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URDU TRANSLATION & VALIDATION OF COV19-IMPACT ON QUALITY OF LIFE AMONG PAKISTANI POPULATION

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ABSTRACT

The aim of the study was to translate, adapt and assess the psychometric properties of COV1-Impact on Quality of Life (COV19-QoL) scale in the Urdu language. In the first part of the study the English version of the scale was translated and adapted to Urdu language. Urdu translated scale was then administered on 462 individuals with the mean age of 33.57 (± SD=12.64) to assess the item correlation, validity and chronbach's alpha of the scale. In the second part of the study, 62 participants with mean age 25.78 (±SD=5.4) were included for test-retest and the linguistic eqvivalence of the translated scale. The result of Kaiser-Guttman's and Cattell's scree plot suggests that only one principal component emerged with a minimum 0.55 factor loading. Item total correlation ranged from .75 to .84. Cronbach's alpha was .88 whereas test-retest reliability was .85. Convergent validity was .78 and discriminant validity was -.31, and linguistic equivalence for both scales was .87. The psychometric properties of the Urdu version of COV19-QoL scale are robust enough to evaluate quality of life during the pandemic among the Pakistani community.

Keywords: *COV-19, Quality of Life, Impact, Psychometric, Pakistan*

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INTRODUCTION

The World Health Organization (2020) defines pandemic as a large-scale epidemic that spreads at a larger level across different countries, affecting millions of people. The coronavirus pandemic was caused by a new strain of coronavirus, which the world had never experienced before (Boseley et al., 2020). To stop the spread of infection, different strategies were implemented, including local confinement, isolation, social distancing, and lockdown. The COVID-19 outbreak has confined individuals to their homes, physical activity of individuals has decreased because daily activities were reduced. This has a negative impact on health because it contributed to sedentary behavior (Lau et al., 2020).

Since WHO has announced COVID-19 as global pandemic, individuals who have not been affected by virus, were also required to follow rules and orders implemented by government, where it was mandatory to stay home. This has further affected physical and mental health of individuals (Kazmi et al., 2020; Sood, 2020). Studies also explored that during the pendamic people were more concerned about getting ill or their physical health than mental health concerns. This is more likely because of the risk and threats posed by deadly coronavirus in deterioration of physical health and probabilities of consequent deaths. Therefore people were more concern about physical health and took steps to keep themselves safe from catching virus (Repisti et al., 2020)**.** Pandemic affected every individual either healthy people or with any ailment (Holmes et al., 2020). Studies in countries like India showed that those individuals having chronic health issues reported poor mental health, low quality of life, as compared to those individuals without any chronic illness at time of home quarantine (Kazmi et al., 2020; Sood, 2020). Researches further suggested that such type of incidences have impacted on physical health, mental health and quality of life of individuals (Sim & Chua, 2004).

Therefore, in addition to impact on physical health it was also became essential to take a look at the impact it created on the mental health and over all quality of life. Quality of life is also based on both physical and mental health factors and other environmental factors including food supply, accommodation, cultural, economic and political (Priebe et al., 2015). Early studies concerned that such incidences can cause certain psychosocial impacts, including fear of getting ill, fear of death and fear of stigma (Rubin et al., 2010; Hall, Chapman, 2008). Lockdown restriction due to pandemic, has posed great risk of isolation and reduced social connectedness. In a similar manner, the respondents of a study

mentioned that in context of family and social life interactions, the most negative impact was the reduced interactions with family, they were most negatively affected by the lack of uniting with family, with relatives, colleagues, and with neighbors. In the same way there has been adversed impact on work and school life due to lockdowns and staying at home and awy from school and work (Öztürk et al., 2021)

Therefore, it is need of time to evaluate quality of life during pandemic especially in those countries which have been affected and reported high positive cases due to coronavirus infection such as Pakistan. Pakistan has high positivity rate due to Coronavirus and constantly facing this pandemic in form of its variants. In order to assess quality of life during COVID-19 pandemic different instruments have been established and one of them is COV19-Impact on Quality of Life (COV19-QoL) developed by Repišti et al. (2020). It is self-assessment scale having sound psychometric properties. The COV19-QoL is developed in English language. There is no translation available in Urdu Language. Hence, it is vital to translate the scale in Urdu language that is the National language of Pakistan and is easy to read and understood by its native people. Hence, contemplating this gap, the current study was planned to translate and validate COV19-QoL in Urdu language to provide a valid measure for the accurate assessment of impact of COVID-19 on quality of life in population under consideration.

