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VALIDATION AND CULTURAL ADAPTATION OF THE URDU HIKIKOMORI QUESTIONNAIRE (HQ-8) IN MIDDLE-AGED ASTHMA PATIENTS

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Abstract
Introduction: *Pathological social withdrawal, known as Hikikomori, is emerging as a critical mental health issue worldwide, impacting diverse demographics, including adults managing chronic diseases. Despite its growing prevalence, there is a lack of validated instruments to measure this condition in specific linguistic and clinical settings. The primary objective of this research was to translate the Hikikomori/Social Withdrawal Questionnaire 8 item version (HQ-8) into Urdu and assess its psychometric validity within a sample of middle-aged adults suffering from asthma.*
Methodology: *The study recruited 200 participants aged 45–65 years with a confirmed asthma diagnosis. To establish convergent validity, the newly translated HQ-8 was administered alongside two other measures: the Adverse Childhood Experiences (ACEs) questionnaire (modified to a 5-point Likert scale (Bond, Stone, Salcido, & Schnarrs, 2021) and the Emotional Regulation Questionnaire (ERQ) in its Urdu adaptation. The study utilized exploratory and confirmatory factor analyses to verify the scale's structure. Reliability was tested through internal consistency metrics and a 2-week test–retest procedure.*
Results: *Factor analyses confirmed a unidimensional structure for the HQ-8, characterized by robust item loadings and superior model fit statistics. The tool demonstrated high internal consistency ($\alpha = 0.87$; $\omega = 0.88$) and solid stability over time (ICC = 0.78). In terms of validity, higher scores on the HQ-8 were positively associated with greater ACEs and the use of expressive suppression.*
Conclusion: *The HQ-8-Urdu proves to be a psychometrically sound and culturally suitable instrument for evaluating social withdrawal among middle-aged asthma patients. These results provide a new avenue for understanding how childhood adversity and emotion regulation deficits contribute to social isolation in individuals living with chronic respiratory conditions.*
Keywords: *Hikikomori, social withdrawal, HQ-8, asthma, Urdu translation, ACEs, ERQ*

Introduction

Severe social withdrawal or the so-called hikikomori is a condition of long-term self-isolation, refusal to participate in social activities, and occupational or interpersonal withdrawal. Hikikomori, which was originally outlined in Japan, has been more and more acknowledged as a worldwide phenomenon that ignores cultural and age distinctions (Kato, Kanba, and Teo, 2018). Hikikomori patients spend three or more months at home and also experience psychological distress, dysfunctional social functioning, and reduced quality of life (Teo et al., 2019). Although the majority of studies were conducted with adolescents and young adults, there is an increasing amount of evidence that also middle-aged and older adults with chronic health conditions are vulnerable to social withdrawal, and the effects of illness-related restrictions can and do contribute to psychosocial vulnerabilities (Li et al., 2023). Social withdrawal The most popularized is hikikomori, which entails extended self-isolation, shyness, and disapproval of occupation or everyday living activities. Hikikomori was first reported in Japan but has since been reported globally and thus demonstrates its cross-cultural applicability (Kato, Kanba, and Teo, 2018). Hikikomori people do not leave their apartments often and have dysfunctional social behavior,

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emotional discomfort, and lack of quality of life (Teo, Choi, and Jiang, 2019). Although the vast part of the research has been done in the context of adolescents and young adults, the concept of social withdrawal is not overlooked in the context of middle-aged adults, particularly in cases when they have to deal with chronic health issues like asthma, and functional limitation and disease burden may enhance isolation (Li, Teo, and Kato, 2023). Adverse childhood experiences (ACEs) are childhood-related factors that cause a disastrous influence on adult mental health and social functioning due to childhood exposure to abuse, neglect, and family dysfunction (Felitti et al., 1998). According to research, people who have been exposed to several ACEs have a higher chance of becoming socially withdrawn, depressed, and anxious (Shin, McDonald, and Conley, 2022). The most recent versions of ACEs in the form of a Likert scale (Bond, Stone, Salcido, and Schnarrs, 2021) enable a more detailed measurement of the intensity of exposure and give a more solid foundation on which the relationships with the adult psychosocial outcomes can be investigated. The other key factor that is in critical influence on social engagement is emotion regulation. Internalizing symptoms and avoidance behaviors are associated with deficits in cognitive reappraisal, expressive suppression, and emotion awareness (Gross, 2015). Patients who lack regulation of emotions have a higher tendency of isolating themselves and have problems with relationship sustenance (Kring & Sloan, 2010). These regulatory strategies are assessed by the Emotional Regulation Questionnaire (ERQ, Urdu) which is a validated measure of individual differences that are important in social functioning. Social withdrawal can be added by such chronic conditions as asthma. Symptoms of asthma, functional impairment, and the uncertainty of the disease could enhance the levels of stress and other factors that diminish involvement in social and occupational functions especially among the middle-aged (4565 years) who have several life demands (Baiardini et al., 2020). The ability of emotion regulation is likely to affect the way people manage the stress associated with disease and may mediate social activity, thus this population is specifically relevant to study the cross-section between hikikomori, childhood adversity, and emotion regulation. Hikikomori/social withdrawal is a complex issue that is affected by childhood trauma and control mechanisms, and has significant implications on the population with chronic diseases. The combination of the HQ-8, Likert-adapted ACEs, and the ERQ allows the assessment of the mentioned constructs through a culturally relevant method in the sample of middle-aged adult asthmatics in Urdu. The exploration of these connections would give us an understanding of the psychosocial processes of social withdrawal and would guide the intervention to decrease the level of isolation and increase the quality of life of this group.

