Quality of Life in a Sample of Old Age People in Al-Karkh District in Baghdad-City/2024

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Abstract

Background: with an aging population, elderly well-being is a key concern. In Iraq, family and culture play a vital role in elderly care, making quality of life assessment essential for policy and healthcare improvements.

Objectives: To assess quality of life among individuals aged 65+ and its association with sociodemographic factors.

Method: A cross-sectional study conducted over a period from March to August 2024 in five primary care centers in Al-Karkh, Baghdad, included 384 randomly selected participants. The WHOQOL-BREF questionnaire measured physical, psychological, social, and environmental well-being.

Results: The mean quality of life score was 52.3 ($\pm$13.6), with 46.9% reporting moderate quality. Higher scores were linked to younger age, male gender, higher education, and financial sufficiency. Chronic diseases affected physical and psychological well-being, while marital status influenced social well-being.

Conclusion: Elderly quality of life in Baghdad is shaped by sociodemographic and health factors. Broader population-based studies are recommended.

Key words; Quality of Life, elderly, WHOQOL-BREF questionnaire.

INTRODUCTION

Elderly is a fragile and vulnerable segment of population need especial care due to the multiple problems which leads to a decline in the body's physical capacity and physiological system. [1] Ageing, an inevitable process, is commonly measured by chronological age and, as a convention, a person aged 65 years or more is often referred to as 'elderly'. [2]

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. [3]

In Iraq, according to the Ministry of Planning, the population estimated in 2013 for 65 years and older was 2.7 million while in 2016 it was 3.2 million, while according to Ministry of Health estimated the elderly population for 60 years and over in 2012 was 4% of the population became 5% in 2013, and is expected to reach 8% of the seniors in 2050. [4] In 2023, individuals aged 65 and older made up around 3.1% of Iraq's total population, according to the World Bank data. [5]

In 2020, the number of people aged 60 years and older outnumbered children younger than 5 years and between 2015 and 2050, the proportion of the world's population over 60 years will nearly double from 12% to 22%. [6] The World Bank reported that life expectancy at birth in the world was 72 years and in the Arab countries 71.2 years and 71.3 years in the Iraq during 2022. [7]

This means that people spend more years in old age, which is the last term of life and since the phenomenon of aging causes significant changes in all aspects of human life, including a wide range of age structures, norms, values and the establishment of social organizations, it is very important to address the challenges of this phenomenon and take appropriate measures to improve the physical, psychological and social status of the elderly as 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. [8]

Moreover, today it is not just about staying alive, it is also about quality of life (QoL) and how you live. Supporting older people should not be done only with the aim of increasing their life expectancy. Nowadays, dynamic aging is the goal, which means that as the elderly population increases, their QoL should also be considered so for this reason, quality of life (QoL) in old age has become an increasingly significant concept in recent years. [9]

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 [10]

Because every person has different expectations from life, the meaning of quality of life is different for every individual. A good QoL for the elderly is defined as living independently without requiring anyone, carrying out basic daily life activities properly and feeling good. [11, 12]

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. [8] Maintenance of QoL is one the most important outcomes of care services for older adults. Several international action plans on ageing endorse the importance of QOL, and international interest in the measurement of QOL of older adults is growing [13-15].

Although age-related disabilities may cause loss of social role and

marginalization, many studies have indicated that aging alone does not necessarily impact the QoL negatively. Many elderlies can enjoy a state of physical and mental well-being. The mechanism of how older adults evaluate their QoL can be highly individualistic, subjective, and inconclusive. [16]

SUBJECTS AND METHODS

A cross-sectional study with analytical element was conducted over a period of six months from the 1st of March to the 31St of August 2024. The study was conducted at five primary family medicine centers in Al-Karkh district from Baghdad /Al-karkh health directorate from two sectors (Al-Karkh and Aladel sectors for primary health care) which are selected by convenience sampling then centers are selected by simple random sampling (lottery method).

