

Assessment of Post COVID-19 Health-Related Quality of Life among Sample of Iraqi population

Shaymaa Hasan Abbas^{*1}, Sura Abbas Khadair², Zahraa Abdul Ghani M.A¹

^{*1} lecturer, Department of Clinical Pharmacy, College of Pharmacy, Mustansiriya University, Baghdad, Iraq

¹ lecturer, Department of Clinical Pharmacy, College of Pharmacy, Mustansiriya University, Baghdad, Iraq

² Assistant lecturer, Department of Clinical Pharmacy, College of Pharmacy, Mustansiriya University, Baghdad, Iraq

Corresponding author

Shaymaa Hasan Abbas^{*1}

Formal-Email: shaymaamustafa8@uomustansiriya.edu.iq

Personal-Email: shaymaamustafa8@gmail.com

Abstract: *Introduction: COVID-19 is caused by the SARS-CoV-2 virus. Severe acute respiratory infection symptoms are common in the early stages of this disease. Methodology: The research was conducted using a cross-sectional design. The information was gathered through an online questionnaire. The questionnaire had two main sections: first, sociodemographic data; second, the Short-Form-36 Health Survey was used to assess COVID-19 patients' health-related quality of life. Results: The findings revealed that COVID-19 was most common in females than males. Physical functioning (PF) scores were similar in both genders and increased in males on other scales. Patients with a history of chronic disease scored higher on limitations due to physical health problems (RP), vitality (VT), social functioning (SF), and limitations due to emotional health problems (RE), while patients without a history of chronic disease scored higher on Physical function (PF), bodily pain (BP), general health (GH) and, mental health (MH). Conclusion: The HRQoL of female patients was worse than that of male patients. In contrast to individuals without a history of chronic disease, patients with a history of chronic disease reported impairment on the PF, BP, GH, and MH scales, while other scales improved.*

Keywords: COVID-19, health-related quality of life, gender, chronic disease.

Introduction

The SARS-CoV-2 coronavirus causes COVID-19 illness, which is a novel coronavirus¹. The newly identified coronavirus illness (COVID19) has put pressure on healthcare systems all over the world². Severe acute respiratory infection symptoms are common in the disease early stages³. Acute respiratory distress syndrome and other major consequences arise quickly in some people⁴. COVID-19 can affect several organ systems in addition to the pulmonary system, including the cardiovascular⁵, neurological⁶, hematopoietic⁷, and psychological⁸. Previous large-scale health outbreaks have shown that this type of event has a significant impact on not just physical health but also mental health and overall quality of life⁹. This has an impact on the entire population, including both healthy people and those who are considered vulnerable¹⁰. Interest in health-related quality of life (HRQoL) is growing in tandem with social progress and the transformation of medical care and service systems¹¹. HRQoL is defined as a patient's subjective perception of a disease's multiple effects¹².

Materials and methods

Patients:

One hundred thirty six patients fulfilled the diagnostic criteria of COVID-19 were enrolled in the study. All patients were diagnosed by laboratory tests specific for SARS-CoV-2.

Study design:

A cross-sectional study was conducted (September 2020 to May 2021). COVID-19 was diagnosed using the Iraqi standard at the time. The study had a qualitative design with a Statistical System approach, which was used to describe variations in how individuals experience their quality of life.

The data was collected by using the predesigned questionnaire. The questionnaire include questions with specific response types. Questions were close ended. Data was collected using an online survey using Google Forms, and the survey was distributed via several channels: (1) medical and educational association websites; (2) public platforms (Facebook); and (3) social media contacts (Whatsapp, Viber, SMS). The study participants informed of the aim, the privacy protection of research, and the agency

conducting the study. Written informed consent was gotten from the survey participants. The questionnaire was divided into two sections:

First, sociodemographic information, which includes age, gender, smoking status, chronic disease history and disease subtype; second, include the Evaluation of HRQoL of COVID -19 patients by using THE SHORT-FORM-36 HEALTH SURVEY which is a 36-item derived from the original 245-item Medical Outcomes Study(MOS)questionnaire¹³. The SF-36 includes multi-item scales, which can be divided into 8 scales¹⁴.

Statistical analysis:

In this study, the Statistical Analysis System- SAS (2012) application was utilized to determine the impact of various factors on study parameters. To compare the means, the T-test was utilized. To compare study percentages, the Chi-square test was performed.

Results

Table (1) showed the patients demographic and disease characteristics of 136 COVID-19 patients with age range from (14 - 57) years with mean of (26±7.71) years. Distribution of COVID-19 was more in female than male (%66.91 versus 33.09%, respectively), the smoking history reported with 21(15.44 %) patients. The history of medical condition for the patient shown that 15 (11.03 %) patient out of 136 COVID-19 patients have a history of chronic disease. Mild cases that do not needed O2 therapy represent (96.32%) of study patients. Statistically, high significant difference reported for Sociodemographic characteristics of study participants.

Table 1: Sociodemographic characteristics of participants

Variables	Study participants		P-value
Age (years)	Mean ±SD (26±7.71)		---
Gender	NO	%	0.0027 **
Male	45	33.09%	
Female	91	66.91%	
Smoking			0.0001 **
Yes	21	15.44	
No	115	84.56	
Chronic diseases history			0.0001 **
Yes	15	11.03%	
No	121	88.97 %	
Subgroup			0.0001 **
Mild	131	96.32%	
Sever	5	3.68 %	
** (P≤0.01).			

Data presented as mean, number and (%).

