

Translation and Validation of the “Walsh Family Resilience Questionnaire” for Iranian Families

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Abstract

Introduction: Resilience is the process by which families are able to maintain or regain positive outcomes despite stress and negative emotional experiences. Assessing family resilience is important to identify families' strengths and vulnerabilities. There are currently no family resilience instruments available for Iranian families. This paper describes the translation and validation of Walsh Family Resilience Questionnaire (WFRQ) for being used with Iranian families.

Method: The WFRQ was translated into Persian and back-translated. Proportional simple random sampling was used to recruit a representative sample of 350 families selected from a military center in 2017 in Tehran. Total scale and subscale reliability were examined using Cronbach alpha. Test-retest reliability was conducted with 350 adolescents who completed the WFRQ twice with a two-week interval in between and assessed using Intra-class Correlation Coefficients (ICC).

Results: Cronbach alpha coefficients were equal to or greater than 0.70 for all scales. Test-retest reliability for the overall WFRQ score was excellent (ICC = 0.83, 95%CI, 0.76–0.93) and very good for family belief system subscales (ICC = 0.70–0.79).

Conclusion: The present study provides evidence of good validity, reliability and test-retest reliability of the WFRQ for Iranian families. Further testing, including construct validity, and testing across different contexts will strengthen the evidence. The instrument will have applications in resilience research, educational and clinic settings and could facilitate the development and evaluation of intervention programs to build resilience in Iranian families.

Keywords: Translation, Validation, Family resilience

1. Introduction

Resilience as a construct [1] has been defined as the ability to positively adapt or overcome adversity or stress [2]. It is considered as a continuum of adaptation or success [3]. Resilient individuals are more resistant to psychological risk experiences in comparison with non-resilient people [4] and have the capacity to recover from psychological trauma [5]. Despite many studies focusing on individuals' capacities [6], resilience is also a feature of the individual's surrounding environment such as family, school and community [7]. Recent studies have demonstrated that resilience is also influenced by interactions between genetic and environmental factors [8]. Beyond seeing individual family members and effective parenting/caregiving as resources for individual resilience, a systemic perspective focuses on risk and resilience in the family as a functional unit [9]. Family resilience refers to the capacity of the family system to withstand adversity [10]. Resilience is the fundamental concept to understand why some families are devastated by traumatic events, such as illnesses, disability, or loss, while others adapt or even grow stronger. This approach affirms the evolutionary and self-healing potential of families to overcome crisis and difficulties in their lives.

The theoretical–clinical model of family resilience by Walsh is characterized by a focus shift, from dysfunction and limitations of families and individuals to their resourceful capacities, from pathology to functionality, and from a problematic situation to possibility [11].

The Walsh Family Resilience Framework identified nine key processes and grouped them into three dimensions of family functioning: family belief systems, family organization, and communication/problem-solving processes. The first dimension – family belief systems – involves 1) shared meaning-making efforts, 2) positive outlook, and 3) transcendence and spirituality, which facilitate shared efforts to understand adverse situations, their impact, and efforts to overcome challenges. Family resilience is promoted by shared beliefs that increase general functioning, collaborative strategies, and movement toward effective recovery and growth. The second dimension – family organization – involves transactional processes that strengthen 4) flexibility, 5) connectedness/cohesion, and 6) economic and social resources. All contribute to reorganization necessary for adaptive responses to meet stressful challenges. The third dimension – communication/problem-solving processes – involves 7) clarity, 8) emotional expression, and 9) collaborative problem solving. These processes facilitate resilience by clarifying information about adverse conditions, by sharing both painful and positive feelings and by facilitating problem solving and proactive planning. These fundamental processes express themselves with different modalities and measures among families, with varied values, resources, and adverse challenges.

Walsh [12] developed a measure of family resilience in which a total of 32 items were defined by a 5-point Likert scale (1 = rarely; 5= usually) followed by an open question. The latter asks the patients and relatives to specify any other aspects that helped them to overcome a crisis.

The Walsh Family Resilience Questionnaire, can be used in pre- and post-assessments, practice effectiveness studies, for rating within families who have changed over time, in the course of dealing with an adverse situation, such as adaptation processes after a crisis event or shift when encountering emerging challenges or chronic multi-stress conditions. The questionnaire will be of great utility for clinicians since it can guide therapeutic interventions focusing on resources. It shows also – in a simple and fast

way – how family needs can be addressed to target treatments by monitoring the patterns and evaluating the outcomes [11].