Al Karkh Health Sectors:
(Al- Mansour PHCC, Shuhada Al-Atifiyah, Al-Yarmouk PHCC
Al Adel Health Sectors:
(Al- Adel PHCC, Al- Jami'aa PHCC)

Study population and sample size: The study populations were elderly participants aged 65 years and above in five selected primary family medicine centers in Al-Karkh district in Baghdad city. The required sample size for this study was calculated by using the standard equation for calculation of sample size of (384) individuals. [17]

Sample size= $\mathbf{1.96}^2 * \mathbf{0.5}$ (1-$\mathbf{0.5}$)/ $\mathbf{0.05}^2$ =384

- Z= Standard of deviation at a confident level 95%, which is 1.96.
- P= is the estimated percentage of probability for the event to be measured = 0.05
- E= Margin of error =0.05

- 1-P= is the probability of the event not to occurs.

Inclusion criteria:
Any old age individual aged 65 years and above (patients and relatives)
Exclusion criteria:
Very ill persons who cannot answer questions

Study tool and data collection:
Data were collected through direct interview with participants using a structured questionnaire that filled out by researcher. A predesigned questionnaire related to the QOL of elderly people devised by the WHO (WHOQOL). [18]

Questionnaire (include two parts):
Part One: Sociodemographic Data and Medical Status:
Part Two: Quality of Life Scale includes 4 domains:
A.   Physical Domain : (7 questions)
B.   Psychological Domain : (6 questions)
C.   Social Relationship Domain : (3 questions)
D.   Environnemental Domain : (8 questions)

Scoring: The WHOQOL-BREF has twenty-four items using Likert Scale of 1-5 continuum {not at all (1), A little (2), A moderate amount (3), very much (4), and

an extreme amount (5)} was used to measure the responses in a summative assessment.

WHOQOL-BREF: There is four domain scores denote an individual's perception of quality of life in each particular domain. The mean score of each domain is a result of cumulative scores of included items rating the subjective satisfaction of QoL in a positive direction (i.e., the higher the score, the better QoL) only question 1, 2, 13 on the opposite direction (i.e., the lowest the score, the better QoL).

Data transformation was done to change the scale from 0 to 100 based on the fallowing equations:

COMPUTE tdom1 = ((domain1 - 7)/28) *100.

COMPUTE tdom2 = ((domain2 - 6)/24) *100.

COMPUTE tdom3 = ((domain3 - 3)/12) *100.

COMPUTE tdom4 = ((domain4 - 8)/32) *100.

VARIABLE LABELS

tdom1 "Physical (TRANSFORMED)"

tdom2 "Psychological (TRANSFORMED)"

tdom3 "Social Relations (TRANSFORMED)"

tdom4 "Environment (TRANSFORMED)"

The total QoL score was divided into four levels [19]:

✧ (1) Poor: Total QoL score less than 45.

✧ (2) Moderate: Total QoL score is 45-66.

✧ (3) Good: Total QoL score is 67 to 88.

✧ (4) Excellent: Total QoL score more than 89.

Ethical considerations:

Data collection was started after obtaining official approval from the scientific medical committee of Al Nahrain College of Medicine, and the Iraqi Board of Medical Specialization. An official letter of permission has been acquired from Al-Karakh Health Directorate addressing each selected sector of primary family healthcare centers.Participation in the study was optional, and verbal consent was obtained from all participants. Data were used for this research, and all personal information was kept confidential..

Statistical analysis:

For data processing, visualization, and statistical analysis R software packages were used ("R version 4.2.2, R Foundation for Statistical Computing, Vienna, Austria").

The Welch's two-tailed t test and one-way ANOVA were performed to test the differences between means of continuous variables.

Tables and figures to show the results. Mean with standard deviation (SD) to summarize the continuous variables, frequencies, and percentages to assess the association. Categorical variables were expressed as frequency and percentages. A P-value level less 0.05 was usedb for the significant association.

