Original Article

Quality of Life among Older Adults Covered by Various Pension Funds, Tabriz, Iran

Hadi Sadighiyan [1], Mehdi Abbasian [1,2,3], Mahmood Yousefi [4], Narjes Maasoumi [5], Reza Nikanfar [6], Hossein Matlabi [*1,2]

1. Department of Geriatric Health, Faculty of Health Sciences, Tabriz University of Medical Sciences, Tabriz, Iran
2. Research Center for Integrative Medicine in Aging, Aging Research Institute, Tabriz University of Medical Sciences, Tabriz, Iran
3. Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran
4. Department of Health Economics, Faculty of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran
5. Academic Unit of Medical Education, University of Southampton, Southampton, UK
6. East Azerbaijan Health Insurance Organization, Iran Health Insurance Organization, Tabriz, Iran

* **Corresponding Author:** Department of Geriatric Health, Faculty of Health Sciences, Tabriz University of Medical Sciences, Tabriz, Iran. **Tel:** +984133340309, **Email address**: hm1349@gmail.com

A B S T R A C T

Introduction: Quality of life (QoL) is known to be one of the main challenges of the present century in the growing heterogeneous elder population. Therefore, determining the affecting factors of QoL among older people could be imperative. The present study aims at the comparative investigation of the QoL the old people covered by the various pension funds in the city of Tabriz, Iran.

Methods: A cross-sectional study was conducted among 212 older people in Tabriz, Iran. All of the participants were selected based on a stratified sampling considering the study population's preliminary distribution in three kinds of funds (the State, Armed forces, and Social security). A reliable Iranian LEIPAD questionnaire was used in a comparative investigation of the older adult's QoL. Data were analyzed with SPSS 21 using t-test, ANOVA, person corellation tests and multiple linear regression.

Results: The majority of the participants were male (84.4%) and married (94.8%). One-third of older people possessed academic qualifications. The average age of pensioners in the State fund was 8 years older than other funds. Social security pensioners received the lowest wages (i.e. 0.76 of State and 0.71 of Armed forces pensioners). The total mean score of QoL was 65.63 ± 12.27 (range: 0-93). The relationship between QoL and education level ($\beta = 0.30$) and marital status ($\beta = 0.22$) was positive and significant. Moreover, a significant difference was observed between scores of QoL and type of pension funds, marital status, education level ($p < 0.05$).

Conclusion: Pension funds can improve the QoL among older people by increasing the pension amount, quality of services and payment benefits of those covered retirees.

Keywords: Aged, Quality of Life, Pension Funds

Introduction

Social security has been recognized as one of the basic human rights and underlined in the international laws' documents, hence the communities should consequently provide the requirements of this right according to their traditions and within the framework of the governing regulations (1). The aging population may cause an increase in the worries about poverty and the social security plan of the old people (2). The increase in longevity has caused the retirees to need the privileges of social security for many years. Based thereon, to prevent the problems that follow retirement, it is of great importance to pay attention to their physical and psychological statuses. Various studies have indicated that the various factors including health, economic and social support affect the well-being and quality of life (QoL) among older people (2-4). The retirement plans and funds are well-known policies for the preservation of the financial supplies that lead to a significant reduction in the old people's poverty hence cause the improvement of the old people's QoL (2, 5). Most of the studies about the investigation of the QoL during retirement have been carried out in the western countries and, based on the searches, a few studies have been undertaken in the Asian countries, especially Iran, in this regard (2).

On the other hand, various studies have dealt with the factors influencing old people's QoL with one of the most important factors capable of leading to the improvement of the old people's QoL being the pensions and insurance, and retirement funds (2, 6). The prior studies have reported conflicting findings on the health status, hence the QoL after retirement in such a way that some of them have given an account on the status enhancement and some others have mentioned the worsening of it and, yet, some have stated the neutrality there of (7, 8). Various kinds of insurances and financial supply and pension guarantees are amongst the sources that can protect the older adults against poverty and anxiety during critical times (9). The changes created in old age occasionally result in severe physical and psychological shortfalls ending in disability and depriving the person of the power of confronting the common difficulties (3). Retirement is also a phenomenon accompanied by income reduction, job loss, and decrease in other cases like occupation, friends, peers, social network, and job conditions; therefore, retirement can create important challenges in getting financially, socially, and emotionally adapted (1).

