Quality of Life of the Elderly During the COVID-19 Pandemic in Iran; A Cross-Sectional Study

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ABSTRACT

Aims Populations are generally susceptible to the new coronavirus, but the elderly are more susceptible to severe disease and are admitted to the intensive care unit, and the mortality rate is higher in elderly patients. This study aimed to evaluate the quality of life of the elderly during the COVID-19 pandemic in Iran.

Instrument & Methods The present cross-sectional survey was conducted on 461 Iranian elderly. Data collection tools include a questionnaire focusing on the quality of life in physical and mental dimensions. Stark quality of life questionnaire to adapt and be useful in COVID-19 disease outbreak conditions; only short phrases have been added to relate it to the disease. Data analysis was done using independent t and ANOVA tests.

Findings The highest percentage of the obtained score was assigned to, the practices to avoid infection with COVID-19 (48.1%) and anxiety or fear of being affected (47%). Among the domains of stigma, the most important predictor of anxiety or fear of being affected was the policy of health settings (R2=0.735).

Conclusion Therefore, it can be concluded that the quality of life of the elderly during the COVID-19 pandemic was low. Men also enjoyed better conditions in comparison with women.

Keywords Quality of Life; Elderly; COVID-19; Mental Health; Physical Health

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CITATION LINKS

[1] Relationship between the ABO blood group and the coronavirus disease 2019 (COVID-19) ... [2] Understanding the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease (COVID-19) based on available ... [3] Preliminary validation of the Corona Disease Anxiety Scale (CDAS) in the ... [4] The epidemic of 2019-novel-coronavirus (2019-nCoV) pneumonia and insights for emerging infectious diseases ... [5] Clinical features of COVID-19 in elderly patients: A comparison with young and ... [6] COVID-19 in older adults: Key points for emergency department ... [7] The relationship between depression and religious attitude and performances in adults ... [8] Quality of life in Iranian ... [9] A new questionnaire for measuring quality of life-the ... [10] Psychological distress in Nepalese residents during COVID-19 pandemic: A community ... [11] The impact of the COVID-19 pandemic on quality of life and well-being ... [12] Analyze the psychological impact of COVID-19 among the elderly population in China and make ... [13] Quality of life in the urban environment and primary health services for the elderly during the Covid-19 pandemic: An application to the city of ... [14] Experiences of American older adults with pre-existing depression during the beginnings of the COVID-19 pandemic: A multicity, ... [15] Life-space mobility and active aging as factors underlying quality of life among older people before and during COVID-19 lockdown in Finland-A ... [16] Evaluation of health-related quality of life using EQ-5D in China during the ... [17] Social disconnectedness, perceived isolation, and symptoms of depression and anxiety among older Americans (NSHAP): A longitudinal ... [18] Associations of social isolation with anxiety and depression during the early COVID-19 pandemic: A survey of older adults ... [19] Assessment of health status of elderly people in the city ... [20] Health literacy, health status, and healthcare utilization of Taiwanese adults: Results from a ... [21] Predictive factors of quality of life in older adults during the ... [22] Lifestyle behaviors and quality of life among older adults after the first wave of the COVID-19 pandemic in ... [23] Quality of life of the elderly during the COVID-19 pandemic in Asian countries: A cross-sectional study across ...

Introduction

Coronaviruses are a large family of viruses that can cause respiratory infections ranging from colds to severe diseases such as MERS and Sars [1]. In December 2019, a series of unexplained cases of pneumonia were reported in Wuhan, China, and the government and health researchers in China took rapid measures to control the epidemic and began etiological research. On January 12, 2020, the World Health Organization (WHO) provisionally named this new virus as novel coronavirus-2019. On January 30, 2020, WHO declared the 2019 novel coronavirus pandemic as a public health emergency of global concern. On February 11, 2020, WHO officially named the disease caused by the novel coronavirus-2019 the disease COVID-19 [1, 2].