RESULTS:

Table 1 presents the demographics and socioeconomic characteristics of the 384 participants included in the study. The mean age of the participants was 68.8 years (± 4.2), with the majority (70.1%) being in the 65-69 age group. Female participants comprised 57.3% of the sample. In terms of marital status, 76.3% were married.

Educationally, 28.6% were illiterate, 24.7% had completed elementary school, 20.7% had a high school education, and 26.0% held a university degree. Regarding occupation, 47.9% were housewives, and 33.6% were retired. Most participants (98.4%) lived with others, with only 1.6% living alone. House ownership was high,

with 85.2% owning their homes. Economically, 61.2% reported having enough resources, while 38.8% indicated their resources were not sufficient. Most participants (77.6%) had chronic diseases.

Table1:Description of the demographics, and socioeconomic characteristics of the participants

Characteristic	N = 384[1]
Age (years)	68.8 ± 4.2
65-69	269 (70.1%)
70-74	70 (18.2%)
≥ 75	45 (11.7%)
Sex	
Female	220 (57.3%)
Male	164 (42.7%)
Marital status	
Single	6 (1.6%)
Married	293 (76.3%)
Divorced	10 (2.6%)
Widowed	75 (19.5%)
Education level	
Illiterate	110 (28.6%)
Elementary School	95 (24.7%)
High School	79 (20.7%)
University	100 (26.0%)
Occupation	
Housewife	184 (47.9%)
Retired	129 (33.6%)
Worker	71 (18.5%)
Living situation	
With others	378 (98.4%)
Living alone	6 (1.6%)
House ownership	
Owner	327 (85.2%)
Renter	57 (14.8%)
Economic status	
Enough	235 (61.2%)
Not Enough	149 (38.8%)
Presence of chronic diseases	
Present	298 (77.6%)
Absent	86 (22.4%)
[1]Mean ± SD; n (%)	

Table 2 details the overall WHOQOL-BREF score and its four domains for the 384 elderly participants. The mean total Quality of Life (QoL) score was 52.3 (± 13.6). Among the participants, only 1.6% rated their QoL as excellent, 29.9% as good, 46.9% as moderate, and 21.6% as poor. The physical domain had a mean score of 49.9 (± 20.2), while the psychological domain scored 56.0 (± 17.6). The social domain had a mean score of 51.2 (± 20.3), and the environmental domain scored 51.9 (± 14.5).

Table 2: Description of the overall WHOQOL-BREF score and its four domains.

Characteristic	N = 384[1]
Total QoL Grades	52.3 ± 13.6
Excellent	6 (1.6%)
Good	115 (29.9%)
Moderate	180 (46.9%)
Poor	83 (21.6%)
Domain of QoL	
Physical domain	49.9 ± 20.2
Psychological domain	56.0 ± 17.6
Social domain	51.2 ± 20.3
Environmental domain	51.9 ± 14.5
	[1]Mean ± SD; n (%)

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Table 3 explores the association between quality of life (QoL) and various sociodemographic factors among the 384 respondents. The physical domain scores varied significantly with age (p=.047), with the highest scores among those aged 65-69 (51.2 ± 19.3). Sex differences were also significant in the physical (p=.000016), social (p=.006), and environmental (p=.016) domains, with males generally reporting higher scores. Marital status influenced physical (p=.00016) and social (p=.007) domains, where single respondents reported the highest physical scores (67.3 ± 19.7), and widowed individuals reported the lowest (42.2 ± 19.9). Educational level was a significant factor in the physical (p=.000000000848) and environmental (p=.0000729) domains, with university-educated respondents reporting the highest scores in both

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Table 3: The relation between quality of life with various sociodemographic factors among the respondents (n=384).

