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► **To cite this version:**

Soudabeh Z Sarabi. Validation of the Persian Translation of the Fear of Negative Evaluation Scale. North American Journal of Psychology, 2017, 19, pp.541 - 548. hprints-01638077

HAL Id: hprints-01638077

<https://hal-hprints.archives-ouvertes.fr/hprints-01638077v1>

Submitted on 3 Dec 2017

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Validation of the Persian Translation of the Fear of Negative Evaluation Scale

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In this study the *Fear of Negative Evaluation Scale* (Watson & Friend, 1969) was translated into Persian and validated. Validity evidence for the translated scale was provided by fitting the data to the dichotomous Rasch model. Findings revealed that the data with 30 items did not fit the Rasch measurement model. Only after deleting seven items the remaining 23 items fit well to the model with high reliability. Validity of the test in Persian supports the cross-cultural validity of the construct and the test.

Research in clinical psychology shows that anxiety experienced in social situations is an important determinant of mental disorders. Family relations, performance, and hospitalization in psychopaths are reported to be associated with distressful social relationships (Watson & Friend, 1969). Social phobia or social anxiety disorder is a prevalent phenomenon in modern societies. Research shows that 12.1% of the adult population in America (Kessler, Berglund, Demler, Jin, Merikangas, & Walters, 2005) and 8.9% of women in Spain (Crespo, Ontoso, & Grima, 1998) have experienced social phobia and social anxiety in their lives.

In an experimental study, Karakashian, Walter, Christopher, and Lucas (2006) showed that FNE is a marginal predictor of helping behavior. They demonstrated that participants with high FNE were less likely to help others presumably because of fear of bystanders' negative appraisal. High FNE individuals are also reported to avoid potentially threatening social comparison information (Friend & Gilbert, 1973, cited in Leary, 1983) and feel uneasy about receiving unfavorable evaluations (Smith & Sarason, 1975, cited in Leary, 1983).

Fear of negative evaluation as the cognitive component of social phobia is defined as "apprehension about others' evaluations, distress over their negative evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (Watson & Friend, 1969, p.449). FNE might be the result of prior disapproval received or a combination of prior received disapproval and desire for approval. It seems that FNE is acquired because of frustration and punishment received in the past. Individuals with high FNE are

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North American Journal of Psychology, 2017, Vol. 19, No. 3, 541-548.
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concerned about being evaluated unfavorably. They are apprehensive about other's judgment of them, try to gain social approval and avoid disapproval. High FNE individuals are presumably affected by the possibility of disapproval; therefore, they avoid situations where they might be unfavorably judged (Watson & Friend, 1969).

Watson and Friend (1969) developed a scale to measure FNE as a dimension of social evaluative anxiety. The scale is composed of 30 true-false items which is often complained to be too long as it exhausts respondents especially when it is given along with other tests (Leary, 1983). Watson and Friend (1969) reported a KR-20 reliability of .94, a four-week retest reliability of .78, and a mean item discrimination of .72 (item-total correlations) for the scale. The scale also had a negative correlation with the Crowne-Marlowe (1964) social desirability scale ($r = -.25$). Their findings further showed that females had a significantly higher level of FNE than males.

In an attempt to make the FNE scale shorter, Leary (1983) developed a brief fear of negative evaluation (BFNE) scale by selecting 12 items out of the 30 items of the original scale. The criterion for selection of the items was item-total correlation: items with item-total correlations of at least .50 were selected. The response format of the scale was also altered from dichotomous to a five-point Likert scale. Leary (1983) demonstrated the validity of the brief version of FNE scale with a number of correlations in the form of convergent-discriminant analysis. BFNE had an internal consistency reliability of .90 (Cronbach's alpha), correlated at .96 with the original FNE, and had a four-week test-retest reliability of .75.

In most studies the two scales of FNE and BFNE are assumed to be measure a unidimensional construct. However, more recent research on the factorial structure of the scales demonstrated that the scales are two-dimensional: positively phrased items form one dimension and negatively phrased items comprise another dimension (Rodebaugh, Woods, Thissen, Heimberg, Chambless, & Rapee, 2004). Several authors, therefore, recommend using only positively worded items as negatively worded ones cause confusion and lead to unexpected replies (Duke, Krishnan, Faith & Storch, 2006; Weeks et al., 2005). Later work with scales which contained only positively worded items ascertained the unidimensionality of the scale (Carleton, Collimore, McCabe, Antony, 2011).

