Research Article

Evaluation of Effective Indexes on Quality of Life Related to Health in Western Iran in 2013

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Abstract

Background: Today, indexes regarding longevity and life expectancy have increased; the most important issue now is how to spend time loving or in other words quality of life.

Objectives: This study was aimed to evaluate effective indexes on quality of life related to health in western Iran in 2013.

Materials and Methods: In this cross-sectional research, 918 families were selected among different counties of Ilam Province by multi-stage clustering sampling. The data collection instrument was a questionnaire used to measure the general economic and quality of life: the SF-36 health status questionnaire. Data were analyzed using multivariate regression models.

Results: The mean age of the study participants was 32.97 ± 9.5 years, and the mean score for their quality of life was 61.74 ± 12.31. There was a significant statistical relationship between people's quality of life and their marital status, province of residency, income, economic situation, and life satisfaction ($P < 0.05$). Also, there was a significant and inverse correlation between people's age and quality of life ($r = 0.21$), physical health summary ($r = 0.21$) and mental health summary ($r = 0.08$).

Conclusions: The mean quality of life among the individuals studied was in the middle level, however, it is important to consider the different dimensions of their living situations, such as economic protections, social cooperation, ability to present suitable behaviors to solve problems, and living situation, especially among deprived people.

Keywords: Quality of Life, Economic Factors, Health, Iran

1. Background

Today, indexes regarding longevity and life expectancy have increased; the most important issue now is how to spend time loving or in other words quality of life. Some scientists and officials have taken this subject into consideration (1). Quality of life is considered as a basic index for individuals and it is used to measure different dimensions of life, such as daily activities and physiologic aspects, which are consider of special importance for quality of life (2). Quality of life can be defined as an individual's perception of their life achievements in the area of their value system, and the cultural background that they live in with its relationship to their objectives, expectations, standards, and anxieties. This concept involves a person's physical health, psychological condition, level of independence, social communication, and personal ideas (3). Quality of life involves multiple dimensions and is a complex concept which is influenced by factors, such as time, place, social, and personal values, and thus, it has various definitions for individuals and different groups. Some people have defined quality of life as the ability to exist in an area and some others have interpreted it as a measurement Attractiveness rate, while other people have defined it as public welfare, social welfare, gladness, satisfaction, and others (4). Nowadays a population's quality of life is considered as a framework for providing services for the improvement of people's quality of life, and it is expressed as the most important objective of healthcare interventions (5). Offering definitions about quality of life are beneficial for use in healthcare protection and can be divided into five scopes which are: normal life, happiness and satisfaction, access to personal objectives, benefit to the society and natural ability rate. In other words, quality of life can be

considered as a relationship between the individual health condition, on the one hand, and the ability to follow life objectives on the other hand. Therefore, it seems that satisfying human needs and basic priorities have important roles in the quality of life (6). Quality of life is a very important issue, which was first taken into consideration for Technologies development development and industrialization processes in many countries, Further studies were undertaken in this field, which is important because of the increasing importance of people's quality of life regarding the monitoring of public policy and its role as a beneficial tool in health planning and management (7-13).

The concept quality of life has been studied in the social sciences such as sociology, philosophy, and also the medical sciences for many years (14). Social characteristics are used to define the concept of quality of life in the social sciences and many discussions have been developed about the concepts of how to live well in the fields of philosophy and religion. Since 1940, this concept has also been used in medical research, such as cancer research, to measure a patient's quality of life. Quality of life has also been considered in the field of medicine (15-22). For instance, studies have been conducted on the quality of life of heart patients, which have shown that quality of life among these patients has decreased (21, 23-27). The results of a study by Nikpor et al. showed that the mean quality of life for older people in the west of Tehran is in the middle and there are significant relationships between variables such as sex, level of education, economic condition, and current health condition (28). By considering these studies the world health organization (WHO) has suggested that promotion of people's quality of life is one of the duties of healthcare centers.

2. Objectives

This study aimed to evaluate effective indexes on quality of life related to health in western Iran.