It is in this course that the expectation of welfare and social supports, including the retirement pensions with an emphasis on the protection of human veneration, would be a right expectation based on the principles of social justice (10). The social security organizations of every society with various mechanisms are realized as the custodians of the old people's supports (11).

The results of Sherizadeh and colleges study showed that the older persons' QoL is at an average level and that the age and the score of QoL were inversely associated and also that the men have received higher scores of QoL in contrast to women. It has also been found out that married old people have the highest score of QoL and that the illiterate old people have received the lowest score of the QoL (12).

In another study results shown that the total mean score of the QoL for the elder people receiving pensions from the state pension funds is better than that of the other old people and also that most of the old people are satisfied with their retirement. The education and income levels were found to directly influencing retired old people's QoL (2).

In general, the social security organization, armed forces, and the state pension fund cover more than 90% of the retired insurance-paying population of the country. Therefore, scientific planning, correct management, and on-time identification of the problems and challenges faced by the funds in the economic, social, and other aspects is necessary. Considering the difference and diversity in the offering of the services and facilities of the pension funds, the present study was carried out to evaluate and compare the QoL in the old people covered by Tabriz's pension funds.

Methods

The target population

There are 174,158 people aged over 60 (11% of the total population) in Tabriz (12). We covered all older people by the various pension funds, including state, armed forces, and social security.

Design and sampling

This study was performed using a cross-sectional and descriptive-analytical approach and based on stratified sampling according to the initial distribution of the population in three types of pension funds. Participants were selected from the social security, state, and armed forces pension funds in Tabriz, Iran. Each fund includes several city-wide agencies called 'insurance offices'. The samples were considered as regions by stratified simple random sampling. For this purpose, a sampling protocol was classified according to different regions (different branches of the mentioned insurance companies) and the distribution table of the older population in each region was designed. Then, the percentage of older adults in each area was calculated and according to the ratio of each area in the community, the percentage and ratio of samples in that area were determined. After calculating the ratio of samples, the expected number of samples of retired old people in different branches was prepared. Finally, simply random selections were approached. Therefore, out of 54,000 retired covered by the social security fund, 119 samples were selected ((more than 50% of the people in Iran (East Azerbaijan Province) are covered by the social security organization and its pension fund)). Moreover, 34 and 59 respondents were

recruited respectively from 14500 armed forces and 30000 state pensioners. A total of 212 samples with a 95% confidence interval, the second error ($\beta = 0.20$), and significance value ($p < 0.05$) was required for the entire population.

Data collection instrument

A reliable Iranian based on the Leiden-Padua (LEIPAD) questionnaire was used in a comparative investigation of the old people's QoL. The instrument has good psychometric properties, being partly based on scales that have been thoroughly validated (12, 13). It was developed to measure self-perceived functioning and well-being in older adults. The core instrument comprised 31 questions that covered 7 domains, including physical functioning, self-care, depression and anxiety, cognitive functioning, social functioning, sexual functioning, and life satisfaction scales (14). The theoretical score varieties between 0-93. Each item in the instrument assesses responses along a scale of 0 (worst condition) to 3 (best condition). Higher scores represent higher QoL. The instrument can be administered by non-specialized personnel after a brief training period and is relatively quick to administer (taking roughly 30 minutes). Moreover, socio-demographic variables such as gender, marital status, family size, residence location, education, occupation, insurance status, living arrangement, and income status were also collected.

Procedures

To approach suitable participants, a list of insurance offices in each area was nominated and the managers were contacted for permission to use their scheme for fieldwork. In the next stage, by visiting the centers and using the interview protocol, informed consent was obtained from the clients. If the person agreed and had the conditions to enter the study; the face-to-face questionnaire-based interviews were conducted over 30-40 minutes in a suitable place.

Data analysis

The Kolmogorov–Smirnov test was also used to determine if a data set was well-modeled by a normal distribution ($p > 0.05$). Moreover, t-test, linear regression, and one-way analysis of variance (ANOVA) were used for analyzing changes between demographic variables and QoL scores. Finally, Levene's (14) test was used to assess the equality of variances for a variable calculated for two or more groups. The level of significance was set at a p-value < 0.05. All results were reported as Mean ± SD (Standard Deviation). Data management and analysis were performed using IBM SPSS.

Ethical considerations

The Research Ethics Committee of Tabriz University of Medical Sciences approved this study (ethical code IR.TBZMED.REC.1396.361). Moreover first, the participants were given enough explanation about the study objectives and then their written consent for participating in the research was obtained.

