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Is the quality of life different in single and remarried elderly?

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Abstract:

BACKGROUND: Due to increasing number of the world population, elderly individual's quality of life (QOL) is a matter of concern and marital status as one of the objective measures of QOL is of paramount importance. This study was done to compare the QOL between single and remarried elderly.

MATERIALS AND METHODS: This case–control study was conducted on 200 elderly people in Qaen (Southern Khorasan province), Iran. The research sample consisted of two groups of single and remarried elderly, 100 in each group. A demographic and LEIPAD (an acronym deriving from the name of Leiden and Padua universities) QOL questionnaires were completed by the participants via interview.

RESULTS: There was a significant difference between single and remarried elderly groups in the QOL ($P < 0.001$). Linear regression showed that marital status ($P < 0.000$), economic situation ($P < 001$), primary education ($P < 0.0002$), and diploma ($P < 0.030$) opposed to the illiterate were significantly related to the QOL. In other words, being married and higher economic situation and education increase the QOL. There was a significant negative correlation between the age ($P < 0.000$) and QOL. The strongest factor was age.

CONCLUSIONS: Marital status, income, and education play an important role in all aspects of QOL in older adults. Thus, being married can be a protective factor against physical, psychological, and social problems in old age. Realizing this issue in consultation process of elderly peoples is recommended.

Keywords:

Married elderly, quality of life, single elderly

Introduction

Aging as an inevitable developmental phenomenon results in a number of alterations in physical, psychological, hormonal, and social conditions.[1] It is expected that the number of people over the age of 60 to be 2 billion by 2050 due to a dramatic increase in population.[2] The process of population's aging in Iran is similar to those in other countries. The United Nations has anticipated that the population over 60 years of age in Iran will constitute 33% of the total population with a growth of 26% from 2011 to 2050. This makes Iran the third country in the world in terms of population aging rate.[3]

Since the whole life is affected by aging, the quality of life (QOL) becomes poor.[4] The World Health Organization defines QOL as individuals' perception of their position in life in the context of the culture and the value systems, in which they live in relation to their goals, expectations, standards, and concerns. It is a broad concept affected in a complex way in which the persons' physical health, psychological state, level of independence, and social relationships are salient features of their environment.[5]

Physical, emotional, intellectual, and social functioning; life satisfaction; marital status; perception of health; economic status; and also sexual functioning are some

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factors which have been known to affect QOL in late adulthood.[6]

In general, QOL is a subjective and complex concept and its most important component is the health-related QOL.[7] In the present century, the main health-related issue is to lead a high QOL unlike the 20th century when only survival was the priority.[3] Since marriage is one of the most important institutions affecting people's life and well-being,[8] ameliorating the QOL of the senior people and focusing on marital status as one of its objective measures is of paramount importance.

Marital status has been classified as single, married, and breakdown couples (including separated, divorced, and bereavement).[9] Most studies in this regard are cross-sectional in which marital status has been reported as one of the factors affecting QOL, but it is unclear whether QOL affects the marital status or vice versa. This study was designed as a case–control study to investigate the effect of marital status on QOL in the elderly.[10,11]

Materials and Methods

This case–control study was conducted on 200 elderly referred to public health centers in the city of Qaen Eastern Iran. The research sample consisted of two groups of single ($n = 100$) and remarried elderly ($n = 100$). Three public health centers were chosen from 10 centers randomly and elderly people were invited to participate by phone call. Eligible people were randomly recruited according to the last digit of their health records. Inclusion criteria were Iranian nationality, resident of Qaen, elderly who aged 60 years or more, seniors who lived alone (unmarried, widowed, and divorced) for single group, and remarried elderly. Exclusion criteria had physical and mental illness or psychological disorders.

This study was approved by the Ethics Committee of Birjand University of Medical Sciences (Ref No: 43/94). All participants were free to participate or not in the study and were enrolled after obtaining written informed consent, and all the information was collected and kept confidential.

The sample size was estimated to be 200 elderly (100 in each group) based on the results of a pilot study on 30 elderly (15 single and 15 remarried), 95% confidence interval (CI), and a power of 80%.

$$N = \frac{\left(Z_{1-\frac{\alpha}{2}} Z_{1-\beta}\right)^2 \left(S_1^2 + S_2^2\right)}{\left(\mu_1 - \mu_2\right)^2} = \frac{(1.96 + 0.84)^2 \left([3.92]^2 + [2.81]^2\right)}{(20.3 - 18.8)} = 81$$

The study tools included self-structured questionnaire for sociodemographic data and Leiden-Padua (LEIPAD) QOL. The participants via interview completed demographic and LEIPAD QOL questionnaires.

The demographic questionnaire included individual characteristics such as age, gender, income, and marital status, number of children, occupation, and education. The validity of sociodemographic questionnaire was assessed by content validity.