3. Materials and Methods

In this cross-sectional research study, data was collected from 918 families in 2013 (February 2013 to May 2013). Samples for the study were selected from different cities of Ilam province. The sample size was computed with α = 0.05, β = 0.10, r = 0.29 and using the equation (Equation 1):

$$n = \frac{z^2 + \frac{3}{4}\ln\left(\frac{1+r}{1-r}\right)}{\frac{3}{4}\ln\left(\frac{1+r}{1-r}\right)} \qquad (1)$$

The families economic and general condition was determined using questions about demographics and job situations, income and living costs on the questionnaire. Responses were based on a Likert scale format. A SF-36 questionnaire was used for measurement of people's quality of life related to health. The validity and consistency of the instrument has been measured among different communities (29, 30), and the validity test for the Persian copy has been performed in Iran (31, 32). Cronbach's alpha coefficient of this questionnaire used in the present research was 0.81.

This questionnaire is one of most important questionnaires used for evaluating quality of life related to health among healthy individuals and patients. It evaluates quality of life related to health in eight scopes, which includes questions as follows: 10 questions about physical function, four questions about limitation due to physical problems, three questions about limitations due to emotional problems, two questions about physical pain and its effect on daily activity, five questions about people's perception of their public health, two questions about social function, four question about exhilaration, and five questions concerning people's mental health. This tool involves two abbreviated components, which are obtained by combining the scales as follows: the abbreviation of physical health evaluation includes physical function, physical pain, and limitations due to physical problems, as well as public health; the abbreviation of mental health includes social function, mental health, exhilaration, and limitation due to emotional problems. To score the questionnaire in each dimension, first, the questions are scored according to the questionnaire directions and then the sample's score is summed up and related to a scale from zero (bad situation) to 100 (best situation). The dependent variable (quality of life grade) should become a dual variable for the logistical regression. Therefore, scores lower than the mean (61.71) were defined as undesirable life quality and scores higher than the mean were defined as favorable life quality. Data were analyzed by using SPSS version 21 software and the Smirnoff-Kolmogorov test, t-test, ANOVA and Pearson correlation coefficients. A P value lower than 0.05 was considered significant.

4. Results

In this study, 918 householders with a mean age 32.97±9.5 and age range 18 - 70 years were investigated. The highest mean quality of life was associated with the age group below 25 years. Based on Table 1, the mean quality of life for study participants was 61.74 ± 12.31 (out of 100) and among men and women was 61.44 ± 12.38 and 61.97 ± 12.26, respectively. The mean summary measure of physical

health and summary measure of mental health were 64.06 ± 14.04 and 56.66 ± 11.86, respectively (Table 1).

The gender of a majority of the people studied were women (56.1%), by marital status most were married (78.8%), and by residency most resided in the city (81%). In terms of job condition, half of the participants (49.8%) were employed, followed by the unemployed (47.7%), and retired (2.5%). In terms of education, half of the people studied had bachelor's degrees (41.1%), followed by high school education (19.6%), associate's degree (19.3%), master's degree and higher (7.9%), elementary (5.4%), guidance (4.8%), and illiterate (2%). Based on a t-test, the highest mean quality of life was associated with women (61.97%), those married (64.44%), employed (62.35%), city residents (64.39%), people with diploma or higher (61.99%), and people who had a personal house (61.91%). There was a significant relationship between their marital status and residency (P < 0.01) (Table 2).

Also, there was a significant statistical relationship between quality of life, measured by the ANOVA test, with variables such as monthly income (P < 0.01), economic situation (P < 0.001), and life satisfaction (P < 0.001), so that mean quality of life was increased by increasing monthly income, improving the economic situation, and life satisfaction (Table 3).

The highest mean quality of life related to health was associated with the Sirvan province (70.11), followed by Abdanan (65.74), Dareh shahr (64.65), Ivan (64.11), Malekshahi (62.34), Ilam (62.17), Dehloran (61.39), Chardavol (57.84), and Mehran (42.75). There was a significant statistical relationship between these variables (P < 0.001) (Table 4).