Characteristic	Physical	Psychological	Social	Environmental
Age categories				
65-69	51.2 ± 19.3	56.3 ± 17.7	52.3 ± 19.8	52.0 ± 14.8
70-74	49.3 ± 21.5	57.3 ± 16.4	49.4 ± 19.8	52.1 ± 12.1
≥ 75	43.3 ± 22.5	52.3 ± 18.5	47.4 ± 23.7	51.0 ± 16.5
P-value	**0.047**	0.3	0.2	>0.9
Sex				
Female	46.1 ± 20.5	55.7 ± 17.3	48.8 ± 21.6	53.4 ± 14.4
Male	55.1 ± 18.8	56.5 ± 18.0	54.4 ± 18.1	49.8 ± 14.5
P-value	**0.000016**	0.6	**0.006**	**0.016**
Marital status				
Single	67.3 ± 19.7	59.7 ± 14.1	47.2 ± 24.0	55.2 ± 23.4
Married	51.2 ± 19.6	56.7 ± 16.9	53.2 ± 19.5	52.4 ± 14.6
Divorced	61.8 ± 25.0	60.0 ± 18.2	45.8 ± 18.1	48.4 ± 13.5
Widowed	42.2 ± 19.9	52.5 ± 20.0	44.4 ± 22.1	50.0 ± 13.5
P-value	**0.00016**	0.2	**0.007**	0.5
Education level				
Illiterate	41.2 ± 21.4	55.0 ± 20.8	52.7 ± 20.8	54.3 ± 14.5
Elementary School	47.5 ± 19.4	56.7 ± 16.7	49.0 ± 21.8	49.7 ± 14.5
High School	54.5 ± 20.5	55.0 ± 17.1	47.3 ± 20.7	46.7 ± 14.3
University	58.3 ± 14.7	57.4 ± 14.9	54.7 ± 17.4	55.4 ± 13.3
P-value	**0.00000000085**	0.7	0.057	**0.000073**
[1]Mean ± SD; [2]One-way ANOVA; Welch Two Sample t-test				

Occupational status mostly affected the physical (p=.00000000816), psychological (p=.012), and social (p=0.035) domains of QoL. Workers reported the highest physical (61.3 ± 17.0), psychological (58.9 ± 16.7), and social (56.3 ± 18.5) scores compared to housewives and retired individuals. Living situation did not impact any QoL domains, with those living alone showing slightly higher scores across all domains, though the differences were not statistically significant both physical and psychological (p=.4) and social (p=.11).

House ownership significantly influenced the environmental domain (p=0.006), with homeowners scoring

higher (52.6 ± 14.8) than renters (47.6 ± 11.7). Economic status had a profound effect across all domains, with those having enough resources reporting significantly higher scores in the physical (p=.0000000259), psychological (p=.000000101), social (p=.0000121), and environmental (p=.0000000000391) domains compared to those with insufficient resources. Lastly, the presence of chronic diseases significantly affected

the physical (p=.000000000000257) and psychological (p=0.031) domains. Participants without chronic diseases reported higher physical (66.8 ± 16.2) and psychological (59.5 ± 16.4) scores than those with chronic diseases. However, there were no differences in the social (p=.6) and environmental (p=.3) domains between these two groups, (Table 4).

Table 4: The relation between quality of life with various social, economic factors, and the presence of chronic diseases among the respondents (n=384).