Table 2 shows the following: The physical functioning (PF) scores were fairly close in both genders and increased in males on other scales: There was no statistically significant difference in HRQoL results between male and female COVID-19 participants (P value > 0.05).

Table (2): Comparison of COVID-19 patients' HRQoL outcomes by gender.

Scale	Sample	Mean± SD	P-value
PF	Male(n=45) Female(n= 91)	77.44±19.93 78.29±19.93	0.802 NS

RP	Male(n=45) Female(n= 91)	58.55±37.14 54.12±37.14	0.733 NS
BP	Male(n=45) Female(n= 91)	71.88±26.71 60.85±26.71	0.594 NS
GH	Male(n=45) Female(n= 91)	65.44±16.62 57.19±16.62	0.511 NS
VT	Male(n=45) Female(n=91)	50.00±77.92 46.15±77.92	0.763 NS
SF	Male(n=) Female(n=)	63.33±47.18 53.84±47.18	0.548 NS
RE	Male(n=) Female(n=)	52.59±41.79 43.00±41.79	0.633 NS
MH	Male(n=) Female(n=)	52.04±20.52 44.87±20.52	0.329 NS
NS: Non-Significant.			

Table 3 shows the following: patients with no history of chronic disease scored higher on (PF, BP, GH, MH), while patients with a history of chronic disease scored higher on (RP, VT, SF, RE). There was no significant difference in HRQoL results between COVID-19 patients with and without a history of chronic disease (P value > 0.05).

Table 3: Comparison of COVID-19 patients' HRQoL outcomes by chronic disease history.

Scale	Chronic disease history	Mean± SD	P-value
PF	Yes (n=14)	83.18±19.93	0.271 NS
	No (n=122)	78.31±19.93	
RP	Yes (n=14)	59.09±37.14	0.583 NS
	No (n= 122)	54.79±37.14	
BP	Yes (n=14)	68.40±26.71	0.821 NS
	No (n= 122)	62.82±26.71	
GH	Yes (n=14)	55.71±16.62	0.570 NS
	No (n= 122)	59.14±16.62	
VT	Yes (n=14)	76.36±77.92	0.239 NS
	No (n= 122)	44.67±77.92	
SF	Yes (n=14)	55.35±47.18	0.931 NS
	No (n= 122)	55.42±47.18	
RE	Yes (n=14)	57.57±41.79	0.446 NS
	No (n= 122)	43.83±41.79	
MH	Yes (n=14)	44.00±20.52	0.875 NS
	No (n= 122)	47.75±20.52	
NS: Non-Significant.			

Discussion

The pandemic of COVID-19 is a serious psychological and physiological stressor for people and organizations in all social and economic communities around the world¹⁵. The goal of this study is to examine HRQoL in Iraqi COVID-19 patients.

The distribution of COVID-19 in this study was more in female than male (66.91% versus 33.09%, respectively). While, A preliminary analysis indicated a fairly similar distribution of infections across men and women (51 % versus 47 %, respectively), with some age group differences¹⁶.

The current study used SF-36 scores to assess (HRQoL) results for COVID-19 patients based on gender. Male COVID-19 patients had higher scores on all scales than female COVID-19 patients, according to the findings. Similarly; one research of COVID-19 patients from China reported that female sex is a risk factor for COVID-19 patients' mental health quality of life.

Males and females have various societal roles and pressures, which affect their illness progression differently. Females care for their families more than males and require more energy to deal with stress, resulting in significant emotional injury¹⁷.

In the population of Spain. Women suffered the biggest impact in all of the factors evaluated and had the lowest degree of spiritual well-being in the first evaluation (after two weeks of confinement). Data from the second measurement (after five weeks of confinement) revealed that depressive symptomatology rose considerably in both men and women with time, whereas anxiety did not show statistically significant changes¹⁸.

As a result, women are a worry in COVID-19 and should be taken into account for the possibility of lengthier recovery times.

Patients with COVID-19 experienced unusual symptoms such as headache, abdominal discomfort, and chest pain, particularly in the critical group¹⁹. As a result, the COVID-19's physical suffering could persist for a month.

Patients were also isolated in hospital wards and subjected to tight control measures during the acute phase of the disease²⁰. They had to cut their ties with the community. Meanwhile, they were more focused on themselves and less on others, as well as social concerns, resulting in lower SF scores.

During the Covid-19 crisis, people with chronic health issues are vulnerable populations with a reduced quality of life²¹. Health-care systems, on the other hand, have generally ignored this vulnerable group²².

The current study discovered a correlation between people's overall health and their quality of life. If there are chronic health problems, the results showed that physical functioning, body pain, mental, and overall health are all bad. Physical activity and exercise have been shown to improve health related quality of life²³. As a result, COVID-19 individuals with chronic conditions may benefit from exercise as well.

These measures, on the other hand, have disturbed people's everyday employment and activities, which could have serious consequences for their health and well-being²⁴.

The COVID-19 pandemic, like the Middle East respiratory syndrome coronavirus (MERS-CoV)^{25,26}, generates widespread panic and mental health issues in the general population. Furthermore, quarantine may have an impact on the public's psychological health. This can have an impact on people's overall health and quality of life²⁷⁻³⁰.

Conclusion: COVID-19 patients' health-related quality of life was impacted. The patients were severely physically and psychologically harmed. The HRQoL of female patients was worse than that of male patients. In contrast to individuals without a history of chronic disease, patients with a history of chronic disease reported impairment on the PF, BP, GH, and MH scales, while other scales improved

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