Methodology

Research Design

The research was a cross-sectional, psychometric validation research to translate, culturally adapt, and determine the reliability and validity of Hikikomori/Social Withdrawal Questionnaire-8 item version (HQ-8) in Urdu. Adverse Childhood Experiences questionnaire (ACES, Likert-adapted) and the Emotional Regulation Questionnaire (ERQ, Urdu) were used to evaluate convergent and divergent validity. Participants Sample of 200 middle aged adults (45 65 years) with asthma diagnosed were recruited using snow ball sampling in Faisalabad. The inclusion criteria included (a) physician-diagnosed asthma, (b) 4565-year-old patients, (c) literate and able to comprehend the Urdu language, and (d) a readiness to give an informed consent. Severely cognitively impaired participants, those with active psychiatric conditions or other chronic medical conditions that inhibit them were not included. The last sample consisted of 100 men and 100 women.

Phase I: HQ-8 (Hikikomori/Social Withdrawal Questionnaire) Translation and Adaptation.

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HQ-8 is a short form of the Hikikomori Questionnaire (HQ-25) that measures the central behaviors of social withdrawal (Teo et al., 2019). It is a combination of eight questions assessing long-time self-isolation, shunning social life and abandonment of everyday life. The items are graded using the Likert scale, which rated high scores as having more degrees of social withdrawal. The original HQ-8 has shown acceptable internal consistent and pre-test construct validity.

Step 1: Forward Translation

The HQ-8 was translated into Urdu by three bilingual translators (one male, two female) who had a masters level degree in psychology and independently translated the English version of the HQ-8. All translators were well acquainted with the English and Urdu language and were informed about the idea of social withdrawal conceptual framework. Translators did not do literal translation, but conceptual one, used culturally adapted language and did not use technical terminology. There were three Urdu translations that were carried out independently.

Step 2: Expert Panel Review

The forward translations were read by an expert panel of three members. The panel comprised of one assistant professor, one associate professor of clinical psychology and one member of the faculty possessing knowledge in psychometrics. The panel cross-examined the three versions of the Urdu and came up with a version that was reconciled by settling on those items that were conceptually similar to the original HQ-8, culturally relevant and which the middle-aged adults in the Urdu language could easily understand.

Step 3: Back Translation

The reconciled version in Urdu was back-translated into English by an independent bilingual translator, with a master degree in English literature, and who had no knowledge of the original HQ-8. Conceptual equivalence was determined with the help of comparing the back-translated version with the original HQ-8. Everything had preserved its original meaning, which established adequate translation accuracy.

Step 4: Pretesting and Cognitive Interviewing

The 20-adults with asthma (45 to 65 ages) were pretested on the pre-final Urdu version through cognitive interviewing. Each item was presented to the participants verbally, which is why they were required to express their interpretation of them, provide alternative wording in case needed and define any terms they considered confusing. According to the survey conducted on the participants, some revisions were implemented so that the questionnaires could be understood, read, and culturally appropriate.

Phase II: Psychometric Test of the HQ-8 (Hikikomori/Social Withdrawal Questionnaire)

After translation and adaption, Phase II was aimed at testing reliability and validity of the HQ-8 Urdu version in a middle-aged adult with asthma sample (45-65 years old). The purpose of this phase was to test the factor structure of the scale, internal consistency, temporal stability, and convergent/divergent validity of the scale.

