Interventions in Aging*, *14*, 231–239. https://doi.org/10.2147/CIA.S189560

Hu, S. X. X., Lei, W., I., Chao, K. K., Hall, B. J., & Chung, S. F. (2016). Common chronic health problems and life satisfaction among Macau elderly people. *International Journal of Nursing Sciences* 3(4), 367–370 https://doi.org/10.1016/j.ijnss.2016.10.004.

Ju, Y. J., Han, K. T., Lee, H. J., Lee, J. E., Choi, J. W., Hyun, I. S., & Park, E. C. (2017). Quality of life and national pension receipt after retirement among older adults. *Geriatrics & Gerontology International*, 17(8), 1205–1213. https://doi.org/10.1111/ggi.12846

Katta, A., Krishna, A., M., B., Anegawa, T., & Munuswamy, S. (2017). Progressive disability in elderly population among tribals of Telangana: a cross sectional study. *International Journal for Equity in Health*, 16(1), 104. https://doi.org/10.1186/s12939-017-0600-4

Khaje-Bishak, Y., Payahoo, L., Pourghasem, B., & Asghari Jafarabadi, M. (2014). Assessing the quality of life in elderly people and related factors in Tabriz, Iran. *Journal of Caring Sciences*, 3(4), 257–263. https://doi.org/10.5681/jcs.2014.028

Kim, G. M., Hong, M. S., & Noh, W. (2018). Factors affecting the health-related quality of life in community-dwelling elderly people. *Public Health Nursing (Boston, Mass.)*, 35(6), 482–489. https://doi.org/10.1111/phn.12530

Kwon, M., Kim, S. A., & So, W. Y. (2020). Factors influencing the quality of life of Korean elderly women by economic status. *International Journal of Environmental Research and Public Health*, 17(3), 888. https://doi.org/10.3390/ijerph17030888

Oztürk, A., Simşek, T. T., Yümin, E. T., Sertel, M. ve Yümin, M. (2011). The relationship between physical, functional capacity and quality of life (QoL) among elderly people with a chronic disease. *Archives of Gerontology and Geriatrics*, 53(3), 278–283. https://doi.org/10.1016/j.archger.2010.12.011.

Özyurt, B., C., Eser, E., Çoban, G., Akdemir, S., N., Karaca, İ. ve Karakoç, Ö. (2007). Manisa Muradiye bölgesindeki yaşlıların yaşam kalitesini etkileyen faktörlerin değerlendirilmesi. *Türk Geriatri Dergisi*, 10(3), 117–123.

Power, M., Quinn, K., Schmidt, S., & WHOQOL-OLD Group (2005). Development of the WHOQOL-old module. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, 14(10), 2197–2214. https://doi.org/10.1007/s11136-005-7380-9

Rezaeipandari, H., Morowatisharifabad, M. A., Mohammadpoorasl, A., & Shaghaghi, A. (2020). Cross-cultural adaptation and psychometric validation of the World Health Organization quality of life-old module (WHOQOL-OLD) for Persian-speaking populations. *Health and Quality of Life Outcomes*, 18(1), 67. https://doi.org/10.1186/s12955-020-01316-0

Rong, J., Ding, H., Chen, G., Ge, Y., Xie, T., & Meng, N. (2020). Quality of life of rural poor elderly in Anhui, China. *Medicine*, 99(6), e19105. https: //doi.org/ 10.1097/ MD.0000000000019105

Rusa, S. G., Peripato, G. I., Pavarini, S. C., Inouye, K., Zazzetta, M. S., & Orlandi, F. (2014). Quality of life/spirituality, religion and personal beliefs of adult and elderly chronic kidney patients under hemodialysis. *Revista Latino-Americana de Enfermagem*, 22(6), 911–917. https://doi.org/10.1590/0104-1169.3595.2495

Saffari, M., Pakpour, A. H., Naderi, M. K., Koenig, H. G., Baldacchino, D. R., & Piper, C. N. (2013). Spiritual coping, religiosity and quality of life: a study on Muslim patients undergoing haemodialysis. *Nephrology (Carlton, Vic.)*, 18(4), 269–275. https://doi.org/10.1111/nep.12041

Sarıkaya, M., Polat, M., Seydel, G. ve Eryılmaz, S. (2018). Yaşlı bireylerde fiziksel aktivite düzeyinin yaşam kalitesi üzerine etkisinin incelenmesi. *Beden Eğitimi ve Spor Bilimleri Dergisi, 12* (2):81–89. https://dergipark.org.tr/tr/pub/bsd/issue/53467/711631

Sováriová Soósová, M. (2016). Determinants of quality of life in elderly. *Central European Journal of Nursing and Midwifery. 7*(3), 484–493. doi:10.15452/CEJNM.2016.07.0019.

The WHOQOL-OLD Module-Manual. *World Health Organization, European Office* (Copenhagen), May 2006.

Tsaousis, I., Karademas, E., & Kalatzi, D. (2013) The role of core self-evaluations in the relationship between religious involvement and subjective well-being: a moderated mediation model, *Mental Health, Religion & Culture*, 16(2), 138–154, doi: 10.1080/13674676.2011.651716

Van Hoof, J., Beneken Genaamd Kolmer, D. M., de Vlugt, E., & de Vries, S. I. (2019). Quality of life: the interplay between human behaviour, technology and the environment. *International Journal of Environmental Research and Public Health*, 16(24), 5106. https://doi.org/10.3390/ijerph162451064

Varela, F. R., Ciconelli, R. M., Campolina, A. G., & Soarez, P. C. (2015). Quality of life evaluation of frail elderly in Campinas, São Paulo. *Revista da Associacao Medica Brasileira (1992)*, *61*(5), 423–430. https://doi.org/10.1590/1806-9282.61.05.423

Wattanasoei, S., Binson, B., Kumar, R., Somrongthong, R., & Kanchanakhan, N. (2017). Quality of life through listening music among elderly people in semi-urban area, Thailand. *Journal of Ayub Medical College, Abbottabad : JAMC*, *29*(1), 21–25.

Yu, T., Enkh-Amgalan, N., Zorigt, G., Hsu, Y. J., Chen, H. J., & Yang, H. Y. (2019). Gender differences and burden of chronic conditions: impact on quality of life among the elderly in Taiwan. *Aging Clinical And Experimental Research*, *31*(11), 1625–1633. https://doi.org/10.1007/s40520-018-1099-2

Yuan, Y., Li, J., Jing, Z., Yu, C., Zhao, D., Hao, W., & Zhou, C. (2020). The role of mental health and physical activity in the association between sleep quality and quality of life among rural elderly in China: a moderated mediation model. *Journal of Affective Disorders*, 273: 462–467. https://doi.org/10.1016/j.jad.2020.05.093