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Original Article

Quality of Life of People in Quarantine and Isolation Centers

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ABSTRACT

Objective: To assess the quality of life of people in quarantine and isolation centres in the Rawalpindi Cantonment area.
Study Design: Cross-sectional study.
Place and Duration of Study: Isolation Centre of Pak Emirates Military Hospital and Armed Forces Institute of Regenerative Medicine Rawalpindi Pakistan and various Quarantine Centres in the Rawalpindi Cantonment area, from Aug 2020 to Mar 2021.
Methodology: A total of 187 individuals were included in the study. All participants were requested to fill out the World Health Organization Quality-of-Life Scale (WHOQOL-BREF) Urdu or English version according to their education level and preference.
Results: There were 108(57.75%) cases who remained in isolation, and 79(42.25%) cases were from quarantine. Quarantined individuals reported significant reduction not only in total score (p<0.001) but also in all four domains, including physical health (p=0.042), psychological health (p<0.001), environmental health (p<0.001), and social health (p<0.001).
Conclusion: It is concluded that the quality of life was low for the people included in the study. Further comparison found that the median quality of life of people in quarantine was statistically lower than in isolation centres.

Keywords: COVID-19, Isolation, Quality of life, Quarantine, WHOQOL-BREF.

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INTRODUCTION

In March 2020, the World Health Organization declared the situation as an epidemic.[1] In order to stop the proliferation of coronavirus and lessen the transference risk in humans, many governments and public health sectors took serious alleviation measures, including the closure of borders, lockdowns, home quarantines, specified quarantine centres, social distancing, mandatory use of masks, working-from-home, the interdiction of social gatherings and meetings, and the development of isolation hospitals for cases diagnosed with COVID-19.[2,3]

After the emergence of the epidemic, Quarantine and isolation are the need of the hour. However, it has been largely considered as an irksome circumstance that may activate different physical, psychological,[4,5] and social problems for all age groups, such as restricting outdoor physical activities, increasing sedentary lifestyle, causing sleep issues, increased anxiety and stress, resulting in the bad effects on the Quality Of Life (QOL) of individuals.[6,7]

Moreover, it is important to consider that those who are quarantined and isolated are excluded by the other community members; consequently, the quarantined individual feels discriminated against and stigmatized.[8,9] This undue bias and discrimination leads to stress and mental health problems. During testing times of epidemic, Boredom, financial difficulties, and lack of knowledge compounded by psychological factors cause deterioration in the quality of life.[10]

The current study is designed to assess the quality of life of people in quarantine and isolation centres in the Rawalpindi Cantonment area since the literature on the subject, including physical, psychological, environmental, and social health, needs to be improved. By comparing the quality of life in individuals undergoing quarantine and isolation, it would become clear whether it is just the confinement that is affecting the Qol or whether there are other factors like the diagnosis of COVID-19 (in isolation centres) or the uncertainty associated with not being diagnosed with COVID-19 but anticipating the symptoms and disease (in quarantine centres). The impacts on domains could be seen in both setups, and measures would be formulated to address the specific causes and thus help improve the quality of life in the specific setups.

METHODOLOGY

The cross-sectional descriptive study was conducted at the Isolation Centre of Pak Emirats Military

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Hospital and AFIRM Rawalpindi Pakistan along with various Quarantine Centres in the Rawalpindi Cantonment area, from August 2020, to March 2021. The approval to conduct the study was taken from the Hospital Ethical Committee (Ltr no.0019/20). Sample size was calculated using the WHO calculator, using 1.46 population standard deviation and mean as 5.94.[11]

Inclusion Criteria: COVID-19 cases of either gender, aged between 18-60 years, who have been in Isolation or Quarantine for more than two weeks were included.

Exclusion Criteria: Patients suffering from severe respiratory distress or physical symptoms rendering them unable to perform normal physical functioning and those with pre-existing mental health issues were excluded.

A written informed consent was taken from each participant willing to participate in the study. Quality of life was ascertained using WHOQOL-BREF (WHO Quality of Life Instrument-Short Form),[12] Urdu or an English version according to their education level and preference. Participants were also requested to fill in demographic details Performa. Four domain scores were derived, and the domain score was calculated from mean scores after multiplying by 4, making it comparable with the scores used in the WHOQOL-100. Finally, the raw score was then converted into the transformed score.

Statistical Package for the Social Sciences (SPSS) version 23:00 was used to analyze the data. Quantitative variables were represented as mean, standard deviation, or median and interquartile (IQR). Qualitative variables were shown as frequency and percentages in each domain. Four quality of life domains (physical health, psychological health, social relationships, and environment) were outcome variables. Mann-Whitney test was used to compare the median quality of life score between quarantined and isolated participants by using (p-value ≤0.05).

