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Evaluation of Perceived Social Support Status and Quality of Life in Improved COVID-19 Patients in Birjand, Iran

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Abstract

Background: Coronavirus disease 2019 (COVID-19) is a viral infectious disease and a pandemic since late 2019. One of the factors affecting the quality of life (QoL) and longevity of patients is social support. Social support reduces the effects of stress and calls for effective coping responses in the face of illness. Patients behave better if they have social support.
Objectives: The aim of this study was to evaluate the QoL and perceived social support in patients with improved COVID-19 in Birjand, Iran, in 2020.
Methods: Using the available sampling method, the participants of this descriptive-analytical study were selected from the list of patients in the health center. A total of 100 patients with improved COVID-19 were included. Data were collected using the demographic information, the Perceived Social Support (PSS) Questionnaire (Kanti-Michel and Zimmet 2000), and WHOQOL-BREF Questionnaire. Data were analyzed by descriptive and analytical tests (one-way analysis of variance and correlation test) using SPSS version 22 at a significance level of $P < 0.05$.
Results: The mean age of participants was 50.08 ± 9.63 years and 44% of the samples were male. The mean score of perceived social support was 52.15 ± 7.62 (out of 60), and the mean QoL score was 86.63 ± 16.72 (out of 100). Also, there was a significant relationship between perceived social support and QoL ($P = 0.03$, $r = 0.21$).
Conclusions: Our findings showed a significant relationship between perceived social support and QoL. Thus, implementation of interventions to promote perceived social support and QoL by the governments, health care workers, family, and friends is essential.

Keywords: Social Support, Quality of Life, COVID-19, Improvement

1. Background

Coronavirus disease 2019 (COVID-19) is a viral infectious disease, which emerged in Wuhan, China, in late 2019, and it quickly spread to all countries of the world. COVID-19 is a global threat to public health (1, 2). The mortality rate of COVID-19 in China was 2.1%, and the death rate in hospitalized patients was reported to be 11 - 15% (3). Studies in Iran reported that 27% of patients were intubated, and 21.9% died (4).

Epidemics affect not only physical health, but also mental health (5). The results of a study in China showed that people had moderate stress and 52.1% felt terrified of the epidemic (6). COVID-19 has affected the lives of many people (7). Many patients with improved COVID-19 experience fatigue and shortness of breath after discharge from the hospital (8). Quality of life (QoL) is a valuable structure (9) to measure the general health; it refers to a person's perceptual judgment of life satisfaction, which also includes his or her health status. However, this may not be synonymous with a person's actual physical health (10, 11). Disease and treatment play a role in people's QoL (9). One of the factors affecting the QoL and longevity of the patient is social support. Social support reduces the effects of stress and calls for effective coping responses in the face of illness (12). Social support is social contacts or interactions that people maintain with others on a regular basis. Social support has an impact on health outcomes (10). It is a dynamic process, and people's need for support changes throughout life (13). Social support falls into emotional, evaluative, informational, and instrumental categories. Social networks include family, friends, and others (14). Patients have different physiological, psychological, social, and emotional needs from healthy individuals (15). By increasing perceived social support, the patients' self-care status and QoL can be improved (16). There was

a relationship between social support and sleep quality at the time of COVID-19 outbreak (17). Increased perceived social support is associated with reduced hospitalization and better treatment results (18).

2. Objectives

The aim of this study was to evaluate the QoL and perceived social support status of in improved COVID-19 Patients in Birjand, Iran, in 2020.

3. Methods

3.1. Study Design

The present study is a descriptive-analytical research. According to the latest statistics from Birjand University of Medical Sciences, a total of 820 COVID-19 cases were approved from April to June 2020, of whom 360 cases were hospitalized. Using the list of patients in the health center, the eligible individuals were identified. The objectives of the study were explained to all participants through making phone calls, and all individuals entered the study voluntarily. A total of 100 individuals entered the study by available sampling technique based on the formula for estimating the mean score of QoL (19). Based on the confidence level of 95, the maximum value of standard deviation of 2.94, and the estimation error of 0.6 ($\alpha = 0.05$), the sample size was estimated to be 100 individuals.

The inclusion criteria were: people aged 30-60 years; at least one week of hospitalization due to COVID-19; being discharged from the hospital for a minimum of four weeks and a maximum of three months; having no physical or mental illness; having no COVID-19 side effects; and not losing a family member due to COVID-19.

The subjects were assured of the confidentiality of their information. To observe the ethical principles, the information was collected through interviews without mentioning the names, and the patients were free to leave the study at any time.