Mu [13] translated this scale into Chinese, and used a Likert 5-point scale for scoring. A total of 176 questionnaires were distributed, and 145 questionnaires were returned (return rate 82.3%). The internal consistency (Cronbach's α) of the Family Resilience Scale was 0.971, and that of each subscale (belief systems, organizational patterns and communication processes) was 0.94, 0.90 and 0.96, respectively, with good reliability.

Rocchi et al. [11] translated this scale into Italian and an adult sample of 421 participants (patients and relatives) was collected with the aim to assess the reliability and validity of the Walsh-IT. The reliability showed high correlation between repeated measurements. The total score of the Walsh-IT-R was strongly correlated with the total score of FACES III Real Family Scale ($r=0.68$; $p<0.0001$).

No studies have been published using the WFRQ with Iranian Families. The aim of the present study was to create the first Persian translation of the WFRQ, and to conduct psychometric testing of the validity and reliability in an Iranian context.

2. Method

Development and pilot testing of the Persian language WFRQ with permission from the WFRQ lead author, two bilingual translators, whose first language was Persian, translated the original questionnaire independently. One translator was a psychologist who was familiar with the concept of family resilience and the published resilience literature. The second translator was a post graduate in English translation who was not familiar with resilience research. After translation, all the items and text were evaluated by the research team and the translators chose the best statement for each item. The statements were selected based on consensus.

A back-translation was then independently completed by one bilingual translator, whose first language was Persian, but had lived in UK for 4 years respectively. The back translation process was blind to the original questionnaire. The two back translated questionnaires were evaluated by the translators and the research team and the best statements were selected for each item based on consensus.

Table 1. Walsh Family Resilience Questionnaire (WFRQ) –Based on Family Resilience Framework: Key Processes

| Domain/Scale | Items | Example Items |
|---|-------|---|
| Family Belief System | 13 | |
| Meaning-Making of Adversity | 4 | We try to make sense of our adverse situation and our options. |
| Positive outlook | 4 | We encourage each other and build on our strengths. |
| Transcendence, Spirituality | 5 | We find inspiration to renew or revise life dreams; positive future vision. |
| Family Organizational Processes | 9 | |
| Flexibility | 3 | We are flexible in adapting to new challenges. |
| Connectedness | 3 | Our family respects our individual needs and differences. |
| Social & Economic Resources | 3 | We can rely on support of friends, neighbors and our community. |
| Communication and Problem-solving Processes | 10 | |
| Clear, consistent messages | 3 | We are clear and consistent in what we say and do. |
| Open Emotional Expression | 3 | We can express many different emotions. |
| Collaborative Problem-solving | 4 | We focus on our goals and take steps to reach them. |

An expert committee comprised from one methodologist, one family psychologist, two English translators, and two members of the "Academy of Persian Language and Literature" then reviewed the Persian version of the questionnaire to assess the cross-cultural equivalence and appropriateness of the WFRQ to the Iranian Families' population. Semantic equivalence of the items was reviewed by assessing the meaning of each word to ensure the accuracy of translation. Idiomatic equivalence was reviewed through evaluating translated idioms such as "We can rely on". Items were investigated with reference to daily life experiences in order to ensure experiential equivalence. There was no word in the questionnaire which held different conceptual meanings between the original and target (Persian) context. Following the cultural adaptation of the instrument, a pilot test was conducted with 10 families from a range of socio-economic backgrounds in Tehran. The translated questionnaire was completed by participants, who were asked to identify ambiguous items and suggest preferred statements. The pilot testing resulted in the rephrasing of one item. At the end of this phase, the translated pre-final version of Walsh Family Resilience Questionnaire was prepared to get used in the next stage to examine the validity and reliability.

The questionnaires were completed by families during normal classroom time in the presence of one researcher. The average time to complete the questionnaire was 25–35 min. Participation was anonymous and family names were not requested on the questionnaire. Basic demographic data including age, gender, and nationality were collected.

