

Impact of the COVID 19 infection on quality of life of COVID-19 survivors in United Arab Emirates

Hiba Rabie, Family medicine specialist¹; Hanan Soliman, PhD²; Shaza Zackaria, Family medicine specialist²

¹EHS-PHCC, ²EHS-PHCC, ³Medcare-Dubai

Introduction

(COVID-19) is an infectious disease caused by the SARS-CoV-2 virus? Most people with covid 19 infection will have mild to moderate respiratory illness and will recover without the need for special treatment. (WHO, 2021) The World Health Organization defines quality of life (QOL) as "an individual's perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards and concerns". (WHO, 2012) The concept of health-related quality of life (HRQOL) and its determinants emerged in the 1980s to include aspects of total quality of life that affect health either physically or mentally. Centers for disease control and prevention defined HRQOL as "an individual's or group's perceived physical and mental health over time." (CDC, 2018)

HRQoL contains 4 dimensions: physical skills, motor skills, mental state, social and economic conditions, and somatic perception. This assessment includes the patient emotional experience including negative emotional states such as depression and anxiety, and the positive experience, such as satisfaction, hope, and ease of adaptability.

Aim

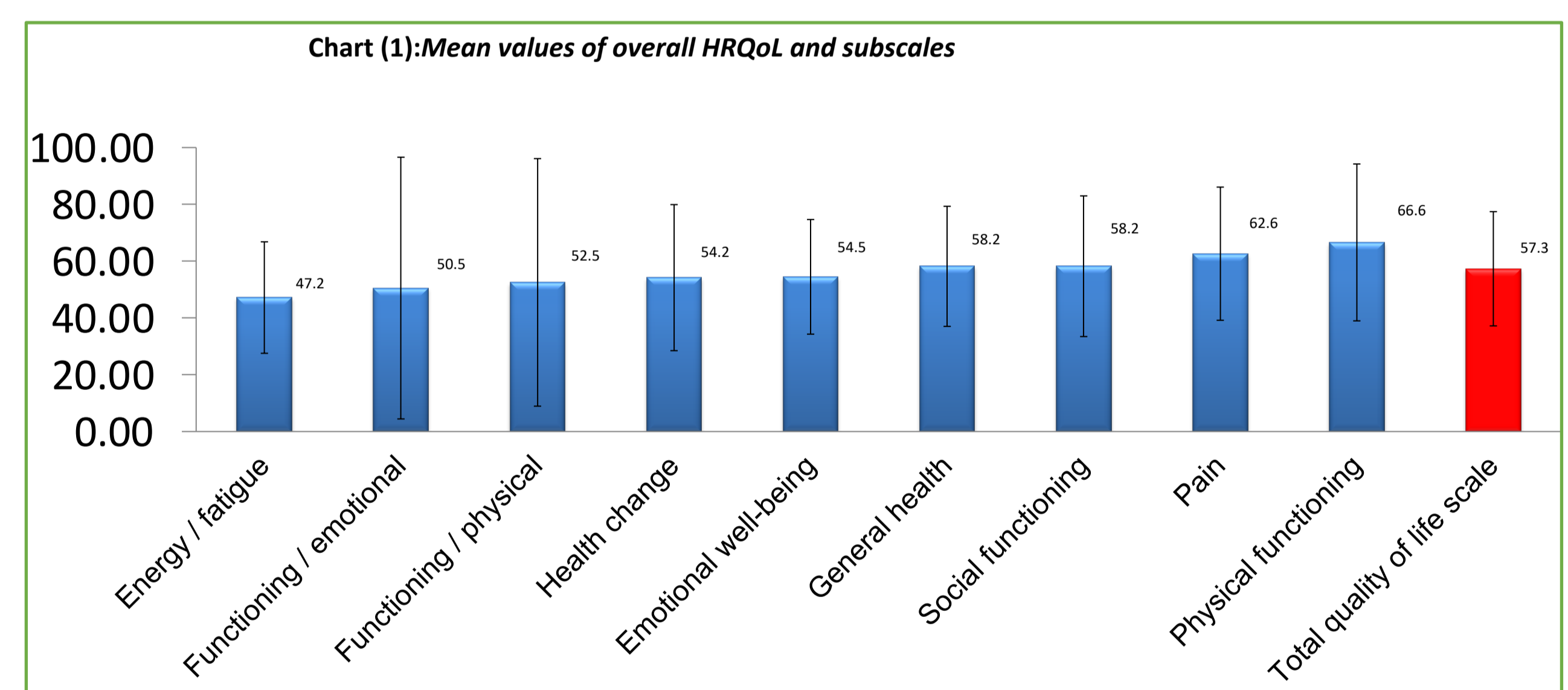
- To assess the health-related quality of life (HRQoL) in covid 19 survivors, and the factors affecting the impact of covid 19 infection on them and hence build the support system needed for them in the future.