METHOD

The current study was based on quantitative research consisted of two phases:

Phase I: In the first phase, translation and adaptation of COV19-Impact on Quality of Life (COV19-QoL) scale was done following guidelines of World Health Organization (2016).

Phase II: In the second phase, the psychometric properties of the COV19-QoL scale have been established.

Phase I: Translation of COV19- Impact on Quality of Life

In phase I, the COV19- Impact on Quality of Life scale (Repišti et al., 2020) was translated. It is self-report questionnaire consisted of six items. The respondents are asked to rate the items on a five-point Likert-type rating scale (1 = completely disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 =

completely agree). Total score is calculated by adding scores on all six items and then dividing it by 06 to get an average score.The score range from 1.00-2.33 is considered low impact, 2.34-3.66 is moderate impact whereas 3.67-5.00 is high impact on quality of life. Cronbach's alpha coefficient for scale ranges from .86-.88 (Repišti et al., 2020).

All translation procedures were carried out according to the guidelines provided by World Health Organization (2016). Translation was completed by using the following steps:

Step I: Forward Translation

In Step-I, the scale was translated from English (Source) language to Urdu (Target) language. For this purpose, five Psychologist with bilingual capacities having command on both English and Urdu language (understanding of technical terms used in scale) have been requested to translate COV19-QoL in Urdu language. They were briefed about topic of research and nature of the study. Experts were requested to translate items in simple and easy language, conveying same meaning as of original scale, that can be understood by general population without any difficulties. After getting translations from each respected member, all responses were compiled.Then these translations were discussed and review by the committee.

Step-II: Committee Approach

In Step-II, Three bilingual psychology professionals were part of the committee to select most appropriate and adequate response from the forward translation. All three experts discussed the items. After reviewing and discussion of all the forward translations and statements, most appropriate, culturally relevant phrases expressing the same meaning of the items, were selected and also few modifications were made where necessary.Then the most relevant, suitable and closest to the original scale items were prepared for the back translation.

Step-III: Backward Translation

In Step-III, the scale translated in Urdu language was back translated in the English language. For this purpose, five psychology subject experts having command on both Urdu and English languages were approached and requested independently for the back translation of the scale. They were briefed about

research topic and nature of study. They were requested to translate this Urdu version scale to English language in which scale was originally developed. These experts were unfamiliar with the original English version of the scale. After getting translations from each respected member, all responses were compiled together in one place under each Urdu translated statement, for expert panelist in committee to review.

After backward translation the members of committee including three professional psychology subject experts having command on both Urdu and English languages reviewed the Urdu translated version of COV19-QoL scale, compared the translations and selected relevant and adequate response items from five English translations. Committee members evaluated each item for accuracy in terms of language and relevance to the meaning with the English items. After comparisons and evaluation of each item for appropriateness and adequacy, most appropriate and adequate responses which were closest to the original version of the scale were then finalized.

Step-IV: Try Out of Urdu Traslated COV19-QoL

The Udru tanslated scale was then given to 30 adults who can read and understand Urdu language to check for comprehension of the items and evluate their difficulty to read and understand. Participants were asked to give feedback and suggestions regarding items. Participants ensured the comprehensibility of the items and considered the scale easy to respond. Then a final Urdu adapted version of scale was ready for further administration and assesments psychometric properties

Phase II: Psychometric Properties of The COV19-QoL

In the Phase II, the inter item correlations of the scale, Chronbach's alpha and test-retest reliability of the translated version of COV19- Impact on Quality of Life scale was assessed along with validity studies.