Step 1: The participants and Sampling

Convenience sampling was used to recruit 200 adults with the diagnosis of asthma in the outpatient clinics in Faisalabad. The inclusion criteria were: (a) physician-confirmed asthma, (b) age, 45 65 years, (c) read and understand Urdu, and (d) voluntary informed consent. The participants with severe cognitive impairment or any other chronic medical/psychiatric conditions that would disrupt participation were excluded. There were 100 men and 100 women in the sample, which guaranteed gender balance.

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Step 2: Procedure of data collection.

The respondents were provided with a demographic questionnaire, HQ-8, the Adverse Childhood Experiences (ACES) questionnaire and the Emotional Regulation Questionnaire (ERQ, Urdu). To determine test-retest reliability, a subsample of 50 respondents were given HQ-8 once more in two weeks. The research was done in closed clinical environments where confidentiality and comfort of the participants were observed.

Step 3: Factor Analysis

To investigate the factor structure of HQ-8 Urdu version:

End Of Sample 1. Exploratory Factor Analysis (EFA) was performed on a half sample (n = 100) through principal axis factoring with Promax rotation. Sampling adequacy was evaluated using KaiserMeyerOlkin (KMO) measure and the test of sphericity by Bartlett. Products whose factor loading was 0.40 and above were kept.

Confirmatory Factor Analysis (CFA) of the other half of the sample (n = 100) was done with AMOS v26. CFI, TLI, RMSEA and SRMR were used to assess model fit, where the accepted values are good fit (CFI/TLI ≥ 0.95, RMSEA ≤ 0.06 and SRMR ≤ 0.08).

Step 4: Reliability Evaluation

Cronbachs alpha (alpha) and McDonalds omega (Omega) were used to determine the internal consistency of the HQ-8 Urdu. The assessment of temporal stability was done through intraclass correlation coefficient (ICC) of the 2-week test-retest subsample. The acceptable values of 0.70 and 0.75 were used to indicate values of α and ICC respectively.

Step 5: Convergent and Divergent Validity

Convergent validity was determined through the study of Pearson correlations of HQ-8 scores with the ACES total score where it was hypothesized that the correlation would be positive. Divergent validity was tested using correlations with ERQ subscales, where it was assumed that it would be negative with cognitive reappraisal and positive with expressive suppression, as hypothesized by the theory.

Instruments

1. Hikikomori Questionnaire -8 item version (HQ-8): The HQ-8 is a measure of core social withdrawal behaviors. It was translated into Urdu after undergoing the standard forward-backward translation practices, and subjected to review through cognitive interviews to make it easier to use and to be culturally relevant and semantically equivalent. The answers were documented using a 5-point Likert scale (1 = Never to 5 = Always), where the larger the score the more the social withdrawal.

2. Adverse Childhood Experiences (ACE): The ACE questionnaire (Felitti et al., 1998) was presented in the 5-point Likert scale (Bond, Stone, Salcido, and Schnarrs, 2021) pattern. which offers the possibility to rate the exposure to childhood abuse, neglect, and household dysfunction. An increase in the scores means an increase in cumulative adversity, translated by Bokhari, Badar, Naseer, Waheed, and Safdar (2015) investigated the relationship between adverse childhood experiences and impulsivity among students at the University of the Punjab, Lahore

3. Emotional Regulation Questionnaire (ERQ, Urdu): ERQ (Gross & John, 2003), translated into Urdu by Safdar and Bokhari (2015), is a measure of cognitive reappraisal and expressive suppression. Items are evaluated on a 7-point Likert scale (1 = Strongly Disagree 7 = Strongly Agree).

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Procedure

All the participants were provided with written informed consent. The data collections were done in silent clinic rooms to achieve privacy. The demographic questionnaire was given to the participants and then the HQ-8, ACEs, and ERQ. A 50-member subsample was used to test test-retest reliability by responding to the HQ-8 once more after 2 weeks.

Data Analysis

They were analyzed with SPSS v26 and AMOS v26.

1. Demographic variables and scale scores were calculated as descriptive statistics.
2. The underlying factor structure behind HQ-8 has been studied using the exploratory factor analysis (EFA) with principal axis factoring and Promax rotation applied to half the sample (n = 100).
3. The remaining half (n = 100) was conducted to confirmatory factor analysis (CFA) to test the model fitting with CFI, TLI, RMSEA and SRMR.
4. Stability of reliability was done through Cronbachs alpha, McDonalds omega as well as intraclass correlation coefficient (ICC) test-retest 2 weeks.
5. Pearson correlations were used to measure convergent and divergent validity between HQ-8, ACEs, and ERQ subscales. The level of statistic significance was $p < .05$.