Coronavirus spreads rapidly in Iran, like in other countries of the world, and puts people's mental and physical health in danger. The symptoms of this virus vary from mild to severe, and usually, the symptoms of infection are fever, cough, and breathing problems [3]. Populations are generally susceptible to the novel coronavirus, but the elderly are more susceptible and are more likely to develop severe illness and be hospitalized in intensive care units, and mortality is higher in elder patients. Moreover, the chances of contracting and dying increase in elderly people who suffer from diseases such as diabetes, high blood pressure, and cardiovascular diseases [4, 5]. The reason why elderly people suffer from a more severe type of disease can be because of physiological changes, reduced immune system function, and chronic diseases in these people [6].

In the second half of the 20th century, medical and health advances increased human life expectancy so that according to the statistics of the World Health Organization in 2000, the population of people aged 60 and over was almost 600 million people, and this figure will reach 1.2 billion by 2025 [7]. Iran, as one of the developing countries, is not exempt from this rule, so the increase in the growth of old age can be seen in the aging process of the country's population. Therefore, according to the increasing trend of the old population, attention should be paid to the well-being of the elderly in all physical, mental, and social dimensions as the needs of the elderly population. In order to improve the health of the elderly and prevent and control diseases, the first step is to identify the condition of the elderly. In this regard, one of the indicators that expresses the condition of the elderly well is the quality-of-life index. Although aging causes a disturbance in the quality of life of the elderly, other underlying factors are also effective in this reduction [8].

Therefore, considering the considerable control of the COVID-19 disease through widespread vaccination and compliance with health procedures, this disease is still considered to be a threat to people's health, especially the elderly, so in this study, we aimed to evaluate the quality of life in elderly people during the COVID-19 pandemic in Iran.

Instrument and Methods

Study design and participation

This cross-sectional survey was conducted on 461 Iranian elderly in 2022. In order to select the desired samples, the sampling method was available samples. A sample link of the questionnaire was provided to the collaborating researchers across the country, and with their cooperation, the questionnaires were completed through interviews. In the present study, sampling was done using the convenience sampling method. After explaining the aim of the study and obtaining the consent of the participants, patients who met the inclusion criteria were enrolled in the study. The inclusion criteria were the elderly (people over 60 years old), any elderly who is willing to cooperate with this study and complete the consent to participate in the research, the elderly whose health is at a level where the ability to hear, see and the minimum required have their own lives and be able to see the forms prepared in the questionnaire and hear the voice of the person who is chosen as a liaison in the research, and the exclusion criteria of this study included the elderly with known mental illnesses and the elderly with Alzheimer's and incurable diseases.

Questionnaire development

The questionnaire used in this study was the Stark QoL questionnaire, focusing on the quality of life in physical and mental dimensions which was designed by Hardt in 2015 [9]. The questionnaire indicates good reliability (Cronbach's alpha=0.93) and good construct validity. It consisted of a 5-point Likert scale whose first item measures mood with 5 smiles at one end for a very happy face, and a very sad one at the other end. The second item measures energy and presents two pictures of a person walking; The walker on the left is full of energy and on the right, he seems to be walking almost as if depressed. The third item measures social contact and displays three pictures showing a group of five persons each, one white and four grey. The white person symbolizes the probed himself and the grey ones, a possible peer group. On one end, the white person is standing in the middle of the group; On the other end alone. Together, these three items constitute the mental component. All items are displayed on one page and are to be answered by making a cross under the picture that best applies to one's situation. On the second page, six items measuring physical functioning are presented. The pictures show activities like carrying a shopping basket, moving a table, tying shoes, etc. To adapt and be usable in the conditions of the outbreak of COVID-19 diseases, only short phrases have been added to relate to the disease. The questionnaire included 24 questions (15 demographic questions, 3 questions in the

psychological dimension, and 6 questions in the physical dimension). It should be noted that the higher the mean score of the physical and mental components, the more unfavorable the quality of life.

Statistical analysis

Analysis was done using SPSS 24 software, and data analysis was done using descriptive statistics, including frequency percentage, mean, and standard deviation, and analytical statistics, including independent t and ANOVA tests. In this study, $p < 0.05$ was considered to be statistically significant.

