

**Original Article****Cross Culture Adaptation of CASP 19 To Assess Quality of Life of Older Adults in Karachi, Pakistan**Laila Khalfan Surani¹¹University of Wales Trinity Saint David, London, England

ARTICLE INFO

Key Words:

Quality of Life, Older People, Cross Cultural

How to Cite:Khalfan Surani, L. (2023). Cross Culture Adaptation of CASP 19 To Assess Quality of Life of Older Adults in Karachi, Pakistan: Culture Adaptation of CASP 19. *Pakistan Journal of Health Sciences*, 4(01). <https://doi.org/10.54393/pjhs.v4i01.494>***Corresponding Author:**Laila Khalfan Surani
University of Wales Trinity Saint David, London, England
l.surani@uwtsd.ac.ukReceived Date: 3rd January, 2023Acceptance Date: 28th January, 2023Published Date: 31st January, 2023

ABSTRACT

CASP-19 (Control, Autonomy, Self-realization, and Pleasure) is a well-established and theoretically derived instrument to assess the quality of life, which has been translated into multiple languages for global application. This study provides a cross-cultural validation of CASP-19 in older adults in Karachi, Pakistan. **Objective:** To assess quality of life of 50+ older adults in Karachi, Pakistan. **Methods:** Focus groups were used to pilot-test a translated CASP-19 survey from English to Urdu, with back translation to explore the language, cultural and conceptual similarities of the tool to the original version. A population survey was administered using cluster sampling. The translated version was administered to 100 participants from each low, middle, and high-income areas via door-to-door recruitment. Confirmatory factor analysis was used to test the psychometric validation of the Urdu version. A regression analysis assessed social determinants of quality of life. **Results:** Pilot-testing confirmed that CASP-19 has conceptual relevance to Pakistani culture in a revised CASP-13 with 6 items remove. **Conclusion:** CASP13 is a valid and reliable tool to assess the quality of life of 50+ older adults in Karachi.

INTRODUCTION

CASP is a measure that was theoretically driven and had four domains, namely, Control, Autonomy, Pleasure, and Self-realisation, with 19 items. The development of CASP is a useful scale for measuring the quality of life in old age. Control is "understood as the ability to intervene in one's environment actively. Autonomy is defined as the right of an individual to be free from the unwanted interference of others" [1]. Laslett presented the theory of the third age and defined that the "older adults should be the 'crown of life' in which people are free to develop themselves and their interests" [2]. Moreover, the increasing participation of older adults in leisure activities and foreign trips showed that the older adults are keen to develop new interests, and based on that, the other two domains, 'pleasure' and 'self-realisation', were developed. By including the other two domains, it showed that to have a good quality of life is not

adequate to be "free from undue interference nor simply to have the potential to be able to intervene in one's environment," but that older adult should engage themselves "through those activities that make them happy" [3]. CASP-19 had been extensively used in various studies with the large and small sample size to data such as it had been administered in large population-based samples English Longitudinal Study of Ageing (ELSA) waves 1 to 5 [4]. The psychometric properties of CASP 19 had been performed in a couple of studies; specifically, in West European countries, primarily in the United Kingdom and Ireland but also in Taiwan and Brazil [5, 6].

METHODS

The CASP 19 tool was given to four people who were well known to the researcher from Pakistan, who had a good command of English and Urdu language, to translate the

CASP 19 instrument. The translators had familiarity with the target population. The four Urdu translated versions of CASP-19 were given to four different people, to back-translate without access to the original English language CASP 19. All these four translators had a good command of both Urdu and English language. All four back-translated versions were shared with two native speakers separately. The natives were academic staff who worked at the University of East London. After consultation with both translators, the 2nd back-translated version was selected to pre-test for the adaptation, selected as the most closely translated version of the original CASP-19. The translated version was pre-tested in the Pakistani community based in London; to understand the tool's language, cultural, and conceptual similarities. The focus group discussion was used to pre-test the measure. The two focus groups, one each for the male and female, were conducted in support of Pakistan Culture Society in Walthamstow, London. All focus group participants were between 55 to 68 years of age. A cross-sectional combination of cluster sampling and purposive sampling was used to select households that were approached as a targeted population. The cluster sampling was done in two stages; i) identifying high, middle and low income strata, and ii) purposive sampling of a sub-population within each strata. Three hundred participants aged 50 or over were selected by purposive sampling, 100 each from low, middle, and high-income areas of Karachi, Pakistan. The sample was designed to replicate in the original study where QoL was measured using CASP 19 (1). To identify a 3-unit difference in CASP-19 with a sample size of 75 people needed in each group (calculated with STATA command samples). In the case of any dropouts from the sample, the sample size was inflated by 33%, so there was 100 people per strata. The quantitative data were entered in the SPSS to check the psychometric properties of the measure CASP 17. CASP 17 has a Likert scale item, numerically coded. 3 was coded to the most positive answer, and 0 was coded most negative answer. The total CASP 17 score was ranging from 0 to 47. A higher CASP-17 score signifies higher quality of life. Furthermore, the two ethics approval for both studies in London and Pakistan was approved by the University Research Ethics Committee at the University of East London.