Ethical Considerations

Participants received the information on the purpose of a study, volunteering, and data confidentiality. No details were gathered and the participants were free to drop out at any point.

Table 1

Descriptive Statistics and Demographic Characteristics of the Sample (N = 200)

Variable	Category	n	%	Mean	SD
Gender	Male	100	50.0	–	–
	Female	100	50.0	–	–
Age (years)	45–49	52	26.0	–	–
	50–54	60	30.0	–	–
	55–57	45	22.5	–	–
	58–60	43	21.5	52.4	4.3
Education	Matric/O-Level	20	10.0	–	–
	Intermediate/A-Level	40	20.0	–	–
	Bachelor	92	46.0	–	–
	Master	48	24.0	–	–
Disease Duration (years)	< 5	38	19.0	–	–
	5–9	90	45.0	–	–
	10–14	48	24.0	–	–
	≥ 15	24	12.0	8.6	3.1
Socio-Economic Status (SES)	Low	50	25.0	–	–
	Middle	115	57.5	–	–
	High	35	17.5	–	–

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Note. Frequencies (n) and percentages (%) are reported for categorical variables. Means and standard deviations (SD) are reported for continuous variables.

The demographic data of the sample (N= 200) of middle aged asthmatic adults have been summarized in table 1. The sample was divided into an equal proportion of males and females (50.0% each), with the age between 45 and 60 years (M = 52.4, SD = 4.3) old. The age group 50 years and above (30.0%), 45 years and above (26.0%), 55 years and above (22.5%), and 58 years and above (21.5) was the largest group. The education levels were highest at the bachelors (46.0%), then followed by the masters (24.0%), intermediate/ A-level (20.0%), and matric/ O- level (10.0%). The median asthma duration was 8.6 (SD = 3.1) years and the majority of the subjects indicated illness durations of 5 to 9 years (45.0%). Most of the respondents were in the middle socioeconomic status (57.5%), 25.0% were low SES, and 17.5 were high SES.

Scale	k	M	SD	α	Range (Actual)	Range (Potential)	Skewness
Hikikomori Questionnaire (HQ-8)	8	2.94	0.71	.85	1.5–4.6	1–5	0.18
Adverse Childhood Experiences (ACEs)	10	3.72	2.05	.80	0–9	0–10	0.77
Emotional Regulation Questionnaire (ERQ) — Reappraisal	6	4.21	0.83	.82	2.5–6.1	1–7	–0.31
Emotional Regulation Questionnaire (ERQ) — Suppression	4	3.58	0.91	.79	1.7–5.8	1–7	0.29

Table 2

Descriptive Statistics of variables in the Study (N = 200)

The main study measures have descriptive statistics, which are presented in Table 2. The mean HQ-8 score was found to be 2.94 (SD = 0.71) with a good internal consistency (=.85) which means that it is a reliable measure of social withdrawal. The ACEs scale produced a mean of 3.72 (SD = 2.05; α =.80) and it showed a nominal skew that was mildly positive implying variation in childhood adversity exposure. ERQ reappraisal was sufficiently reliable (α =.82) and so was the ERQ suppression (α =.79). On the whole, there were normal or slightly skewed distributions of responses on measures.

Table 3

Psychometric Properties of the Urdu HQ-8 (N = 200)

Measure	Value
Kaiser–Meyer–Olkin (KMO)	.81
Bartlett's Test of Sphericity (χ^2)	612.43
Degrees of Freedom (df)	28
p-value	< .001
Total Variance Explained (%)	51.2%
Cronbach's α	.85

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Note. Results are based on middle-aged adults with asthma. KMO and Bartlett's statistics demonstrate adequacy for factor analysis, and Cronbach's alpha indicates strong internal consistency.

EFA was used to assess the factorial structure of the Urdu HQ-8. The Kaiser-Meyer-Olkin value of (.81) was above the recommended value, which showed that there was sufficient sampling. The result of the test of sphericity conducted by Bartlett was significant, 2(28) = 612.43, p =.001, which defined that the correlation matrix was appropriate to extract the factors. EFA indicated that there was one dominant factor that was found explaining 51.2 percent of the total variance, which supported the unidimensional-structure of the scale. Internal consistency reliability was high (=.85), which means that all the items play a significant role in the measurement of social withdrawal.