3.2. Tools

3.2.1. Demographic Information

The demographic form consisted of six questions about age, sex, residence, educational level, employment, marital status, length of hospital stay, economic evaluation, and health assessment.

3.2.2. Perceived Social Support Questionnaire

The second part was the 12-item Perceived Social Support (PSS) questionnaire (Kanti-Michel and Zimmet 2000) to assess the perceived social support from three important sources of support: family, friends, and important people in life. The use of this questionnaire has also been approved in Iran (19). All questions are graded based on a 5-point Likert scale (strongly agree, agree, disagree, disagree, strongly disagree) from 1 to 5. The range of scores on this scale is 12 to 60 (20).

3.2.3. Quality of Life Measurement Tool

The QoL measurement tool was the WHOQOL-BREF QoL Questionnaire. This questionnaire measures QoL in four areas of physical health (seven questions), mental health (six questions), social relations (three questions), and environmental health (eight questions) in a 5-point Likert Scale. There are two general questions about personal evaluation of QoL and health satisfaction. Questions 3, 4, and 26 are scored in reverse. A higher score in this questionnaire indicates a better QoL. The score can be converted to a score of 0 - 100. The validity and reliability of the questionnaire were assessed by Nejat et al. The validity of the questionnaire was evaluated by the ability to differentiate this tool in healthy and sick groups using linear regression. Intra-cluster correlation and Cronbach's alpha values were obtained above 0.7 in all domains (21).

3.3. Statistical Analysis

Data were analyzed by descriptive and analytical tests (*t*-test, one-way analysis of variance, and Pearson correlation test) using SPSS software version 22 at a significance level of $P < 0.05$.

4. Results

In this study, 100 individuals with improved COVID-19 participated. Also, 44% of participants were male, and the mean age of participants was 50.08 ± 9.63 years (Table 1).

The mean QoL score was 86.63 ± 16.52, and the mean score of perceived social support was 52.15 ± 7.62. The mean scores of different dimensions of social support are listed in Table 2.

There was no significant relationship between any of the demographic variables and the perceived social support variable and QoL (Table 3).

According to Pearson correlation test, there was a significant relationship between QoL and perceived social support ($r = 0.21$, $P = 0.03$)

Table 1. Frequency Distribution of Demographic Variables of Participants

Variables	No. (%)
Gender	
Male	44 (44)
Female	56 (56)
Residence	
City	93 (93)
Village	7 (7)
Education	
Illiterate	13 (13)
Primary school	20 (20)
Secondary school	16 (16)
Diploma	16 (16)
Academic	35 (35)
Occupation	
Employee	39 (39)
Housewife	37 (37)
Unemployed	4 (4)
Worker	15 (15)
Self-employed	5 (5)
Marital status	
Married	90 (90)
Single	4 (4)
Divorced / deceased spouse	6 (6)
Individual economic evaluation	
Very good	1 (1)
Good	22 (22)
Medium	54 (54)
Bad	14 (14)
Very bad	9 (9)
Health assessment	
Very good	23 (23)
Good	28 (28)
Medium	34 (34)
Bad	14 (14)
Very bad	1 (1)
Duration of hospitalization	
One week	68 (68)
1 - 2 week(s)	22 (22)
More than two weeks	10 (10)

Table 2. Mean Score of Perceived Dimensions of Social Support

Variables	Mean ± SD	Score Range
Social support perceived by friends	3.77 ± 14.81	4 - 20
Social support perceived by the family	2.11 ± 18.40	4 - 20
Social support perceived by other important people	5.76 ± 18.94	4 - 20
Total perceived social support	7.62 ± 52.15	12 - 60

5. Discussion

In the present study, the mean score of QoL was higher than average. The results of studies showed that the COVID-19 pandemic had an impact on QoL (6, 11). The results of a study in India showed that the QoL at the time of the COVID-19 outbreak was low (22), which is not consistent with the results of the present study. In addition to the cultural differences, the inclusion criteria could play a role in assessing the QoL. The results of another study showed that lung function improved and QoL improved in patients with influenza A six months after discharge from the hospital (23). The results of another study showed that shortly after discharge from the hospital, the QoL improved (24). The results of these two studies are consistent and confirm the results of the present study.