RESULTS

The reliability tests revealed that the scale has good internal consistency with Cronbach's alpha 0.82. There were both high and low correlations between the CASP 17 items. The Kaiser-Meyer-Olkin (KMO) in this analysis was 0.83. Furthermore, table 1 shows the value of Cronbach's alpha for each item. Only item 16 shows the low Cronbach alpha, but the removal of that item would not show an improvement in the Cronbach alpha. Therefore, none of

the items were removed from the scale (Table 1).

CASP 17 items	Cronbach alpha
My age restricts me to do such tasks that I want to do	0.81
I feel that whatever is happening with me I cannot control it	0.81
I feel that I am free to plan for my future	0.81
I can do thing that I want to do	0.80
Family responsibilities stops me to do things that I want to do	0.81
I feel that whatever work I do I can make myself happy from it	0.80
My health stops me to do things, that I want to do	0.81
Lack of money stops me from doing things I want to do	0.80
I wait for all coming days	0.81
I feel that my life has meaning	0.81
Whatever work I do, I enjoy it	0.80
I enjoy other's company	0.81
I look at my past happily	0.82
I feel energetic all the time	0.80
I select things that I have never done before	0.81
I feel satisfied with the way my life is changing	0.79
I feel that life is full of opportunities	0.80

Table 1: CASP 17 Cronbach's alpha for each item

In this study, the single-factor model, the first-order model, and the second-order model were assessed. The analysis demonstrated a measurement model for CASP-17; where all the 17 items have been loaded on a single factor that is QoL. The single factor model of CASP 17 displays a poor model fit as the results of the goodness of fit indices describes that TLI 0.674, CFI 0.714 which is relatively lower than the normal range and RMSEA 0.098, which is higher than its required range. Because the single model seems the worst model fit for CASP 17 therefore, the first order model was performed where the inter-relationship of all the four domains (Autonomy/Agency, Control, Self-realization and Pleasure) was performed. The results of the first-order model of CASP 17 with all four domains do not display a perfect model fit, as TLI 0.827, CFI 0.856 and RMSEA 0.071. As both the single model and the first model did not show a better model fit, a third step was introduced involving the analysis of a second order model for CASP 17. That included all the 17 items with its' domains on one-factor latent variable 'QoL'. The results of the second order model analysis for CASP 17 showed that the values of TLI 0.674 and CFI 0.714 are very low (recommended value >0.90). Moreover, the value of 0.098 for RMSEA was higher than its required range (recommended value <0.05). Thus, the second order factor also does not demonstrate a good model fit between the model and the observed data for CASP 17. Moreover, the modification indices (MI) of covariance were observed. The MI exhibited a high error measurement correlation between (e1, and e2,) that is: 'I feel free to plan for the future', and 'I can do the things that I want to do'. The MI value between the two items (e1 and e2) was 20.99, which is considered high since it is greater than