Findings

The mean age of the participants was 70.46±7.97 (60 to 95) years. Most of the participants were women (51.2%), lived in the city (76.4%), were married (78%), had primary education (76.6%), were housewives (43.2%), had regular insurance (52.5%), and had neither good nor bad views of their lives (46.9%; Table 1).

Table 1. Frequency distribution of demographic parameters of the elderly enrolled in the study

Parameter	Frequency (%)
Sex	
Male	225 (48.8)
Female	236 (51.2)
Place of resident	
City	352 (76.4)
Village	109 (23.6)
Marriage status	
Married	358 (78)
Widow	94 (20.5)
Never married	2 (0.4)
Divorced	7 (1.1)
Education level	
Elementary	353 (76.6)
High school	63 (13.7)
Bachelor's degree	35 (7.6)
Master's degree	10 (2.1)
Employment status before retirement	
Governmental employee	87 (18.9)
Housewife	199 (43.2)
Private company	20 (4.3)
Self-employed	105 (23.6)
Farmer or seasonal worker	41 (10.8)
Pension (IRR)	
Not	130 (28.6)
<2 million	171 (37.7)
2-4 million	117 (25.8)
4-6 million	22 (4.8)
6-8 million	7 (1.5)
>8 million	4 (0.9)
Type of Insurance	
Regular insurance	224 (52.5)
Regular and supplementary insurance	140 (30.4)
Rural insurance	52 (11.3)
Not have any insurance	45 (5.8)
Family visit	
Twice or more a week	193 (41.9)
Once a week	162 (35.1)
Once a month	54 (11.7)
Once every two months	41 (8.9)
Once a year	11 (2.4)
Evaluation of life	
Very good	7 (1.5)
Good	126 (27.3)
Neither good nor bad	216 (46.9)
Bad and very bad	112 (24.3)

Comparing the quality of life in terms of physical and mental dimensions in both sexes using independent t-test showed that the mean score of the physical condition was 7.6±1.8 in women, 6.8±1.9 in men, and the average psychological state was achieved component in women 17.3±5.6, men 14.9±5.8 and a significant statistical relationship between mental and physical components with gender was observed ($p = 0.001$).

There were significant relationships between the mean score of the psychological dimensions considering the place of residence ($p = 0.001$), education ($p = 0.001$), employment status before retirement ($p = 0.013$), type of insurance ($p = 0.01$), and visiting family ($p = 0.036$), but no significant relationship was observed between the average score of the psychological dimension with the amount of pension and marital status. There were statistical differences between the average score of physical components considering the place of residence ($p = 0.003$), level of education ($p = 0.015$), employment status before retirement ($p = 0.038$), and marital status ($p = 0.036$). However, there was no statistically significant relationship between the average score of physical components with the type of insurance used by the elderly, visits with family, and the amount of pension (Table 2).

Table 2. The relationship between demographic variables and mental and physical dimensions

Parameter		p-Value
Sex	Mental	0.001
	Physical	0.001
Place of residence	Mental	0.001
	Physical	0.003
Insurance type	Mental	0.01
	Physical	0.372
Married status	Mental	0.053
	Physical	0.036
Education	Mental	0.001
	Physical	0.015
Employment status before retirement	Mental	0.013
	Physical	0.038
Pension	Mental	0.136
	Physical	0.717
Family visit	Mental	0.036
	Physical	0.117

Discussion

The present study was conducted with the aim of evaluating the quality of life of the elderly during the COVID-19 pandemic in Iran. The elderly are known as a vulnerable group against COVID-19 due to their physical and immune system function being weaker than other people and should be given more attention and care [10]. Home quarantine and social restrictions were among the things that were imposed by the governments in the early days of the pandemic and caused many elder people to be locked in their homes. In this regard, the results of many studies have shown that the loneliness of the elderly in the long term can cause the weakening of the immune

system, the occurrence of psychological and physical disorders, and ultimately death [11].