Sample

To assess the inter item correlations, Cronbach alpha and factor loadings of the items Urdu translated version of COV19-QoL scale was administered on a sample of 462 individuals who can read Urdu. The mean age of these participants

was 33.57 (±*SD*= 12.64). The demographic characteristics of the sample are presented in Table 1.

Further, the translated version of COV19-QoL scale was administered to 62 participants with mean age of 25.78 (±*SD*= 5.42) for the purpose of linguistic equvalance of the scales, test-restest reliability and to find out the validity of the scale. The demographic characteristics of the sample are presented in Table 2.

Measures

COV19-Impact on Quality of Life

The COV19-Impact on Quality of Life (COV19-QoL) is self-report scale consisting of six items. The respondent is asked to rate on a five-point rating scale (*1 = completely disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = completely agree*). Total score of participants is calculated by adding scores on all six items and then dividing it by 06 to get an average score. The score range between 1.00-2.33 is considered low impact, 2.34-3.66 is moderate impact whereas 3.67-5.00 is high impact on quality of life. The Cronbach's alpha coefficient for the English version ranges from .86-.88 (Repišti et al., 2020).

EQ-5D-5L

The EQ-5D-5L is a self-report questionnaire (Devlin & Brooks, 2017) consisting of six items. Scale measures five dimensions including self-care, mobility, anxiety/ depression, usual activities and pain/ discomfort measured on 5 levels (no issue, slight issue, moderate issue, severe issue and extreme issue). Total score is calculated by adding scores on five items and then dividing it by 05 to get an average score. On item numbered 06 participants are asked to rate their health on scale of 0-100. Cronbach's alpha for Urdu version of scale was .85. It was translated and validated in Pakistan (2017) who worked under project of RWS life sciences and EuroQol Research Foundation. EuroQol has copyrights of all translated version of scales including Urdu version (EuroQol, 2017). This scale was used for the convergent validity of the Urdu COV19-QoL scale.

Satisfaction with Life Scale

The Satisfaction with Life Scale (Diener, 1985) is self-report questionnaire consisted of five items. It is 7-point Likert scale with the ratings of

1= strongly disagree to *7= strongly agree*. Score ranges from 05-35 where 20 score is considered neutral; score above 20 indicates high satisfaction; and score below 20 as low satisfaction. In the current study, Urdu version of scale by Barki et al. (2017) having Cronbach's alpha .90 was used for the discriminant validity of the Urdu version of COV19-QoL scale.

Procedure

For the Phase-I of the study, participants (*N*=462) were contacted through different online forums. Researcher explained objectives and purpose of the study. Informed consent was given to participants along with demographic sheet and measures of the study. Participants were ensured that their identity will be kept anonymous and data will only be used for research purpose. They were given right to withdraw at any time. Email of researcher was written on consent form, so participants can contact researcher if they have any concern. After completion of questionnaire participants were thanked for their willingness, time and participation in current study. This data was used for factor loadings, item total correlation and Cronbach's alpha of the translated version of the scale.

For the Phase-II, to establish linguistic equivalance of the scale as well as the test-retest reliability and validity of the scale, 80 participants were approached. The researcher described the objectives of the research and also explained that the Urdu Version of the scale would be readministered after two weeks for retest and the English version of the scale to check the linguistic equivalance. Consented participants were then given demographic information form and Urdu version of COV19-QoL. All of 80 respondents filled the questionnaire. After two weeks all participants were contacted individually on their email address and google link of form was shared with them. Google form included inform consent, demographic information form, COV19-QoL Urdu, EQ-5D-5L, Satisfaction With Life Scale and English version of COV19-QoL (shuffled items) was then administered. Out of 80, 62 individuals were available and filled the questionnaire. After completion of questionnaire, participants were thanked for their willingness, time and participation in current study.