15.0 and between (e12 and e9) that is; 'I feel that what happens to me is out of my control' and 'I feel that my life has meaning' MI value 16.67 which was higher than 15. In order to achieve the best model, fit, which showed higher values on e1, e2, e12, e9 all four items were removed from the analysis. Therefore, then the alternative 13-item four-factor model was tested for the population of Karachi Pakistan. The CASP 13 was also evaluated for model fit through CFA. The single factor model of CASP 13 showed the following values: TLI 0.709, CFI 0.757 and RMSEA 0.101. Although these did not demonstrate perfect findings, they provided better model fit than CASP17. The analysis for the first model fit showed the best model fit, with TLI 0.903, CFI 0.927 and RMSEA 0.058. The second model factor analysis for CASP 13 did not exhibit a very good model fit (TLI 0.709, CFI 0.757 and RMSEA 0.101). Finally, as for CASP 13, items redundancy was examined through inspecting the Modification Indexes (MI). The correlated measurement error was between the item e6 and e7: 'my age prevents me doing the things which I want to do' and 'my health stops me doing things which I want to do'. The MI value between the two items was 64.463, which is considered high since it is greater than 15.0. It was assumed that the redundancies between the two items caused the measurement model to record a poor fit. Therefore, these two correlated measurement errors of redundant items were analyzed as a "free parameter" and run the new measurement model II for the second-factor model. The CASP 13-second model fit (II) after unnecessary the two items, illustrated the findings TLI 0.809, CFI 0.843 and RMSEA 0.082. The finding demonstrated that fitness indexes have improved after the two redundant items which were constrained in the model. The overall CFA results propose that the 'single-factor model' and the 'second factor model' for CASP 13 also does not provide an appropriate fit. However, the domain model, which is the first factor model of CASP 13, is recommended as the best model fit to use in a population of Karachi. Therefore, the shorter version of CASP13 was used to assess the quality of life in Karachi, Pakistan. Each item in CASP 13 had scored on a four-point scale ('Often', 'Sometimes', 'Not often' and 'Never'), that could give a possible range of scores of 0–39, higher the score represents a better quality of life. The mean CASP 13 score for the whole sample was 22.39 ± 6.68 . The findings from this study also identified differences in the score of quality of life in all three groups. Low Income Group (LIG) mean CASP score was 17.4 ± 6.6 , middle income group (MIA) 22.8 ± 4.9 , and high-income group (HIA) 26.8 ± 4.5 .

DISCUSSION

This study tested the construct validity of the CASP 13 in Karachi and it was found to be an appropriate tool to assess

the quality of life. Moreover, it was found to be easily understood by the targeted population. The CASP 13 showed good psychometric properties and good internal consistency in the Pakistani population. In line with other psychometric studies of CASP by Wiggins *et al.*, this study in Karachi had also shown different results in both exploratory and confirmatory factor analysis [7]. As, the population of Karachi Pakistan; was different from the one which the scale was originally developed. It was also able to find out common characteristic of growing older, which was mentioned in Hyde *et al.*, study demonstrated the tool that would be used in the different culture, may able to find the most common universal characteristics of growing older [8]. The exploratory factor analysis had extracted four factors; and the loading of most of the items in factor analysis were the same as other countries like Lithuanian version of CASP-19 [9]. Also, according to its loading, it was named same as it was in the original study (Control, Self-realization, Pleasure and Agency/Autonomy) [10]. However, when it comes to using such a measure in a different culture, the meanings and perceptions of these domains may change because of their cultural values and beliefs. This is what happened with these domains of CASP 17 when used in Karachi. For example, the item asked from the self-realization domain 'I feel satisfied with the way my life has turned out' and some of the participants referred to Allah as one of the participants said, 'It is Allah's will nothing is in our hand'. But few of the participants also said "one wrong decision in life can change the life and one is responsible for their own decisions so we cannot blame anyone or Allah" so there were distinct viewpoints of the participants. Furthermore, performing the CFA item, "I feel that what happens to me is out of my control" had a high redundancy in modification indices; therefore, this item was deleted in model fit. The reason of high redundancy could be the statement be unclear to the participants, or a double meaning statement. Also, it is evident, when this statement was asked to one of the participants she said, "What do you mean by this, nothing is in my hand. God has control over our lives". The similar finding was identified in a study among older Ethiopians population while assessing predictors of QoL. The participants of the study felt the same for the item; "I feel that what happens to me is out of my control". "Because the majority of Ethiopians are strong believers that whatever happens in their life is God's will, and it is possible that they would answer the question that they do not have control, which might be misleading" [6]. Furthermore, the three items loaded in the third factor (Autonomy) in CASP 17 were 'Family responsibilities prevent me from doing the things I want to do', 'shortage of money stops me from doing things I want to do' and 'on balance I look back on my life with a sense of happiness'. Autonomy