The World Health Organization has developed the LEIPAD QOL questionnaire. It contains 31 questions that assess QOL in seven dimensions including physical function (5 questions), self-care (6 questions), depression and anxiety (4 questions), mental functions (5 questions), social functioning (3 questions), sexual function (2 questions), and satisfaction with life (6 questions). For scoring, four-item Likert scale was used, with each question being scored from 0 (worst) to 3 (best). The minimum and maximum scores of this questionnaire were 0 and 93, respectively.[12] The validity and reliability of LEIPAD questionnaire were confirmed by Ghasemi *et al*. in Iran.[13]

Data analysis was carried out using SPSS statistical software version 20.0 (Armonk, NY, USA: IBM Corp). To describe the characteristics of the subjects, descriptive statistics, indicators of central tendency and dispersion (mean and standard deviation), and frequency were used. To check variable normality, Smirnov–Kolmogorov test was used. For comparing the sociodemographic characteristics of the two groups, the independent *t*-test, Mann–Whitney U-teat, and Chi-square test were applied. To compare the QOL in single and remarried seniors, *t*-test and Mann–Whitney U-test were used. $P < 0.05$ was considered statistically significant.

Results

Based on the results, 115 (57.5%) of the elderly were male and 85 (42.5%) were female. Most of the participants were illiterate 75 (37.5%) and housewives 45 (22.5%). The mean age of the participants was 65.7 ± 9.08 years, and the mean number of family members was 3.7 ± 1.93.

The number of women in the single elderly group (52.5%) was more than that of men (47.5%). On the contrary, the number of men in the remarried group was higher (67.3% and 32.7%, respectively). There was a significant difference between single and remarried groups based on household size ($P = 0.006$) and gender ($P = 0.005$). No significant relationship

was found between the two mentioned groups regarding the age, education, job, and economic situation [Table 1]. There was a significant difference between single and remarried elderly groups in relation to QOL ($P < 0.001$) [Table 2].

Adjustment for confounding variables by linear regression showed that age (R^2= −0.296, 95% CI [44.491–85.702] $P < 0.001$), marital status ($R^2 = 0.276$, 95% CI [−0.867–1.078], $P < 0.001$), income ($R^2 = 0.230$, 95% CI [4.492–12.076], $P < 0.001$), primary education ($R^2 = 0.215$, 95% CI [−4.055–5.435], $P < 0.002$), and diploma ($R^2 = 0.158$, 95% CI [−3.663–22.294], $P < 0.030$) opposed to the illiterate were significantly related to the QOL. The strongest factor was age [Table 3].

Table 1: Demographic characteristics of the participants in two groups of single and remarried elderly (*n*=100)

Variables	Mean±SD or *n* (%)		*P*
	Single elderly	Remarried elderly	
Age	65.7±8.30	65.7±9.83	0.966
Gender			
Male	47 (47.5)	68 (67.3)	0.005
Female	52 (52.5)	33 (32.7)	
Education			
Illiterate	39 (39.4)	39 (39.4)	0.079
Primary	46 (46.5)	46 (45.5)	
Secondary	2 (2.0)	2 (2.0)	
Diploma	11 (11.1)	7 (6.9)	
Graduate	1 (1.0)	10 (9.9)	
Occupation			
Self-employed	23 (23.2)	30 (29.7)	0.407
Worker	7 (7.1)	12 (11.9)	
Housewife	26 (26.3)	19 (18.8)	
Unemployed	4 (4.0)	2 (2.0)	
Employee	39 (39.4)	38 (37.6)	
Economic situation			
Low	9 (9.1)	6 (6)	0.610
Moderate	41 (41.4)	47 (46.5)	
High	49 (49.5)	48 (47.5)	
Household size	4.0±2.27	3.3±1.45	0.006

SD=Standard deviation

Table 2: Comparison of single and remarried elderly based on the life quality scores (*n*=100)

Dimentions	Mean±SD or *n* (%)		*P*
	Single elderly	Remarried elderly	
Physical	2.90±8.6	10.1±2.37	0.001
Self-care	13.7±4.71	15.5±3.31	0.0016
Depression and anxiety	7.8±2.31	8.7±2.54	0.006
Cognitive	9.4±2.88	10.7±2.65	0.001
Social	5.6±1.68	6.3±1.65	0.001
Life satisfaction	10.4±3.17	11.5±3.25	0.016
Sexual issues	1.8±1.68	3.0±1.47	0.001
Total score of life quality	57.5±15.34	65.8±13.56	0.001

SD=Standard deviation

Discussion

This study aimed to compare the QOL between single and remarried elderly. The results of this study revealed that there was a significant difference between single and remarried groups in relation to self-care, depression, anxiety, cognition, social, life satisfaction, and sexual domains of QOL. All dimensions except depression and stress are associated with increased QOL in the remarried elderly.

Regression analysis suggested the relationship between marital status and QOL as the second most important factor influencing the QOL of the participants. A study by Fidecki, *et al*. showed that married elderly had better QOL and those staying with their family are much better than those living on their own.[6] Moreover, the similar results were obtained in other studies.[14,15] These findings differ from that of Lima *et al*. in which no relationship between marital status and QOL was detected.[10] Methodological differences among these studies and their different research communities, along with various economic, political, and cultural conditions, could explain the conflicting results of them.