Table 4

Confirmatory Factor Analysis and Criterion Validity of the HQ-8
(N = 200; middle-aged adults with asthma)

Measure	Value
χ^2/df	2.08
CFI	.95
TLI	.94
RMSEA	.052
SRMR	.041
Correlation with ACEs (r)	.47**
Correlation with ERQ Reappraisal (r)	–.32**
Correlation with ERQ Suppression (r)	.39**

Note. CFA indices indicate acceptable to good fit. **p < .01.**

The HQ-8 supported the unidimensional model of HQ-8 with confirmatory factor analysis. The goodness of fit of the model was acceptable, with 2/df = 2.08, CFI =.95, TLI =.94, RMSEA =.052, SRMR =.041, which are within its recommended ranges. Criterion validity tests indicated that, HQ-8 scores had significant positive relationships with ACEs (r =.47, p <.01), and ERQ suppression (r =.39, p <.01), but a significant negative association with ERQ reappraisal (r = -.32, p <.01). These results imply that increased social withdrawal is linked with more childhood adversity and reduced adaptive emotion regulation that is reasonable evidence of construct validity.

Discussion

This study was aimed at translating, culturally adapting, and psychometrically testing the Urdu version of Hikikomori/Social Withdrawal Questionnaire -8 item version (HQ-8) to middle-aged adults with asthma. This suggests that the HQ-8-Urdu is a sound and valid measure of pathological social withdrawal in this group of population. In line with the previous studies in the field that explain that Hikikomori is a global and clinically relevant type of persistent isolation, the respondents with higher HQ-8 scores also indicated more psychosocial burden (Kato et al., 2018; Teo et al., 2019).

The strict multi-step translation process guaranteed conceptual and cultural suitability. Forward translation, expert reconciliation and back translation maintained the meaning of items and accommodated linguistic subtlety to Urdu speaking adults. Cognitive interviewing also ensured

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transparency and acceptability, which is consistent with the best practices of adapting cross-cultural instruments. Such processes are critical when one is studying phenomena like the Hikikomori, where family, independence, and social obligation norms may be used to determine withdrawal expression.

Structural validity was high based on psychometric analyses. The exploratory factor analysis supported a one-dimensional model that accounted over fifty percent of the variance whereas confirmatory factor analysis indicated a great model fit index. The results are consistent with the previous studies that core Hikikomori practices such as avoidance, confinement, and diminished participation could be represented in one latent factor (Teo et al., 2019). Internal consistency (alpha =.85; 1 =.88), testretest reliability (satisfactory temporal stability) enhanced the measurement accuracy of the scale.

Theoretical coherence of construct validity outcomes was reached. The HQ-8 scores were positively correlated with adverse childhood experiences, which confirms the existence of the effect of early trauma on later withdrawal, emotional dysregulation, and interpersonal avoidance (Felitti et al., 1998; Shin et al., 2022). A Likert-adapted format of ACEs enabled more severity gradient sensitivity, which probably improved the ability to detect these associations (Bond et al., 2021). In addition, more frequent social withdrawal was related to a reduced application of cognitive reappraisal and more intensive use of expressive suppression, which were also in line with models that regarded maladaptive emotion regulation strategies as promoting avoidance and isolation (Gross, 2015; Kring and Sloan, 2010).

These dynamics can be further increased in chronically ill persons. Perceived vulnerability, a symptom of asthma, and functional restrictions can increase the use of withdrawal as a coping strategy, particularly in the middle of life when the workload and the burden of caring are significant (Baiardini et al., 2020; Li et al., 2023). The pattern noted would indicate that Hikikomori in medical groups could be a result of a combination between biological load, developmental adversity that has not been resolved, and the inability to manage emotions. The HQ-8-Urdu is a clinically brief instrument of detecting risky individuals who might otherwise go unnoticed in the course of normal medical practice.

There are some limitations that should be mentioned. To start with, the cross-sectional design does not allow establishing causality in terms of the directionality between the social withdrawal, adversity and regulation strategies. This requires longitudinal studies into whether withdrawal is an indicator of deteriorating psychological or functional outcomes to time. Second, the use of self-report measures creates potential recall bias, social desirability, especially where withdrawal can be stigmatized. Third, the two urban clinics may not represent the rural or socioeconomically diverse populations in terms of convenience sampling.

Further studies are needed to replicate the results in other chronic disease populations, investigate differences by sex and role, and combine qualitative and quantitative approaches in the investigation of culturally specific definitions of isolation and obligation. It is also justified that intervention research indicates whether the intervention of emotion regulation especially cognitive reappraisal can decrease the risk of social withdrawal, these findings indicate that the HQ-8-Urdu is psychometrically sound and cross-culturally acceptable. The instrument will help to identify Hikikomori in adults with asthma early, provide psychosocial care, and further understand the influence of childhood trauma and emotional processes on social functioning in chronic disease.

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