has been discussed for last thirty years by the researchers, but in the recent year, some cross-cultural theorists have suggested that autonomy is only a 'western cultural ideal, and not a universal need' [11]. So, therefore, people who give more preferences to family, values, traditions, and norms can never develop autonomy and seem to be more satisfied when living their will to their group's will. However, autonomy is relevant to 'wellbeing (WB) in cultures that emphasize individualism and independence, but less relevant to WB in cultures that emphasize collectivism or interdependence' [12]. Therefore, it is right to say that people's well-being in different cultures depends on the understanding and perception of autonomy [13]. However, in my study, some subjective data were collected during the survey; showed that both man and woman had the autonomy to live their life as they want. As one of the high-income group participants said, 'family responsibility never stops me from doing what I want to do because all individual in our family has right to do what they want to do so all are responsible for their own life'. On contrary a woman from low income said, 'I cannot take decision as a woman my responsibility is to look after children and take care of home and my husband is the one who takes all decision on behalf of our family'. This was also observed in other two other studies which had found similar findings with respect to items 6 ("family responsibilities") and 9 ("shortage of money") [14]. The subjective findings by Borrat-Besson *et al.*, also show that the perception of autonomy is different in different socio-economic group. Hence it is right to say that people in a different culture like Pakistan apply their autonomy in structural contexts, which include (religion, culture, values, and beliefs) that may promote or restrict autonomous action [15]. The domain pleasure in CASP was contextualized differently in Pakistani culture for example interviewing items from a pleasure domain like 'I feel that my life has the meaning' most of the people commented that 'if Allah has sent us in this world so; there must be some meaning and a reason and so far, we do not have any regrets'. When asked another item; 'I look forward to each day; some of the participants said, 'inshallah yes' means 'if God's will, yes'. Therefore, we wait for the next day that Allah will do well, and we are happy whatever we have in our life'. Similar findings by Hamren *et al.*, were identified in older adults in Persia where participants who had experienced violation scored lower in all dimensions of CASP excluding pleasure [16]. CASP also aimed to show that in old age, people are engaged in a reflexive process of self-realisation through those activities that make them happy [17]. However, in Pakistan, millions of older adults live in poverty and leaves very few with pensions or a reliable income when they reach older age, leaving them dependent on their families who often struggle to provide

for them [18]. With this scenario, most older adults cannot fulfill their wish or interest at the old age, but they stay happy and satisfied with what they have in life. QoL is a vague concept that included many factors such as; social, psychological, economic influences, and individuals' experiences, circumstances, health, social well-being, values, and perceptions [19, 20]. Nevertheless, this could be interpreted differently in a different culture based on their socio economic-status, culture and religious ideology.

CONCLUSIONS

It is well known that ageing decreases the quality of life and there could be limiting factors that could be associated with it, like socio-economic background, or health. In Pakistan mainly, research is focused on health-related quality of life on the ageing population or the challenges of the ageing population. Therefore, this research has added to that there is no single dominant which affects the quality of life in old age. But it is evidence that financial situation, opportunities, work satisfaction, not working in old age, lack of social participation, social support, life-course events, health, depression, daily life activities, sense of coherence and optimism are the factors which are positively or negatively associated with quality of life in old age.

Conflicts of Interest

The authors declare no conflict of interest

Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article

REFERENCES

- [1] Hyde M, Wiggins RD, Higgs P, Blane DB. A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19). *Aging & Mental Health*. 2003 May; 7(3): 186-94. doi: 10.1080/1360786031000101157
- [2] Laslett P. What is old age? Variation over time and between cultures. *Health and Mortality among Elderly Populations*. Oxford University Press. 1996: 21-38.
- [3] Kim GR, Netuveli G, Blane D, Peasey A, Malyutina S, Simonova G, *et al.* Psychometric properties and confirmatory factor analysis of the CASP-19, a measure of quality of life in early old age: the HAPIEE study. *Aging & Mental Health*. 2015 Jul; 19(7): 595-609. doi: 10.1080/13607863.2014.938605
- [4] Wu TY, Chie WC, Kuo KL, Wong WK, Liu JP, Chiu ST, *et al.* Quality of life (QOL) among community dwelling older people in Taiwan measured by the CASP-19, an index to capture QOL in old age. *Archives of Gerontology and Geriatrics*. 2013 Sep; 57(2): 143-50.