Most of the validation studies on FNE and BFNE scales have been conducted in Anglophone populations with two studies in Spanish populations (Gallego, Botella, Quero, Baños, & García-Palacios, 2007; Gallego-Pitarch, 2010). These studies demonstrated the validity of scale in a series of convergent-discriminant correlations. To justify the use of

the scale in other cultures it is necessary to demonstrate its validity and reliability in different populations. Although the instrument enjoys good psychometric properties and adequate construct validity in English, the cross-cultural validity of the instrument is underresearched. The purpose of the present study is to validate the Persian translation of the original FNE scale in a nonclinical Iranian sample using the Rasch model (Rasch 1960/1980). Fit of data to a latent trait model, such as the Rasch model, is evidence that a latent dimension underlies the test which accounts for the covariation among the items. In other words, the latent dimension is the cause of covariation among the items which is evidence for validity (Baghaei & Tabatabaee, 2016; Borsboom, 2008).

METHOD

Watson and Friend (1969) developed a scale to measure FNE as a dimension of social evaluative anxiety. The scale is composed of 30 true-false items. Correlational studies by Watson and Friend (1969) demonstrated that FNE as measured by their scale was correlated with relevant constructs of manifest anxiety ($r=.60$), anxiousness ($r=.47$), social approval ($r=.77$), desirability ($r=-.58$), defence ($r=.42$), and dominance ($r=-.50$). Experimental investigations by Watson and Friend (1969) demonstrated that those high on FNE became nervous in evaluative situations and worked harder even on boring tasks to gain approval or to avoid disapproval. In this study the FNE scale is translated into Persian and analyzed using the Rasch dichotomous model (Rasch, 1960/1980).

Translation procedure

The 30 items of the fear of negative evaluation scale were translated into Persian. The translated version was moderated in a series of revisions by two other translators. The final translated version was back translated into English by a bilingual English-Persian psychologist. The original English translation and the back translated versions of the scale were compared and necessary modifications were made to assure the linguistic and psychological equivalence of the two scales¹.

Participants

Participants were 147 undergraduate university students ($M_{age}=24.89$, $SD=6.09$). Thirty-seven of them were male and 110 were female. The questionnaire was given to the participants during regular class sessions. The respondents were informed that the questionnaire was designed for research purposes only and participation in the study was voluntary.

¹ The Persian scale is available from the author upon request.

RESULTS

The fear of negative evaluation scale (FNES) was analyzed using the dichotomous Rasch model. The eRm package (Mair, Hatzinger, & Mair, 2016) in R (R Core Development Team, 2016) was employed to estimate the parameters of the model and investigate the fit of the data to the measurement model.

The fit of data to the Rasch model was assessed by means of principal component analysis (PCA) of standardized residuals (Baghaei & Cassady, 2014; Linacre, 2016), the likelihood ratio test (Andersen, 1973), and Andersen's chi square by degrees of freedom (Baghaei, Yanagida, & Heene, 2017a; Baghaei, Yanagida, & Heene, 2017b).

TABLE 1: Item Parameter Estimates, Standard Errors & Item Fit Values

Item	Estimate	SE	Infit MNSQ	Infit <i>t</i>
1	-1.18	.20	1.20	1.78
2	-.52	.19	.99	-.02
3	-.33	.18	.96	-.35
4	-1.83	.23	1.02	.24
5	-3.47	.37	.84	-.51
6	.09	.18	.87	-1.54
7	.10	.18	1.06	.80
8	-.94	.19	1.08	.91
9	.95	.19	.90	-1.01
10	.20	.18	1.01	.25
11	2.71	.28	.93	-.26
12	.60	.19	1.11	1.32
14	1.14	.20	.75	-2.66
15	.60	.19	.97	-.23
17	.44	.18	.86	-1.67
20	-.32	.19	.94	-.69
21	-.47	.19	.87	-1.42
22	.35	.18	1.03	.39
25	-.37	.18	1.04	.59
26	-1.48	.21	.91	-.71
27	2.44	.26	1.10	.67
28	-.55	.19	.96	-.43
30	-.07	.18	.95	-.48

Andersen's (1973) likelihood ratio test showed that the 30 items of the scale do not fit the Rasch model. $\chi^2=87.42$, $df=29$, $p=.00$. Graphical model check indicated that seven items (13, 16, 18, 19, 23, 24, 29) fall far from the 45 degree line. The Rasch model was fitted again after deleting these items. The Rasch model fitted with 23 items, $\chi^2=33.75$, df

=22, $p=.052$. The chi square by degrees of freedom was 1.53 which is acceptable according to Baghaei, Yanagida, and Heene's (2017b) modified criteria.