Statistical Analysis

The data was analyzed by using Statistical Package for Social Science (26 version). Demographic characteristics of the sample were summarized using descriptive statistics. Cronbach alpha, Pearson bivariate correlation**,** Exploratory

factor analysis (EFA) were computed to examine the linguistic equivalance and psychometric properties of Urdu COV19-QoL scale.

RESULTS

Table 1
Descriptive Statistics for the Participants (N=462)

Variables	*f*	*%*
Gender		
Male	173	37.4
Female	289	62.6
Education		
Matriculation	15	3.2
Intermediate	31	6.7
Graduation	250	54
Post-Graduation	166	35
Affected with COVID		
Yes	206	44.6
No	256	55.4
	M	*SD*
Age	33.57	12.64

Table 2
Descriptive Statistics for the Participants (N=62)

Variables	*f*	%
Gender		
Male	13	21
Female	49	79
Education		
Graduation	41	66
Post-Graduation	21	34
Affected with COVID		
Yes	06	9.7
No	56	90.3
	M	*SD*
Age	25.78	5.42

Table 3
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity for COV19-Impact on Quality of Life (N=462)

		Bartlett's Test of Sphericity
	KMO	*Sig.*
COV19-Impact on Quality of Life	.89	.000***

*** $p < .001$

Table 4
Factor Loading and Item-Total Correlation of COV19-Impact on Quality of Life (N=462)

S#	Item No.	*M*	*SD*	Factor Loading	Item-Total Correlation
1	1	2.50	1.12	.55	.75**
2	3	3.05	1.15	.55	.74**
3	6	2.34	1.11	.56	.75**
4	4	2.87	1.18	.68	.84**
5	2	2.50	1.19	.69	.83**
6	5	2.65	1.23	.72	.84**
Eigen Value		3.75			
% Value		62.50			

***p<.01*

Table 5
Model Fit Summary of 06 Items (N=462)

p-value	*CMIN/DF*	*GFI*	*CFI*	*RMSEA*	*TLI*	*RMR*
.002	2.85	.98	.98	.06	.97	.03

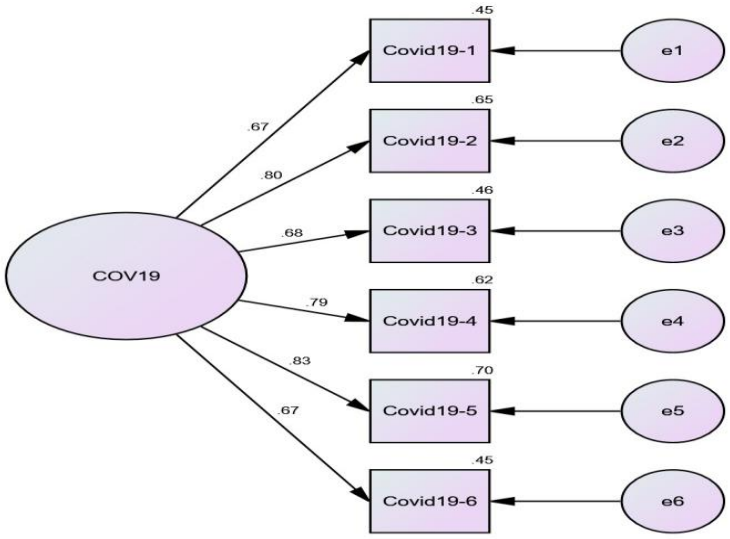

Figure 1: Factor Loadings in Confirmatory Factor Analysis of COV19-Impact on Quality of Life (N=462)

Table 6
Linguistic Equivalence of Urdu Version of COV19-Impact on Quality of Life (N=62)

S#	Scales	*M*	*SD*	1	2
1	COV19-Impact on Quality of Life (English version)	2.17	.83	--	
2	COV19-Impact on Quality of Life (Urdu version)	2.23	.85	.87**	--

***p*<.01*

Table 7
Cronbach's Alpha and Test-Retest Reliability of COV19-Impact on Quality of Life