- doi: 10.1016/j.archger.2013.03.010
- [5] Lima FM, Hyde M, Chungkham HS, Correia C, Siqueira Campos A, Campos M, *et al.* Quality of life amongst older Brazilians: a cross-cultural validation of the CASP-19 into Brazilian-Portuguese. *PLoS One*. 2014 Apr; 9(4): e94289. doi: 10.1371/journal.pone.0094289
- [6] Hamren K, Chungkham HS, Hyde M. Religion, spirituality, social support and quality of life: measurement and predictors CASP-12 (v2) amongst older Ethiopians living in Addis Ababa. *Aging & Mental Health*. 2015 Jul; 19(7): 610-21. doi: 10.1080/13607863.2014.952709
- [7] Wiggins RD, Netuveli G, Hyde M, Higgs P, Blane D. The evaluation of a self-enumerated scale of quality of life (CASP-19) in the context of research on ageing: A combination of exploratory and confirmatory approaches. *Social Indicators Research*. 2008 Oct; 89: 61-77. doi: 10.1007/s11205-007-9220-5
- [8] Hyde M, Higgs P, Wiggins RD, Blane D. A decade of research using the CASP scale: key findings and future directions. *Aging & Mental Health*. 2015 Jul; 19(7): 571-5. doi: 10.1080/13607863.2015.1018868
- [9] Černovas A, Alekna V, Tamulaitienė M, Stukas R. Reliability and validity of the lithuanian version of CASP-19: A quality of life questionnaire for the elderly. *Medicina*. 2018 Dec; 54(6): 103. doi: 10.3390/medicina54060103
- [10] Wiggins RD, Higgs PF, Hyde M, Blane DB. Quality of life in the third age: key predictors of the CASP-19 measure. *Ageing & Society*. 2004 Sep; 24(5): 693-708. doi: 10.1017/S0144686X04002284
- [11] Hyde M, Wiggins RD, Higgs P, Blane DB. A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19). *Aging & Mental Health*. 2003 May; 7(3): 186-94. doi: 10.1080/1360786031000101157
- [12] Sheldon KM, Awong T, Tan HH. Autonomy, culture, and well-being: The benefits of inclusive autonomy. *Journal of Research in Personality*. 2007 Oct; 41(5): 983-1007. doi: 10.1016/j.jrp.2006.11.004
- [13] Rudy D, Sheldon KM, Awong T, Tan HH. Autonomy, culture, and well-being: The benefits of inclusive autonomy. *Journal of Research in Personality*. 2007 Oct; 41(5): 983-1007. doi: 10.1016/j.jrp.2006.11.004
- [14] Stewart SM, Zaman RM, Dar R. Autonomy as a psychological need: Perceptions of Pakistani mothers. *Psychology and Developing Societies*. 2006 Nov; 18(2): 227-39. doi: 10.1177/097133360601800205
- [15] Borrat-Besson C, Ryser VA, Gonçalves J. An evaluation of the CASP-12 scale used in the Survey of Health, Ageing and Retirement in Europe (SHARE) to measure Quality of Life among people aged 50. Lausanne: FORS. 2015. Available at: https://forscenter.ch/wp-content/uploads/2018/07/fors_wps_2015-04_borrat-besson.pdf
- [16] Ryan RM and Deci EL. Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will?. *Journal of Personality*. 2006 Dec; 74(6): 1557-86. doi: 10.1111/j.1467-6494.2006.00420.x
- [17] Netuveli G and Blane D. Quality of life in older ages. *British Medical Bulletin*. 2008 Mar; 85(1): 113-26. doi: 10.1093/bmb/ldn003
- [18] Heravi-Karimooi M, Rejeh N, Garshasbi A, Montazeri A, Bandari R. Psychometric properties of the Persian version of the quality of life in early old age (CASP-19). *Iranian Journal of Psychiatry and Behavioral Sciences*. 2018 Jun; 12(2): e8378. doi: 10.5812/ijpbs.8378
- [19] Barcaccia B, Esposito G, Matarese M, Bertolaso M, Elvira M, De Marinis MG. Defining quality of life: a wild-goose chase?. *Europe's Journal of Psychology*. 2013 Feb; 9(1): 185-203. doi: 10.5964/ejop.v9i1.484
- [20] Ashiq U and Asad AZ. The rising old age problem in Pakistan. *Journal of the Research Society of Pakistan*. 2017 Jul; 54(2): 325-33.