Characteristic	Physical	Psychological	Social	Environmental
Occupation				
Housewife	44.6 ± 20.1	53.3 ± 19.0	49.0 ± 21.2	52.0 ± 15.0
Retired	51.3 ± 19.3	58.4 ± 15.3	51.4 ± 19.6	51.9 ± 13.5
Worker	61.3 ± 17.0	58.9 ± 16.7	56.3 ± 18.5	51.6 ± 15.1
P-value	**0.000000008**	**0.012**	**0.035**	>0.9
Living situation				
With others	40.5 ± 27.6	48.6 ± 22.0	30.6 ± 26.7	51.0 ± 19.1
Living alone	50.1 ± 20.1	56.2 ± 17.5	51.5 ± 20.1	51.9 ± 14.5
P-value	0.4	0.4	0.11	>0.9
House ownership				
Owner	50.3 ± 20.7	55.8 ± 17.8	51.8 ± 19.7	52.6 ± 14.8
Renter	47.8 ± 17.3	57.2 ± 16.3	47.7 ± 23.8	47.6 ± 11.7
P-value	0.3	0.6	0.2	**0.006**
Economic status				
Enough	54.4 ± 17.6	59.8 ± 16.7	54.8 ± 17.7	56.9 ± 12.6
Not Enough	42.9 ± 22.1	50.1 ± 17.4	45.5 ± 22.9	44.0 ± 13.9
P-value	**0.000000026**	**0.0000001**	**0.000012**	**0.00000000004**
Chronic diseases				
Absent	66.8 ± 16.2	59.5 ± 16.4	51.9 ± 14.9	53.4 ± 15.0
Present	45.1 ± 18.6	55.0 ± 17.8	51.0 ± 21.7	51.4 ± 14.4
P-value	**0.000000000000257**	**0.031**	0.6	0.3
				[1]Mean ± SD;
			[2]One-way ANOVA; Welch Two Sample t-test	

DISCUSSION:

Population aging is a widespread phenomenon driven by longer life expectancy, advancements in healthcare services, and reduced mortality rates.This trend is evident in nearly every country globally. As the elderly population grows, addressing their primary needs, including physical and mental health, as well as their quality of life, becomes increasingly important. [20]

A study in Saudi Arabia (2022) reported a higher overall mean QoL score (66.4 ± 11.4) and physical domain (64.5±11.4) compared to the findings of this study (52.3 ± 13.6) and (49.9 ± 20.2) respectively. [21] This discrepancy may be attributed to a difference in healthcare system, screening programs, and disease detection in those regions.

Additionally, a systematic review in Iran (2016), which included 2,150 studies, found a pooled mean QoL score of 60.1 ± 4.6.and physical domain (55.13), [22] which is higher overall QoL scores and physical domain scores than those found in this study. This may be due to healthier lifestyles, reduced reliance on transportation, workplace regulations that discourage weight gain, and improved socioeconomic conditions likely contribute to better overall health, ultimately supporting a higher quality of life.

The present study found that age independently affects physical (QoL) scores, with older age groups reporting lower scores. Furthermore, men exhibited significantly better QoL in physical health. This aligns with the findings of another study in Egypt (2009), which indicated that health-related quality of life declines with increasing age. Additionally, females were more likely to be categorized as having poor HRQOL. The higher QoL in men compared to women may be attributed to

their more favorable socioeconomic status, their roles as family guardians in developing countries, and their greater levels of communication and interaction within the community. [23]

The current study found that the psychological domain was moderate. In a related study conducted in Iraq's Al-Amara province (2020), revealing that 46% were classified as having poor psychological health and 26% as having moderate psychological health, [24] this could be attributed to economic hardships, inadequate social and healthcare support, and lower educational levels which have contributed to widespread psychosocial stress. Cultural stigmas surrounding mental health issues may also prevent individuals from seeking help, leading to further deterioration of psychological well-being.

The present study revealed that the presence of chronic diseases significantly affected both the physical and psychological domains of QoL, with participants free from chronic conditions reporting higher scores in these areas compared to those with chronic diseases. Similar results were observed in Saudi Arabia (2015), who identified chronic disease as a major factor contributing to the decline in QoL. [25] Additionally, a study in Egypt found that approximately 97% of individuals with poor health-related quality of life had chronic diseases, [23] this could be due to their physical limitations like (pain and discomfort, medications side effects) directly reduce their ability to engage in normal activities, while their psychological burden increases due to stress, anxiety, and social isolation.