Results

In this study, 212 aged members of the state pension funds (59), the armed forces (34), and social security (119) with an age range of 52-96 years were studied. Most of the respondents were male (84.4%). In the state pension fund, the number of males was 57.6%. But among the samples of pension funds of the armed forces and social security, more than 94% of them were men. Approximately one-third had academic education and 12.7% were illiterate. The percentage of illiteracy among social security pensioners and academic literacy among the state fund was respectively significant. Moreover, 94.8% of the samples were married. In terms of receiving pensions and income; pensioners of the armed forces, the state, and social security received the most benefits, respectively. The Mean age of pensioners of the state pension fund was consistently 68.9 ± 7.9 years, the social security 66.3 ± 6.9, and the armed forces 65.5 ± 5.0. No significant difference was found between the scores of QoL and gender, income, period of residence, number of children and age groups ($p > 0.05$). There was a statistically significant difference between the mean QoL scores and the, educational level and marital status. (Table 1).

In examining the status of QoL among three types of pension funds, according to ANOVA, it was found that in general there was a statistically significant difference between the groups ($p < 0.05$). The older adults covered by the state fund formed a homogeneous group with the highest QoL scores (69.7 ± 10.2) (Table 2).

Linear regression analysis was used to investigate the hypothesis of the effect of predictor variables on the dependent variable. For this purpose, the level of education; marital status, number of children, income, age, residence history, and gender were included as predictor variables and QoL scores as a criterion variable. According to the obtained results, the relationship between QoL and each of the variables of education level ($\beta = 0.30$) and marital status ($\beta = 0.22$) was positive and significant. There was no significant relationship between other predictor variables included in the model with QoL (Table 3). Furthermore, the results of examining the scores of QoL dimensions with the type of pension fund were summarized in Table 4. Mean scores of life satisfaction, social functioning, anxiety, and depression were significantly different between the groups. Finally, a comparison of the dimensions of QoL indicated that social security retirees in the field of social performance, armed forces in the field of sexual functions and state pensioners in the field of physical function, self-care, cognitive, anxiety and depression, and life satisfaction earned the highest score.

Table 1. Distribution of the quality of life scores by socio-demographic characteristic and type of pension funds (n = 212)

Variables		State fund	Social security fund	Armed forces fund	Total	Mean (SD*)	p-value
Gender	**Male**	34 (57.6%)	111 (94%)	33 (97%)	178 (84.4%)	65.6 (12.7)	> 0.05
	Female	25 (42.4%)	7 (6%)	1 (3%)	33 (15.6%)	65.7 (9.5)	
Marital Status	**Married**	53 (89.9%)	116 (97.5%)	32 (94.1%)	201 (94.8%)	66.1 (11.7)	< 0.01
	Widowed	6 (10.2%)	3 (2.5%)	2 (5.6%)	11 (5.2%)	55.3 (17.6)	
Education level	**Illiterate**	0 (0%)	27 (22.7%)	0 (0%)	27 (12.7%)	60.3 (12.2)	
	Elementary	4 (6.8%)	32 (26.9%)	3 (8.8%)	39 (18.4%)	62.2 (12.9)	
	Secondary school	1 (1.7%)	29 (24.4%)	7 (20.6%)	37 (17.5%)	65.6 (9.4)	< 0.01
	High school	11 (18.6%)	18 (15.1%)	18 (52.9%)	47 (22.2%)	64.3 (14.7)	
	University	43 (72.9%)	13 (10.9%)	6 (17.6%)	62 (29.2%)	71.0 (9.3)	
Number of children	**Lower than 2**	25 (42.3%)	35 (29.4%)	8 (23.5%)	68 (33.3%)	59.7 (10.2)	
	2-4	28 (47.4%)	42 (35.3%))	22 (64.7%)	92 (37.5%)	69.5 (10.7)	> 0.05
	More than 5	6 (10.1%)	42 (35.3%)	4 (11.7%)	52 (38.2%)	67.1 (12.8)	
Age(year)		68.9 (7.9)	66.3 (6.9)	65.5 (5.0)	66.9 (6.9)	65.6 (12.2)	> 0.05
Income(1$=250000Rials)	**Mean (SD)**	76.1 (74.7)	58.3 (36.0)	82.0 (20.2)	67.0 (44.2)	65.6 (12.2)	> 0.05
Period of residence(year)		30.3 (4.6)	32.7 (10.6)	29.1 (2.4)	31.5 (7.6)	65.6 (12.2)	> 0.05