In this study, it was found that the mental and physical health of people was affected during the COVID-19 pandemic and the overall quality of life of people decreased. A lot of research has been done in this field, which we will mention below. Meng et al., in their study in relation to the psychological impact of COVID-19 among the elderly population in China, showed that a total of 1556 samples were collected, of which 602 were men and 954 were women. The age of 706 cases was from 60 to 64 years, 336 cases from 65 to 69 years, 263 cases from 70 to 74 years, 115 cases from 75 to 79 years, and 136 cases were at least 80 years old. 37.1% of the elderly experienced depression and anxiety during the period of COVID-19, and women experienced this feeling more than men [12].

In Italy, research was conducted by Guida & Carpentieri and the results showed that elderly people living in remote cities received poor health services, which negatively affected their quality of life and mental health, and the rate of infection and mortality in these elderly people was higher than others [13]. In the United States, Hamm et al. emphasized the conclusion that the quality of life of the elderly is affected during the COVID-19 disease and that the elderly are prone to anxiety, depression, and self-harm. There was also a tile [14]. Rantanen et al. in Finland showed that the health and quality of life of the elderly were affected during the COVID-19 pandemic, and the quality of life of the elderly decreased during this period [15]. Ping et al. conducted a study in China during the COVID-19 pandemic on 1139 elderly people and concluded that elderly people and people with chronic diseases reported lower quality of life [16]. Due to the fact that the COVID-19 epidemic has affected the quality of life of people, especially the elderly, and has led to physical and mental injuries in the elderly [17, 18].

In the present study, it is concluded that the quality of life of women is lower in comparison with men. Female gender, older age, and admission to the intensive care unit were the most commonly reported factors associated with a low level of quality of life [19]. In addition, Lee et al. obtained a similar result [20]. According to the mentioned results, it seems that women probably have higher expectations than men for their well-being and quality of life. In the present study, there was a significant relationship between the components of quality of life (mental and physical condition), education level, employment status before retirement, and marital status. In this regard, Khorani et al.'s study showed that the level of education, marital status, place of residence, and economic status were the most important predictors of quality of life in the elderly during the COVID-19 pandemic [21]. Also, Duan et al. in a cross-sectional study conducted on 516 elderly with an average age of 67.6±6.6 showed that the quality of life of the elderly during the COVID-19 pandemic is significantly different in relation to education, marital status, economic status, living status, and employment status. The elderly have lower educational levels and should be prioritized in the implementation of interventions to improve their quality of life in the elderly [22]. Consistent with our study, one study regarding the quality of life of the elderly during the COVID-19 pandemic in six Asian countries showed that demographic factors including age, marital status, country of residency, type of health insurance, current employment status, frequency of meeting with family members, ability to pay household bills, and receiving social support during the COVID-19 pandemic are factors affecting the aspect physical and mental health are the quality of life [23]. Perhaps the reason for the existing discrepancies and differences in the variables affecting the quality of life in the results of various studies is due to the fact that the quality of life is a completely subjective concept and cannot be seen by others and refers to people's perception and experiences of different aspects of life. Therefore, people's perceptions of the quality of life may vary according to their region, culture, and expectations of life.

Like other studies conducted during the COVID-19 pandemic, this study had limitations, such as the lack of direct access to the samples and the questionnaire's online completion. therefore, health politicians are expected to plan and take appropriate measures in order to reduce the damage caused by the spread of COVID-19 during the outbreak of the disease and even after it in order to improve the quality of life of the elderly, both physical and mental dimensions. The results of this study can be used in possible future pandemics. It is suggested to examine the general health of the elderly along with the quality of life in future research. It is also suggested that elderly women should be given more attention in future studies.

Conclusion

The spread of COVID-19 affected the physical and mental health and overall quality of life of the elderly. The quality of life (physical and mental dimension) of elderlies during COVID-19 was low and the men's situation was better than women's.

Writer/Statistical Analyst (25%); Habibi SH (Second Author), Methodologist/Discussion Writer (15%); Karimi Z (Third Author), Introduction Writer/Discussion Writer (15%); Davoodi Z (Fourth Author), Methodologist (10%); Rillera Marzo R (Fifth Author), Assistant Researcher (10%); Fatahian F (Sixth Author), Introduction Writer/Methodologist/Discussion Writer (25%)

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