There was a significant and inverse statistical correlation between age and quality of life (r = 0.21), physical health summary (r = 0.21), and mental health summary (r = 0.08). Thus, increased age caused a decrease in quality of life, physical, and mental health summaries. Also, a significant and direct statistical correlation existed between quality of life and physical health summary (r = 0.91), and mental health summary (r = 0.69). Thus, an increase in quality of life caused an increase in physical and mental health summaries (Table 5).

5. Discussion

The world health organization (WHO) defines quality of life as an individual's perception of their living situation due to their value system and the culture in which they live, as well as their relationship with their favorable objects, expectations, standards, and priorities. This definition involves a broad concept influenced by the individual's mental and physical health condition, level of independence, social communication, and personal ideas (33).

In the present research, based on the t-test, the highest mean quality of life was among married people (64.44) and based on the city of residency (64.39), and there was a significant relationship with both variables. In a study by Hadi et al. (34), it was observed that the single group had gained a high score in the dimensions of physical, public health, exhilaration , social function, and limitations due to emotional problems, compared with married, divorced, and widowed groups. In addition, the married group gained a high score in the dimensions of physical problems and function, public health, exhilaration, and social function compared with singles. Also, in a study by Habibi et al. (35) there was not a significant relationship between quality of life and marital status, however, Vahdaninia et al. in one of their studies, concluded that mean quality of life among married people was higher than the groups of single, divorced, or widowed (36). A similar result was obtained in a study in Korea (37). As isolation is one of the potential risks that threaten an elder's health, it is necessary to consider people's potency and protective environment to counter this factor. In studies by Pour Tahamtan et al. (14) and Goshtasbi et al. (38), health level and quality of life in urban areas was higher than in rural areas, which is in agreement with the present research. This can be explained by unequal hygienic situations, residencies, and the differences between rural and urban facilities.

Also, there was a significant statistical relationship between quality of life as measured by the ANOVA test, with monthly income (P < 0.01), economic situation (P < 0.001), and life satisfaction (P < 0.001). Studies performed by Haas et al. in San Francisco in 2005 (39) and Schultz et al. (40), demonstrated that there was a significant relationship between an unsuitable financial situation in order to provide food and housing with their health condition and lower quality of life, whereas, this relationship was not observed in studies by Mir et al. (41). Also, in a study by Abbaszadeh et al. there was a significant relationship between quality of life and life satisfaction. Thus, those who were dissatisfied with their living situation had a higher chance of having a lower quality of life (42). The significant relationship between the two factors indicated that people's positive attitudes to their life can have an effect on and increase quality of life. Zillich et al. in their studies, showed that deprived people's quality of life was lower than ordinal people's, based on economic situation, and there was a significant relationship between the two variables (43).

According to the results of this research, increased age also causes a decreased quality of life, decreased physical and mental health summaries and showed there was a significant and direct statistical correlation between quality of life with physical health summary (r = 0.91) and mental health summary (r = 0.69). In 2006, Albou Kordi et al.

Table 1. Mean and STD Subscale - Quality of Life Related to Health

Variable	Mean $\pm$ SD
Physical functioning	73.34 $\pm$ 28.08
Limitations due to physical problems	52.41 $\pm$ 35.78
Limitations due to emotional problems	50.86 $\pm$ 39.01
Mental Health	54.73 $\pm$ 11.03
Exhilaration	52.31 $\pm$ 11.27
Social functioning	68.75 $\pm$ 20.22
Physical pain	70.17 $\pm$ 21.24
Public health	60.21 $\pm$ 17.59
Physical health Summary	64.06 $\pm$ 14.04
Mental health Summary	56.66 $\pm$ 11.86
Total score of quality of life	61.74 $\pm$ 12.31

Table 2. Relationship of Quality of Life to Health Demographic and Economic Variables Based on T-Test[a]