One of the main determinants of QOL among the elderly has been explored to be health status. The current study is in agreement with the previous findings which showed a significant difference between the two single and remarried groups in terms of the physical dimension.[16,17] However, when examining the relationship between marriage and physical health, different patterns are observed. Williams and Umberson found differences in self-assessed health by marital status measured across the life course and concluded that this was due to the negative effect of marital dissolution rather than the benefit of marriage.[18]

A considerable difference was detected between the two single and remarried groups with respect to self-care domain of QOL. Luo *et al*. came to the same conclusion and showed that the self-care capabilities of widowed and divorced elderly were worse than married ones.[19]

In our study, a statistically significant difference was observed between the single and remarried groups according to the depression and anxiety dimension. The mean QOL scores of this domain are higher among remarried elderly people. In a systematic review conducted by Yan *et al*., it was indicated that married elderly people in comparison with the never-married, widowed, and divorced seniors had a lower risk for depression.[20] The findings of this study are in agreement with our research. On the contrary, Hoppman and Gerstof believe that although there is evidence of spousal

Table 3: Logistic regression results for relation of quality of life and demographic characteristics

Model	Standardized coefficients beta	95.0% CI for *B*		*P*
		Lower bound	Upper bound	
Age	−0.296	44.491	85.702	<0.001
Gender	0.027	−0.699	−0.279	0.742
Family members	0.014	−4.119	5.776	0.831
Marital status	0.276	−0.867	1.078	<0.001
Economic situation	0.230	4.492	12.076	0.001
Job				
Self-employed*				
Worker	−0.030	2.929	10.876	0.653
Housewife	0.004	−8.291	5.210	0.965
Unemployed	−0.048	−6.039	6.314	0.477
Employee	0.022	−15.925	7.467	0.775
Education				
Illiterate*				
Primary	0.215	−4.055	5.435	0.002
Secondary	0.087	2.349	10.603	0.158
Diploma	0.158	−3.663	22.294	0.030
Graduate	0.136	0.827	15.765	0.058

*Reference. CI=Confidence interval

similarities for both health and well-being outcomes, negative emotions often appear to be more contagious.[21]

A survey which conducted by Gupta *et al*. demonstrated that there were significant differences between the mean scores of social relationship and environmental health in single and married elderly people. The mean QOL scores of these domains were higher among remarried elderly individuals.[14] A similar finding was obtained by Bilgili and Arpacı' study.[2] The results of the current study were consistent with previous ones. Surprisingly, the findings of a study conducted by Dykstra and Fokkema showed that married people were more likely to suffer from emotional loneliness. Their explanation for this unpredictable finding was that sometimes, unfulfilled expectations of married people with a strong partner orientation lead to disappointment. Another reason they mentioned was that partner-centered married people have a considerable dependency on their partners which makes them prone to loneliness.[22]

When one ages, his body function is affected by plentiful changes, which paves the way for decreasing life satisfaction. In the present study, significant differences between the two single and remarried groups were observed according to the life satisfaction domain of QOL. The remarried group compared to single group had higher mean QOL scores. This result is in line with the finding of Botha and Booysen (2013) that married individuals are more satisfied than those in other marital status groups as a whole.[23] Stutzer and Frey stated that since marriage provides an additional source of self-esteem, it is positively associated with individual well-being.[8]

The findings of the current study indicated that there was a significant difference between both the single and remarried groups in relation to sexual issues. In other words, remarried elderly have higher mean QOL score in this regard. This finding is confirmed by our cultural and religious conditions of our country.

The results of the current study revealed that most of the aged individuals examined in this study had medium QOL (61.7 ± 15.02), which is supported by the findings of other similar studies done in Iran.[3,24]

Regression analysis showed that the age was the strongest factor influencing the QOL, as it declines when one grows old. This finding was consistent with Hajian *et al*. study in which elderly people with low education, older age, being single, or living alone had significantly poorer scores of QOL.[17]

In the current research, primary education and diploma opposed to the illiterate were significantly related to higher QOL score. Other studies have also confirmed these findings.[3,12] It has been said that education improves QOL by providing intellectual development and social adaptation and helps the elderly to be aware of chronic illnesses.[16,17]

According to the results, the economic situation had a significant positive correlation with the QOL. Since groups with higher income have greater knowledge of disease prevention, healthier habits, and greater access to health services, they can benefit more from the advantages of a healthy lifestyle.[16] A limitation of this study was that since data were gathered by self-report during interview, individual differences, stress, and mental condition as well as interview-setting conditions might have affected the participants' responses. It is recommended that a longitudinal study with more sample size should be done to determine the causal effect of marital status on elderly QOL.

Conclusions

Although the process of aging is inevitable, and everyone will entangle with the despair of losing his abilities in later life, adopting suitable policies about any domain of QOL, can ensure elderly welfare and well-being to some extent. The results of the present study demonstrated that marital status plays an important role in all aspects of QOL in older adults. Thus, being married can be a protective factor against physical, psychological, and social problems in old age. Realizing this issue in consultation process and guiding elderly that is tailored to their specific conditions is recommended.

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Conflicts of interest

There are no conflicts of interest.

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