Regarding the social domain, this study had a mean of 51.2 ± 20.3. This suggests a moderate level of social well-being. This finding aligns with a study conducted in

Turkey (2016) social support also indicating a moderate level of perceived social support, but a slightly better perception of social support compared to this study. Both studies highlight the positive impact of marriage and family on the social well-being of elderly individuals and living arrangements significantly affect social domain scores, with those living with family, a spouse or children reporting better social support. [26]

Social support scores were slightly higher in the Turkish study, may be due to cultural programs like active aging centers, which promote social interaction. In the present study, married participants reported the highest QoL scores, particularly in the physical and social domains. This finding aligns with a study in Baghdad general hospital (2020), which indicated that married individuals also reported better overall QoL scores across all domains, while widowed Individuals displayed significantly lower QoL, reflecting the impact of losing a partner on emotional, social, and economic dimensions. [16]

Both studies show that married participants generally have higher QoL scores, benefiting from the emotional, financial, and social support of their spouses. This is particularly evident in the physical and social domains. Also, social isolation following the loss of a partner appears to play a critical role in diminishing QoL, especially in the social domain (44.4± 22.1)
In Iraq's sociocultural context, strong family ties and marital relationships are central to providing care and support in old age. This explain the substantial disparity in QoL between married and widowed individuals and underlines the critical role of spousal support in enhancing psychological well-being and maintaining social connections, both of which contribute to higher QoL. [16].

Regarding education, in current study show that university graduates reported the highest QoL scores in the physical and environmental domains. Illiterate participants showed the lowest scores. In another study in Baghdad Teaching Hospital (2019), show higher percentage of participants had college degrees compared to this study. Both studies indicate that education is a key factor in improving elderly well-being and higher education correlates with better physical health, psychological well-being, and awareness of health risks. [27] More educated elderly individuals are more independent and better able to manage their health also had better mental health. Illiterate individuals are at greater risk of falls, disease and social isolation.

Regarding occupation, in current study show occupational status significantly impacted QoL. Workers had the highest scores across physical (61.3), psychological (58.9), and social (56.3) domains compared to retirees and housewives. This aligns with the findings of another study in Medical city (2020). It is evident that in both studies, the majority of elderly individuals were either retired or unemployed, with a much smaller percentage still engaged in work. [28]

Both studies highlight the importance of employment in maintaining good physical and mental health in older adults with working elderly individuals experience fewer health issues and psychological disorders. Employment contributes to better quality of life through social interaction, financial stability, and environmental satisfaction [28].

While economic sufficiency was a major determinant of QoL. Participants with enough resources scored significantly higher in all QoL domains compared to those with insufficient resources. This aligns with the findings of another study in Egypt (2009) underscoring the universal importance of financial security. Financial sufficiency was also critical in determining QoL. [23] Both studies demonstrate the critical role of occupation and economic stability in improving QoL among elderly population.

In the current study, the mean score for the environmental domain was 51.9 ±14.5, closely aligning with the result reported by a study in Iran (2016) [22]. However, this mean was lower than the score observed by another study in Saudi Arabia [21]. This study found that females scored higher in the environmental domain than males, and scores were also higher among those with greater educational attainment and economic status. These findings mirror those of a study in Saudi Arabia, suggesting that higher educational and economic levels may enhance environmental satisfaction by increasing access to resources and empowering individuals to modify them surroundings to better meet their needs. [21]

Conclusions:

The quality of life (QoL) of elderly individuals attending primary healthcare (PHC) centers found it to be moderate. Factors such as age, gender, education level, occupational status, economic status, and the presence of chronic diseases significantly influenced different aspects of QoL. Men and individuals with higher education and income had better QoL across physical, psychological, social, and environmental domains. Marital status influenced QoL, with single individuals showing better physical health and married individuals exhibiting stronger social well-being.

Recommendations

Enhancing healthcare services for the elderly, particularly those with chronic diseases, is crucial for their well-being. Creating social spaces can reduce loneliness, while lifelong learning programs promote empowerment. Economic stability is essential for ensuring basic needs and social participation.

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