Statistical analyses were performed using SPSS version 18.0. Descriptive statistics are provided for socio demographic variables. The internal consistency of the questionnaire and subscales were assessed using Cronbach's alpha coefficients. Acceptable value for Cronbach's alpha was defined as equal to or greater than 0.70[14]. Test re-test reliability was assessed using Intra-class Correlation Coefficients (ICC) comparing the WFRQ overall score and subscale scores obtained at two time points from the same participants. Lisrel 8.8 was used for confirmatory factor analysis and assessing the goodness of the fit 3 scales resilience model. The values of the Root Mean Square Error of Approximation (RMSEA) below 0.05

indicate a close fit; between 0.05 and 0.8, a fair fit; between 0.08 and 0.1, a mediocre fit; and, over 0.1, a poor fit. The cut-off values were considered as 0.95 for CFI and NFI and 0.08 for the RMR i [15].

3. Results

Among a total of 540 families, 350 families were selected from a military center in 2017 by simple random sampling method. These families completed the Walsh Family Resiliency Questionnaire. All families were Iranian nationals and the mean age of mothers in this study was 38.14 and the fathers were 46.19. Also, 23.4% of parent's had primary education and 30.6% had diploma education, 32% had Bachelor's degree, 10% had Master's degree and 4% had Doctorate. The average number of children in these families was 2.3 and their marital life period was an average of 16.5 years.

General descriptive data for each scale, along with Cronbach alphas are described in Table 2. Cronbach alpha coefficients for all scales were in the acceptable (0.70) to good (0.82) range. The calculated Cronbach's alpha coefficient for Family Organizational Processes domain of the WFRQ were in an acceptable range ($\alpha = 0.70$), and in the good range for Communication and Problem-solving Processes domain ($\alpha = 0.85$) and was excellent for the Family Belief System ($\alpha = 0.94$).

Test re-tests reliability findings are shown in Table 3. The overall calculated ICC for the total questionnaire was 0.87 (95%CI 0.76–0.93) indicating a very strong test-retest reliability. The calculated ICC for Family Belief System scales ranged between 0.70 and 0.79 showing a strong agreement in scores obtained over a two-week interval. Test re-test reliability in the current study was in the good to excellent range for all scales with ICC values ranging between 0.70 and 0.79. According to Cicchetti [17], ICC between 0.60 and 0.74 is good, 0.75 and 1.00 is excellent [16]. The questionnaire as a whole is in an excellent range in terms of reliability (ICC = 0.87).

Confirmatory factor analysis was performed to investigate the factorial structure of the 9 WFRQ scales. The estimated fit indices using Lisrel 8.8 for this model are presented in Table 4.

Factor loadings of items within each scale ranged from good to excellent (table5).

Table 2. General descriptive data for each scale and Cronbach's alpha of translated WFRQ

| Domain/Scale | Cronbach's alpha |
|---|------------------|
| Family Belief System | |
| Meaning-Making of Adversity | 0.71 |
| Positive outlook | 0.72 |
| Transcendence, Spirituality | 0.72 |
| Family Organizational Processes | |
| Flexibility | 0.73 |
| Connectedness | 0.70 |
| Social & Economic Resources | 0.73 |
| Communication and Problem-solving Processes | |
| Clear, consistent messages | 0.72 |
| Open Emotional Expression | 0.72 |
| Collaborative Problem-solving | 0.71 |

Table 3. Test re-tests reliability: Inter-class correlation coefficients

| Doman/Scale | Persian WFRQ | |
|---|----------------|-------------------------------|
| | Cronbach Alpha | ICC (95% Confidence Interval) |
| Family Belief System | | |
| Meaning-Making of Adversity | 0.70 | 0.70 (0.59–0.79) |
| Positive outlook | 0.79 | 0.79 (0.71–0.85) |
| Transcendence, Spirituality | 0.75 | 0.75 (0.66–0.83) |
| Family Organizational Processes | | |
| Flexibility | 0.73 | 0.72 (0.62–0.81) |
| Connectedness | 0.72 | 0.71 (0.62–0.80) |
| Social & Economic Resources | 0.70 | 0.70 (0.59–0.79) |
| Communication and Problem-solving Processes | | |
| Clear, consistent messages | 0.70 | 0.70 (0.59–0.79) |
| Open Emotional Expression | 0.72 | 0.71 (0.62–0.80) |
| Collaborative Problem-solving | 0.71 | 0.70 (0.59–0.78) |

Table 4. Fit indices for confirmatory factor analysis of the 12 Persian WFRQ scales (n = 350).