Test: t- test, One Way ANOVA, Pearson correlation
*Standard Deviation

Table 2. Comparison of quality of life and type of funds in the older adults

Type of fund	Number	Mean (SD)	95% CI		p-value
			Lower	Upper	
State fund	59	69.7 (10.2)	66.68	72.87	
Social security fund	119	63.5 (11.4)	61.40	65.75	< 0.05
Armed forces fund	34	65.6 (16.2)	61.54	69.68	
Total	212	65.6 (11.8)	62.89	68.36	

Test: One Way ANOVA

Table 3. Multiple linear regression analysis to evaluate the predictors affecting quality of life

Predictive variable	b	Se	β	t	p-value
Constant	51.64	3.56		14.96	< 0.0001
Education(Reference group: University)	8.08	1.74	.30	4.63	< 0.0001
Marital Status	12.26	3.57	.22	3.42	< 0.001
	R = 0.35	AdjR² = 0.12	F = 15.38	P = < 0.0001	

Table 4. The distribution of quality of life dimensions scores by type of pension funds

Domains	Funds	Mean (SD)	95% CI		p-value
			Lower	Upper	
Physical function	**State**	13.5 (1.3)	13.09	14.02	
	Social security	12.9 (1.6)	12.63	13.28	≥ 0.05
	Armed forces	12.7 (2.8)	12.12	13.34	
	Total	13.0 (1.7)	12.67	13.49	
Self-care	**State**	14.8 (2.1)	14.14	15.65	
	Social security	14.0 (3.0)	13.5	14.57	> 0.05
	Armed forces	14.0 (3.7)	13.05	15.05	
	Total	14.2 (2.9)	13.56	15.09	
Cognitive function	**State**	11.8 (1.9)	11.18	12.58	
	Social security	11.3 (2.9)	10.82	11.81	> 0.05
	Armed forces	11.2 (3.0)	10.28	12.12	
	Total	11.1 (2.8)	10.76	12.17	
Depression and anxiety	**State**	9.0 (1.9)	8.28	9.75	
	Social security	7.6 (3.2)	7.18	8.21	< 0.05
	Armed forces	8.3 (2.8)	7.35	9.39	
	Total	8.1 (2.9)	7.6	9.11	
Social function	**State**	5.5 (1.8)	6.27	7.32	
	Social security	6.8 (1.2)	5.49	6.23	< 0.05
	Armed forces	5.5 (2.1)	5.33	6.72	
	Total	6.2 (1.5)	5.68	6.61	
Sexual function	**State**	2.4 (1.6)	2.01	2.83	
	Social security	2.1 (1.5)	1.89	2.47	> 0.05
	Armed forces	2.4 (1.6)	1.89	2.98	
	Total	2.2 (1.6)	1.92	2.65	
Life satisfaction	**State fund**	11.2 (3.2)	10.3	12.1	< 0.05
	Social security	9.5 (3.5)	8.88	10.14	
	Armed forces	10.8 (3.8)	9.64	12.0	
	Total	10.1 (3.4)	9.39	10.98	

Test: One Way ANOVA

Discussion

Considering the daily increasing population of the retired individuals in comparison to the past, gaining information about the QoL in the old people covered by the pension funds can contribute to the acquiring of more data about the conditions of the retirees hence better planning for their welfare. To do so, the present study was carried out to comparatively investigate the QoL in the old people covered by Tabriz's pension funds. This evaluation indicated that the total score of the old people's QoL was 65.6 ± 12.2 which was at an intermediate level similar to other studies (12, 15, 16), and also the level of QoL was significantly higher in older people receiving a pension from the state pension fund in comparison to the other two pension funds. The results of some of the other studies performed in the other countries with higher income levels, as well, are reflective of the high level of the old people's QoL in these countries as compared to that of the old people living in countries with intermediate and low-income levels (17, 18). Considering the comparisons made in various studies in this regard, the total mean of the QoL was more likely to be lower for the pensioners of the social security organization's fund in contrast to the other funds concerning the amount of the pension as well as the lower services and facilities provided.