Table 1 shows the item parameter estimates, their standard errors, and their infit mean square values. All items have infit mean squares within the acceptable range of .70-1.30 (Bond & Fox, 2007). Item fit statistics show the degree to which items conform to the Rasch model expectations and contribute to the definition of the unidimensional construct of fear of negative evaluation. Graphical model check (Figure 1) also indicated that the 23 items cluster around the 45 degree line, which is evidence of fit of data to the Rasch model.

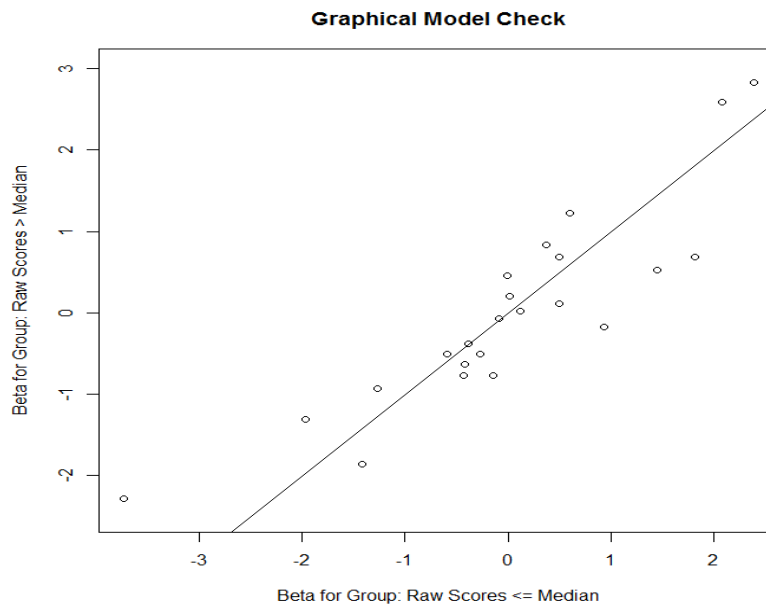


FIGURE 1 Graphical Model Check for the 23 Fitting Items

Principal components analysis of standardized residuals (Linacre, 2016) showed that the strength of the first contrast in the data is 2.2 in eigenvalue units, which is smaller than the criteria (2.5) set by Linacre (2016). The separation reliability of the instrument with 23 items was .84.

DISCUSSION

In this study an attempt was made to validate the Persian translation of fear of negative evaluation scale (Watson & Friend, 1969). The scale was translated into Persian through forward and backward procedures.

Findings showed that the scale, after deleting seven items, is a valid and reliable measure of fear of negative evaluation in the Persian language. Validity evidence for the instrument was provided by fitting the data to the Rasch (Rasch, 1960/1980) unidimensional model.

Future research should more closely examine the invariance of the scale across languages. The sample in the study was rather small, thus future studies should examine the validity of the Persian translation of the scale with larger samples. Furthermore, the participants in this study were all Iranian mostly female undergraduate university students. More diverse populations with different backgrounds and ages from other Persian speaking countries should also be considered.

The important contribution of the present study is that it can be considered as a piece of evidence for the cross-cultural validity of the fear of negative evaluation scale. Measurement of social anxiety factors are challenging because their importance and relevance may vary across nations and cultures. Factors which cause anxiety in one culture might be quite ordinary in another culture, or vice versa. The current study demonstrates that the theory of fear of negative evaluation is viable in the Iranian population.

Misfit of seven items might be an indication that the FNE scale is not unidimensional. Further analyses are needed to examine the content of the misfitting items to find out the nature of the secondary dimension of FNE. If the multidimensionality of the scale is determined, the multidimensional Rasch model (Adams, Wilson, & Wang, 1997; Baghaei, 2012; Baghaei, 2013; Eckes & Baghaei, 2015) can be used to confirm the structure of the scale. The other possible reason for the multidimensionality of the scale might be the negatively worded items. Previous research has demonstrated that negatively worded items in psychological questionnaires could result in secondary dimensions (Baghaei, Hohensinn, & Kubinger, 2014; Marsh, 1996) which are artificial and basically nuisance method dimensions (Baghaei, & Aryadoust, 2015; Baghaei & Ravand, 2016).

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