Variable	Quality of Life	P Value
Sex		0.54
Male	61.44 $\pm$ 12.38	
Female	61.97 $\pm$ 12.26	
Marital Status		0.001
Single	60.59 $\pm$ 12.35	
Married	64.44 $\pm$ 11.68	
Unemployed	61.15 $\pm$ 12.47	
Job Status		0.22
Employed	62.35 $\pm$ 12.15	
Retired	58.35 $\pm$ 11.2	
Private House		0.68
Yes	61.91 $\pm$ 11.88	
No	61.55 $\pm$ 12.9	
Residence		0.001
City	64.39 $\pm$ 11.44	
Village	60.97 $\pm$ 12.36	
Education		0.39
No Diploma	61.18 $\pm$ 12.4	
High School Diploma	61.99 $\pm$ 12.33	

[a]Values are expressed as mean $\pm$ SD.

found similar results in their research on Shahinshahr elders (44). In 2008, a study by Bazrafshan et al. found this result in Shiraz Province, where general quality of life and its dimensions were decreased by increasing age (45). In studies by Mir et al. (41), there was a significant and re-verse correlation among age and quality of life and physical health summary (P < 0.01, r = -0.87), so that the young people had a better physical dimension, but there was a significant and direct correlation between age and mental health summary (P < 0.05, r = 0.45). As expected, increased

Table 3. Mean and STD of Quality of Life Related to Health, Based on Demographics and Economics[a,b]

Variable	Quality of Life	P Value
Age		0.000
< 25	65.84 ± 11.83	
25 - 29	62.66 ± 12.42	
30 - 34	62.22 ± 12.02	
35 - 39	60.005 ± 13.18	
40 - 44	60.28 ± 12.72	
45 - 49	59.32 ± 10.76	
> 50	55.49 ± 13.17	
Income, Thousands of Tomans		0.008
Less than 500	59.29 ± 11.94	
500 - 750	63.5 ± 10.91	
750 - 1 million	64.04 ± 11.61	
More than 1 million	64.72 ± 9.49	
Bad	58.64 ± 11.61	
Economic Situation		0.000
Average	63.67 ± 10.59	
Well	61.06 ± 14.92	
Life Satisfaction		0.000
Bad	56.61 ± 11.63	
Average	61.43 ± 10.87	
Well	63.62 ± 13.18	

[a] Values are expressed as mean ± SD.
[b] Tested by ANOVA.

Table 4. Mean and STD of Quality of Life Related to Health Based on Residence City[a,b]

Variable	Quality of Life	P Value
Residence City		0.000
Ilam	62.17 ± 11.8	
Eyvan	64.11 ± 9.37	
Sirvan	70.11 ± 10.98	
Chardavol	57.84 ± 13.42	
Mehran	42.75 ± 11.6	
Dareh shahr	64.65 ± 11.41	
Dehloran	61.39 ± 10.71	
Malekshahi	62.34 ± 13.29	
Abdanan	65.74 ± 10.01	

[a] Values are expressed as mean ± SD.
[b] Tested by ANOVA.

age causes a decrease in quality of life in both dimensions (mental and physical), which may partly be a result of an elder's physical limitations and may partly be associated with a person's mental and emotional situation.

In regards to the mean quality of life among the studied individuals the measurement was in middle, however, it is important to consider the different dimensions of the study subjects' living, such as economic protections, social cooperation, ability to provide suitable behaviors to problems, and consideration of the facilitation of living affairs, especially among people in deprived areas.

Table 5. Correlation Between Age and Quality of Life, Physical Health Summary and Mental Health Summary

	Age	Quality of Life	Physical Health Summary	Mental Health Summary
Age	1			
Quality of Life	-0.21[a]	1		
Physical Health Summary	-0.21[a]	0.91[a]	1	
Mental Health Summary	-0.08[b]	0.69[a]	0.51[a]	1

[a] Significant at less than 0.01.
[b] Significant at a level of less than 0.05.

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Footnotes

Authors' Contribution: Meysam Behzadifar, Masoud Behzadifar and Ali Delpishe carried out the design and coordinated the study analysis and participated in manuscript preparation. Mandana Saroukhani provided assistance in the design of the study and coordinated in manuscript preparation. Kourosh Sayehmiri provided assistance for analysis. All authors have read and approved the content of the manuscript.

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