Social support is described as accessible support to the individual through social relationships with others. Formal support from health professionals and organizations is an effective factor in this regard (25). The results of current study showed that the perceived social support score was higher than the mean score. Zhang's study found that support from friends and family increased during the COVID-19 epidemic (6). The evaluation of social support in a study by Alnazly et al. showed a moderate to high level of social support in all dimensions (14), which is consistent with the results of the present study. In this study, the highest perceived social support was related to support from other important people, followed by family support. The family is a powerful source, and it can have a positive effect on stressful situations. In other words, the family is the most important and available source of support (26). Due to the lack of direct communication between patients and family members during hospitalization, medical staff was one of the important sources of support for patients. In addition to the family members' support, the participants received other support from the health system, including receiving education and counseling, follow-up, and services of the health care system. All these services can play an important role in the perceived social support

Increasing perceived social support is associated with reduced hospitalization and better acceptance of treat-

Table 3. Mean Score of Perceived Social Support and QoL Based on Demographic Variables [a]

Variables	Perceived Social Support	Quality of Life
Gender		
Male	6.17 ± 51.22	14.79 ± 86.79
Female	55.8 ± 52.87	18.22 ± 86.50
P-value [b]	0.65	0.93
Education		
Illiterate	0.05 ± 6.84	27.48 ± 84.84
Primary school	11.82 ± 55.65	13.73 ± 86.60
Secondary school	6.43 ± 51.18	12.98 ± 84.87
Diploma	6.01 ± 50.56	17.31 ± 83.12
Academic	5.47 ± 52.11	14.73 ± 89.71
P-value [c]	0.70	0.390
Occupation		
Housewife	10.13 ± 53.00	20.19 ± 86.84
Employee	5.33 ± 51.74	14.86 ± 89.00
Self- Employed	6.91 ± 50.46	12.83 ± 86.53
Worker	6.55 ± 52.50	16.98 ± 87.50
Unemployed	4.88 ± 53.80	15.18 ± 80.80
P-value [c]	0.82	0.77
Individual economic assessment		
Very good	52.00	95.00
Good	4.69 ± 49.18	12.89 ± 90.09
Medium	8.98 ± 53.29	18.50 ± 86.85
Bad	5.22 ± 52.92	16.12 ± 83.92
Very bad	6.92 ± 51.33	15.11 ± 80.11
P-value [c]	0.35	0.08
Health assessment		
Very good	12.24 ± 51.73	19.71 ± 93.60
Good	5.91 ± 50.67	14.19 ± 85.60
Medium	5.27 ± 53.70	14.65 ± 83.11
Bad	5.81 ± 52.28	19.25 ± 84.78
Very bad	48.00	100.00
P-value [c]	0.49	0.08

[a] Values are expressed as mean ± SD.
[b] *t*-test
[c] One way ANOVA test

ment, and there is a direct and significant relationship between QoL and social support (18). Social support protects mental health from the negative effects of low resilience (25). Increasing social support can improve self-care and QoL (16).

The results of the present study indicated a significant relationship between perceived social support and QoL. Also, there was a direct and significant relationship between perceived social support and QoL (18, 27). The results of a study showed that increasing social support is effective in adapting to psychological distress and prevents the occurrence of psychiatric symptoms such as stress and anxiety (14). Another study investigated the relationship between formal and informal social support on health-related QoL in Chinese elderly. The results showed that formal support such as higher pensions, insurance, and social activities were statistically more effective on QoL than informal support (6).

The mean score of perceived social support had no significant relationship with the patients' job status, which is consistent with the results of a study by Jalaei et al. (28). The findings of the present study did not show a significant relationship between marital status and social support, which is not consistent with the results of some other studies (5, 17). The discrepancy in the results may be due to the cultural and social differences of individuals and the different nature of COVID-19.

5.1. Study Limitations

One of the limitations of this study is the limited number of samples. Also, since we used the interview method, there was a possibility of inaccurate response in some cases.

5.2. Conclusions

The findings of present study showed that there was a significant relationship between perceived social support and QoL. Therefore, designing regular interventions can be effective in increasing the perceived social support and QoL in patients.

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Footnotes

Authors' Contribution: Moodi M. (First author), Introduction author/Original researcher (30%); Sharifzade GR. (Second Author), Methodologist/Assistant Researcher (30%), Baghernezhad hesary F. (Third Author), Original researcher/Methodologist/Discussion author (40%).

Conflict of Interests: The authors declare that they have no competing interests.

Data Reproducibility: The data presented in this study are openly available in one of the repositories or will be available on request from the corresponding author by this journal representative at any time during submission or after publication. Otherwise, all consequences of possible withdrawal or future retraction will be with the corresponding author.

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Informed Consent: Participants entered the study after signing an informed consent.

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