The present study indicated that the total mean of the QoL was less in men (65.6) than in women (65.7) but it was not statistically significant. This was different from the other studies (19-21). Quite likely, the methodological differences between the present study and the foresaid study in terms of the information gathering method and measurements and the ratios of the genders in the selected sample volumes (which has been higher in the present study) can be the reasons for such a difference in the results. Moreover, amongst the notable points were that most of the present study's participants have been male. They enjoyed a higher rate of employment during the past years and especially in self-employment and service forms that do not need high education levels. As well, they have been more predominantly covered by the social security organization's fund hence having a lower base of premium and retirement pension. This was quite reverse the recent decades' situation in which women have been more frequently employed. These conditions can face considerable variations in future years.

This study results showed, the mean score of QoL was significantly higher in the older people and the subjects with higher education. Numerous studies have demonstrated higher levels of education as a factor of active aging and a better QoL, and probably higher

levels of education are associated with the allocate high social and economic positions in all stages of life (11, 22, 23).

Based on the results of the studies performed in this regard, the demographic variables influencing the old people's social interaction and support are gender, age, marital status, residence status, and educational histories (24). Social support is the accessibility of the family or friends' help and it stimulates a sense of attachment in the old people,increases their physical and psychological health and helps them properly have a happy life. Social support causes the older adults to show vaster and more positive concentration at times of need or crisis (16, 25, 26). Due to the same reason and as it was imagined according to the study hypothesis, the social aspect of the QoL differs in the three groups of the pension funds. The stateal fund's pensioners could acquire significantly higher means in comparison to the pensioners of the social security and armed forces' funds.

Recent studies have shown that widowed old people do not enjoy a good health status in comparison to married ones. The relationship between the marital status and the health status of the older adults has been investigated in various studies, particularly in the western communities that consider marital status as one of the key variables in the determination of the QoL (19). Similar results have also been found in this study most of the participants of which are married (94.5%). The mean score of the married individuals' QoL was found higher than that of the widowed persons and a significant difference was documented between the marital status and QoL in such a way that the married old people were found enjoying an increasingly better QoL in contrast to the widowed old people. This finding was in accordance with the results found in the previous studies performed inside and outside the country (12, 21). On the other hand, there was a strong body of evidence indicating the significant relationship between marriage and the improvement of the QoL in the individuals, particularly the old people because being married satisfies the spouses' affective and sexual needs and simultaneously meets their psychological needs, including the elimination of loneliness and elevation of the need for a companion as well as the need for being loved and feeling important, and enhances their QoL.

The comparison of the anxiety and depression domain in the individuals according to the type of the pension fund indicated that the depression and anxiety are lower in the pensioners of the stateal funds. Considering the problems related to physical health, personality properties, depression history, insufficient life occurrences, lack of social support, illiteracy, type of the nuclear family, low family income, and having diseases as important factors giving rise to depression in old people (25, 27), the old people covered by the state pension funds were found to have higher education levels hence higher social stances and subsequently better health statuses. As for the depression and anxiety, most of the old people are inflicted with them and experience a reduction in their QoL due to the loss of spouse, friends, and companions and becoming more dependent on others (28).

In the studies performed on the life satisfaction after retirement, factors like retirement age, literacy level, familial communication, recreational activities, economic independence, individual and occupational properties before retirement, physical and psychological health, and personality were amongst the most important factors influencing it (6, 29). Since the above-mentioned cases, the life satisfaction of the stateal funds' pensioners was significantly higher than the other funds' pensioners. Moreover, in another study, as well, the comparative investigation of the life satisfaction in the employed women and housewives demonstrated a high rate of life satisfaction in the retired women (30).

Conclusion

Based on the present study's results, the QoL in the old people covered by Tabriz's pension funds were at an intermediate level. Thus, considering the continuous increase in the retirees' population, it was very much necessary to recognize the factors influencing the quality of the favorable life so that proper plans can be accordingly made for this population group. According to the study results, pension funds can improve the QoL of the older people by increasing the pension amount, and quality of services and payment benefits of those covered retirees with the use of experiences developed and aging countries and related specialists of gerontology field.

Study limitations

The limitations of this study were self-reported data, filling out questionnaires in insurance brokerage and probably dishonesty in reporting the amount of pensions received by the retirees.

Conflict of interest statement

There was no conflict of interest. The authors have no financial relationships relevant to this article. None of the authors has received support for this work that influenced its outcome.

Data availability

All data generated or analyzed during this study are included in this published article.

Author's contribution

HM, MY and HS designed the study. HS, HM involved in data collection. HM, MA and NM wrote the article. HM, MA and NM edited and revised it, participated in results analysis and improve discussion section and submitted it. All authors have read the manuscript and approved its final version.

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