Methods

- cross-sectional study on covid 19 survivors from the 7 emirates of the United Arab Emirates, using an anonymous online questionnaire. The survey was created on Survey Monkey.
- Inclusion Criteria were:
 - Males and females
 - Above 18 years old
 - Able to self-report
 - Understands the language of the questionnaire (Arabic and English)
- Exclusion Criteria
 - Those who disagree to participate in the survey
 - Those less than 18 years old
 - Those who cannot understand the language of the questionnaire
- The sample size was calculated to be 455 responses.
- Population: the total recovered cases in the UAE: 883270 cases, were announced by March 2022 as per the Emirati Ministry of Health and Prevention portal. (WAM, 2022)
- The confidence interval is set at 95%, the Z alpha 1.96, Z beta 0.84, P value is assumed to be 0.5 and the desired margin of error (d) is 5%.
- The Questionnaire was distributed through social media platforms (ex: WhatsApp, LinkedIn, Instagram, etc.). Data were collected between January 2022 till March 2022.
- The first part of the questionnaire included:
 - The sociodemographic section of the questionnaire obtained information regarding patients' address, age, gender, nationality, employment status, and health status (e.g., chronic medical conditions: diabetes Respiratory, Cardiac, blood disease, and psychological disorder) when they inquire about the infection, covid19 vaccine, smoking, presence of persistent covid 19 symptoms and where the participant received medical care.
- The second part included:
 - The RAND 36-Item Health Survey (Version 1.0), is the most widely used HRQoL survey in the world. It is composed of 36 items and consists of 8 health domains: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. (Hays and Morales, 2022). The scores of SF-36 between 0 and 100 were assigned to each domain, the lowest and highest score are 0 and 100, with higher scores indicating a more favorable health status. Items in the same scale are averaged to create the 8 scale scores. (< 50) indicative of a poor HRQoL calculated.

Results

- A total of 505 responses were received. The overall health-related quality of life mean score for Covid 19 survivors was 57.3. The mean score for energy /fatigue was 47.18 which was the lowest score (most affected subscale) with a Role emotional score of 50.52, which in the second least. Limitation in Physical functioning 'item scored the highest (mean=66.59) the least affected, followed by pain/discomfort (62.62). Females had a significantly lower mean value of overall HRQoL score (55.98, P<0.05) as well as emotional wellbeing (52.35, P<0.01), fatigue (44.2, P<0.001), pain (60.58, P<0.05) and general health (56.66, P<0.05) subscales. On the other hand, males had a mean HRQoL score of (59.77, P<0.05). There was a significant negative correlation between older age and overall HRQoL and almost all subscales physical functioning score(P<0.05), role physical(P<0.01), role emotional(P<0.01), pain(P<0.05), general health and health change (P<0.001) except for the emotional wellbeing which had a significant positive correlation with age (p<0.05). Age was almost not correlated with the energy subscale and the relation was statistically non-significant. The Unemployed had lower mean values of overall HRQoL score of 47.36(P<0.001) compared to the employed and students. Role physical, role emotional and energy subscales were most affected in this group. Covid 19 survivors with chronic diseases had significantly lower mean values of the overall HRQoL score and All the subscales were lower in this group. Participants who were admitted to the intensive care unit (ICU) during their disease had a lower overall HRQoL, with a mean score of 39.7(P<0.001), physical functioning mean score ,role physical means score and role emotional mean score were lowest compared to those who did not require care during their illness. Those who had persistent symptoms were having a low HRQoL mean score of 45.34 (P<0.001). Smokers had a lower HRQoL mean score of 50.6 (p<0.05). Smokers had a role physical mean score of 33.65(P<0.01). Previous smokers had a higher mean score of overall HRQoL (P<0.05), higher physical functioning mean score of 77.37(P=0.05) and almost all subscales. HRQoL in vaccinated participants had a higher mean score of 58.57 (p<0.05). The Physical functioning mean score, Role physical mean score ,Role emotional mean score ,Social functioning mean score and Health change mean score were higher in this group compared to those who did not receive the vaccine before infection. There was no statistically significant difference between the overall HRQoL mean score in local Emirati and non-Emirati participants.



Overall Health-related Quality of life (HRQoL) and subscales mean scores								
	N	All subscales and total scale are normalized on a 100-point scale		SEM	95% Confidence Interval for Mean		Minimum	Maximum
		Mean	SD		Lower Bound	Upper Bound		
1 Overall HRQoL	489	57.31	20.11	0.91	55.53	59.10	12.50	100.00
2 Physical functioning	446	66.59	27.62	1.31	64.02	69.16	0.00	100.00
3 Role emotional	427	52.52	43.58	2.11	48.37	56.66	0.00	100.00
4 Role physical	419	50.52	46.08	2.25	46.09	54.94	0.00	100.00
5 Energy / fatigue	397	47.18	19.63	0.99	45.24	49.12	0.00	100.00
6 Emotional well-being	397	54.48	20.18	1.01	52.49	56.47	0.00	100.00
7 Social functioning	414	58.21	24.77	1.22	55.82	60.61	0.00	100.00
8 Pain	409	62.62	23.44	1.16	60.34	64.90	10.00	100.00
9 General health	476	58.17	21.14	0.97	56.26	60.07	0.00	100.00
10 Health change	489	54.19	25.71	1.16	51.91	56.48	0.00	100.00

Conclusion

- The health-related quality of life in post covid 19 patients in the United Arab Emirates was 57.3 with the energy subscale being the most affected. Old age, female gender, non-employment, presence of chronic diseases, admission to intensive care unit (ICU), smoking, no vaccination and the presence of persistent symptoms were associated with lower health-related quality of life subscales scores.