| Indic | Estimated value | Cut-off values |
|----------|-----------------|-------------------------------|
| χ^2 | 3737.21 | – |
| p | <0.001 | <0.05 |
| GFI | 0.86 | 0.9 |
| RMSEA | 0.10 | stringent upper limit of 0.07 |
| 90% CI | 0.25, 0.2 | – |
| CFI | 0.86 | ≥0.95 |
| RMR | 0.14 | ≥0.08 |
| NFI | 0.85 | ≥0.95 |

Table 5. Factor loadings of WFRQ items

| Scale | Item | Correlation item corrected total | Factor loading |
|-------------------------------|------|----------------------------------|----------------|
| Meaning-Making of Adversity | 1 | 0.31 | 0.41 |
| | 2 | 0.53 | 0.67 |
| | 3 | 0.70 | 0.85 |
| | 4 | 0.52 | 0.64 |
| Positive outlook | 5 | 0.70 | 0.88 |
| | 6 | 0.31 | 0.42 |
| | 7 | 0.70 | 0.86 |
| | 8 | 0.71 | 0.71 |
| Transcendence, Spirituality | 9 | 0.71 | 0.75 |
| | 10 | 0.51 | 0.61 |
| | 11 | 0.52 | 0.54 |
| | 12 | 0.50 | 0.52 |
| Flexibility | 13 | 0.66 | 0.70 |
| | 14 | 0.65 | 0.72 |
| | 15 | 0.44 | 0.12 |
| | 16 | 0.65 | 0.70 |
| Connectedness | 17 | 0.75 | 0.77 |
| | 18 | 0.81 | 0.76 |
| | 19 | 0.54 | 0.61 |
| Social & Economic Resources | 20 | 0.69 | 0.70 |
| | 21 | 0.74 | 0.58 |
| | 22 | 0.64 | 0.71 |
| Clear, consistent messages | 23 | 0.60 | 0.77 |
| | 24 | 0.47 | 0.52 |
| | 25 | 0.41 | 0.34 |
| Open Emotional Expression | 26 | 0.60 | 0.65 |
| | 27 | 0.70 | 0.72 |
| | 28 | 0.45 | 0.59 |
| Collaborative Problem-solving | 29 | 0.70 | 0.71 |
| | 30 | 0.65 | 0.66 |
| | 31 | 0.70 | 0.72 |
| | 32 | 0.65 | 0.68 |

4. Discussion

Resilience is a culturally-based construct and it is necessary to consider contextual factors when investigating adolescent resilience [16]. There are no specific instruments to measure family resilience in an Iranian context. The present study is the first study in which WFRQ has been translated into Persian and was used with Iranian families. Regarding the validity of the translation process, the translation process was conducted by independent linguistic experts and has been approved by the author of the WFRQ and expert committee members. Family debriefing was also conducted in the pilot study to enhance the validity and reliability of the Persian WFRQ. Comprehensive translation, back translation and consultations with relevant experts resulted in the development of a Persian family resilience measure that appeared to be true to the constructs addressed in the original measure. The test-retest reliability in the current study was in the good to excellent range for all scales.

The confirmatory factor analyses supported the original factor structure of WFRQ with the fitness of the 9 scale resilience model for the current sample size of Iranian families. The findings indicate acceptable internal inconsistency of the translated WFRQ scales. Also, all scale reliabilities were in the acceptable to good range. This is while the scale reliabilities in the current study are similar to previous findings [11, 13]. There may be other factors that influence resilience for Iranian families and cultural differences may exist which need to be considered to improve the performance of the Persian community scale. Further research, such as a mixed-method study exploring family resilience factors in Iranian adolescents, may benefit the psychometric refinement of the Persian WFRQ. The poorly performing items will be dropped or reworded in an attempt to better capture resilience factors in the community for Iranian families.

5. Conclusion

In conclusion, the present study provides evidence of scale validity and test-retest reliability of the Persian translation of the WFRQ among Iranian families. The study was conducted in response to lack of specific measurement tools for assessing family resilience in Iran. The Persian WFRQ is the first questionnaire available to measure family resilience in Iranian families Based on Walsh's approach. The instrument will have applications in family resilience research, educational and clinic settings and could facilitate the development and evaluation of intervention programs to build resilience in Iranian families.

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