RESULTS

A total of 187 participants were included. The demographic variables of the study are presented in the Table-I. The mean age of participants was 42.71± 14.34 years, with minimum and maximum ages of 18 and 60 years. There were 84(44.92%) male and 103 (55%) female cases. There were 108(57.75%) cases who remained in isolation. In Isolation and Quarantined people, the median Physical Health score was 17.50 (5.75) and 17(6), and the median Psychological health score was 19(3) and 14(2). In Isolation and Quarantined people, the median environmental score was 20(3.75) and 4(2), and the median social health score was 19(4) and 14(2). The median score in isolated and Quarantined people was 75(7.75) and 58(8) respectively.

Table-I: Demographic Characteristics (n=187)

Parameters	n(%)
Age* (years) Mean±SD	42.71±14.34
Gender	
Male	84(44.92%)
Female	103(55.08%)
Study participants during COVID-19	
Isolation	108(57.75%)
Quarantine	79(42.25%)

The study participants who remained in quarantine have shown significantly lower median scores in WHOQOL-BREF and median total quality of life scores compared with those who remained in isolation. Quarantined individuals reported significant reduction not only in median total scores (p<0.001) but also in all four domains, including physical health (p-value= 0.042), psychological health (p<0.001), environmental health(p<0.001), and social health (p<0.001), as described in Table-II.

Table-II: Comparison of WHOQOL-BREF scales in Isolated and Quarantined Individuals (n=187)

Parameter	Isolation (n=108)	Quarantine (n=79)	Mann-Whitney Test	p-value
Physical Health	17.50(5.75)	17(6)	-2.06	0.039
Psychological health	19(3)	14(2)	-11.62	<0.001
Environmental	20(3.75)	14(2)	-11.61	<0.001
Social health	19(4)	14(2)	-11.70	<0.001
Total score	75(7.75)	58(8)	-11.36	<0.001

WHOQOL-BREF=WHO Quality of Life Instrument-Short Form

DISCUSSION

The current study reported that individuals who remained in quarantine had significantly lesser median scores in all WHOQOL-BREF domains and the median total quality of life score compared with those who remained in isolation (p<0.001). Recently, in China, a study has endeavoured to explore how COVID-19 affects the health-related quality of life among the adult population. The results demonstrated that daily engagement in physical activities decreased, while the sedentary style of life increased compared with that before the lockdown. More than fifty per cent of the participants had moderate-to-vigorous physical activity, while twenty-three per cent indulged in a healthy diet. So, the study concluded that home isolation has

positively and negatively affected adult health behaviours in China.[13]

Few studies have explored quarantine's impact on the mental health of the general population, which is mostly conducted in China. Qiu *et al.* have highlighted in their study that thirty-five per cent of the population experienced psychological disturbance, particularly women and individuals aged between 18 and 30 years or older than 60 years, as they are more vulnerable to distress and more likely to develop post-traumatic stress disorder were.[14] Unlike the findings of this study, other studies highlighted that depression and distress were experienced more in isolated individuals than in quarantined individuals. However, Perceived stigma was more common among quarantined individuals.[15] A study conducted by Ferreira *et al.* showed that in-home quarantined individuals had increased anxiety levels and compromised QoL. People with elevated anxiety tended to have a lower QoL-10. In a study conducted on the Iranian population, psychological disorders of people while in the quarantine were significantly higher than those after quarantine.[16]

Similarly, another cross-sectional study used to assess how the current pandemic has affected the quality of life among Vietnamese has shown that the mean values were highest (90.5±7.98) among those quarantined in government facilities, followed by (88.54±12.24) in the general population and lowest mean values of quality of life parameters (86.54±13.69) among people gone to self-isolation. This study has also highlighted that most of the participants in all three groups experienced depression and anxiety, with the highest among the general population (0.95±0.07), followed by those who were quarantined in government facilities (0.94±0.12) while the lowest among those who went to self-isolation (0.93±SD: 0.13).[17] These findings are in agreement with our statistics. In another similar study done in Norway during the early phases of the current pandemic, it was noted that individuals being quarantined or isolated had a significant negative correlation with HRQoL.[18] This finding is comparable to the current study.

CONCLUSION

It is concluded that the quality of life was low for the people included in this study. On further comparison, it was found that the mean quality of life of people in quarantine centres was statistically lower than that of isolation centres in the Rawalpindi Cantonment area. Hence, for these people, psychiatrists and psychologists must be involved to help them learn better coping skills, manage stress and enhance their mental health to improve their quality of life.

Conflict of Interest: None.

Author's Contribution

Following authors have made substantial contributions to the manuscript as under:

SI & AAB: Data acquisition, critical review, approval of the final version to be published.

MA & NS: Concept, data analysis, data interpretation, approval of the final version to be published.

AH & OIK: Study design, drafting the manuscript, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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