Scale	Total Items	*α*	*Test-Retest r*
COV19-Impact on Quality of Life	06	.88	.85**

***p<.01*

Table 8
Convergent Validity of Urdu Version of COV19-Impact on Quality of Life (N=62)

S#	Scales	*M*	*SD*	1	2
1	COV19-Impact on Quality of Life (Urdu version)	2.23	.80	--	
2	EQ-5D-5L	1.62	.49	.78**	--

***p<.01*

Table 9
Discriminant Validity of Urdu Version of COV19-Impact on Quality of Life (N=62)

S#	Scales	*M*	*SD*	1	2
1	COV19-Impact on Quality of Life (Urdu version)	2.23	.80	--	
2	Satisfaction with Life Scale	1.62	.49	-.31*	--

**p<.05*

DISCUSSION

The COVID-19 Pandemic raised serious mental health concerns and its impact on well-being, quality of life, and mental health of people of Pakistan is documented in a number of studies (Javed & Mehmood, 2020; Mehmood et al., 2023; Waheed et al., 2022). However, there was no scale available in Urdu which is National language of Pakistan and is easy to read and understand by its native people. Hence, to fill in this gap, the present study was conducted to translate and validate COV19-QoL scale into Urdu language with an intend to provide a valid and psychometrically sound measure to evaluate impact of COVID-19 on quality of life among Pakistani population.

The translation of the COV19-QoL was carried out following translation guideline provided by World Health Organization (2016). Confirmatory Factor analysis (Table 4 & 5) revealed one dimension of COV19-QoL. Thus, the scale measures unidimensional construct i.e. perception of deterioration of quality of life amid COVID-19 pandemic. This factor explained 62.50 variance with Eigen value 3.75 (Table 4). These values are similar to the values of original English version of scale (Repisti et al., 2020). Factor loadings were greater than .55 for each item (Table 4). All item-total correlation were above .75 suggesting that all items strongly correlate with total scale (Table 4). According to Kaplan and Saccuzzo (2017) items having correlation above .30 be considered to retain as part of instrument. Hence, all six items of COV19-QoL scale were retained.

The results pertaining to language equivalence show a strong positive association between both Urdu version and English version of COV19-QoL scale (Table 6). According to Šipka (2015), it is important to ensure that translated version of scale conveys same meaning as of original items, so genuine response can be gained. Hence, language equivalency is an important step in scale translation.

Further, analysis suggested that Urdu version of scale was internally consistent having Cronbach's alpha value of .88 (Table 7). This Cronbach's alpha value was consistent with the values reported by Repisti et al. (2020) which ranged from .86 to .89. Moreover, the test-retest reliability procedure was conducted after two weeks interval as it is suggested that time interval between test retest should not be less than two weeks or more than 6 months (Urbina, 2014). The obtained r-value of .87 show a good test-retest reliability of the scale (Table

7). Overall these results shows that COV19-QoL is internally consistent and a reliable measure to use.

Concerning the convergent and discriminant validity, it is acknowledged that same constructs should correlate with related constructs in convergent validity whereas the discriminant validity refers to how two unrelated constructs should differ and shouldn't correlate moderately or strongly (Streiner et al., 2015). To establish the convergent validity in the present study, the scores of Urdu translated versions of COV19-QoL were correlelated with Urdu version of EQ-5D-5L. The results reveal a strong positive correlation of .78 between both measures (Table 8) hence suggesting both scales measure similar construct. To establish discriminant validity of Urdu version of COV-19-QoL scale, the Satisfaction with Life Scale was used. The results reveal a moderate negative correlation of -.31 between COV19-QoL and Satisfaction with Life Scale (Table 9) indicating a good discriminant validity reflecting that these constructs differ from each other.

To conclude, the Urdu translated version of COV19-QoL is established to be reliable and valid measure. It is short and easy that makes it feasible for participants to fill it. Hence, it can be used by mental health practitioners and researchers to identify impact of COVID-19 on quality of life among general population of Pakistan.

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