# Brief Version of the Fear of Negative Evaluation Scale – Straightforward Items (BFNE-S): Psychometric Properties in a Spanish Population

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The aim of this study was to examine the psychometric properties of the Brief version of the Fear of Negative Evaluation Scale - Straightforward Items (BFNE-S) in a non-clinical Spanish population. Rodebaugh et al. (2004) recommended the use of this scale composed of 8 straightforwardly-worded items, instead of the 12-item version of the BFNE. The sample consisted of 542 undergraduate students, 71.3% of whom were women and 28.7% were men; the mean age was 21.71 (4.78) years. Exploratory factor analysis produced one factor which accounted for 51.28% of variance. The internal consistency of the scale was α = .89. The BFNE-S correlated with the *Social Avoidance and Distress Scale* (*r* = .44), the *Personal Report of Confidence as Speaker – Modified* (*r* = .44), the *Public Speaking Self-Efficacy Questionnaire* (*r* = -.38) and both subscales of the *Self-Statements during Public Speaking* (SSPS-P *r* = -.22; SSPS-N *r* = .53). ANOVAs revealed significant differences in the BFNE-S amongst a non-clinical population, persons suffering from specific social phobia, non-generalized social phobia and generalized social phobia.
*Keywords: assessment, fear of negative evaluation, psychometric properties, social anxiety, social phobia.*

El objetivo del presente estudio fue comprobar las propiedades psicométricas de la escala compuesta por los ítems directos de la Escala de Miedo a la Evaluación Negativa versión breve (BFNE-S) en población no clínica española. Rodebaugh et al. (2004) recomendaron utilizar esta escala formada por 8 ítems directos, en lugar de la versión del BFNE de 12 ítems. La muestra estuvo formada por 542 estudiantes universitarios. El 71,3% de la muestra fueron mujeres, el 28,7% varones y la media de edad fue 21.71 (4.78). El análisis factorial exploratorio extrajo un solo factor que explicó el 51,28% de la varianza. La consistencia interna de la escala fue α = 0,89. El BFNE-S correlacionó con la Escala de Evitación y Malestar Social (*r* = 0,44), el Cuestionario de Confianza para Hablar en Público – Modificado (*r* = 0,44), el Cuestionario de Autoeficacia al Intervenir en Público (*r* = -0,38) y ambas subescalas del Cuestionario de Autoverbalizaciones durante la situación de hablar en público (SSPS-P *r* = -0,22; SSPS-N *r* = 0,53). Se realizó un ANOVA en el que se observaron diferencias significativas en el BFNE-S entre población no clínica, personas con fobia social específica, fobia social no generalizada y fobia social generalizada.
*Palabras clave: evaluación, miedo a la evaluación negativa, propiedades psicométricas, ansiedad social, fobia social.*

The amount of research conducted in the field of social phobia (SP) and social anxiety as increased considerably in recent years (Hofmann, DiBartolo, Holaway & Heimberg, 2004). One of the reasons for this growing interest is the high prevalence of this problem in society; indeed, 12.1% of the adult population of America has experienced them at some time in their lives (Kessler et al., 2005). In Spanish samples Crespo, Ontoso and Grima (1998) reported a prevalence of 8.9% among women.

Heimberg, Holt, Schneier, Spitzer and Liebowitz (1993) classified SP into several subtypes according to its severity: a) *generalized SP*, which is diagnosed when anxiety appears in most social situations; b) *non-generalized SP*, which includes persons who experience clinically significant anxiety in a variety of social situations, except in at least one area of their social functioning; and c) *specific SP*, which is diagnosed when a person presents anxiety in a limited number of very specific situations.

The cognitive-behavioral models of SP have described social anxiety has an emotional reaction to the perception of negative evaluation by others. The construct of fear of negative evaluation belongs to the cognitive component of SP and refers to the irrational thoughts related to being judged in a hostile way or looked down upon by others in social situations (Weeks et al., 2005).

Amir, Foa and Coles (1998) observed how persons who had been diagnosed with generalized SP were more ready to interpret ambiguous social situations in a negative way than persons without anxiety and persons with other anxiety disorders. Likewise, Boone et al. (1999) reported that the self-statements of persons with generalized SP are more negative than those of persons with specific SP after speaking in public or other social interactions.

Two scales that are widely used for measuring the cognitive component of SP are the *Fear of Negative Evaluation Scale* (FNE; Watson and Friend, 1969) and the *Brief version of the Fear of Negative Evaluation Scale* (BFNE; Leary, 1983). Both scales assess fear of negative evaluation. The FNE is made up of 30 items requiring "true or false" answers. Persons who score higher on the FNE tend to catastrophize even in situations with mildly negative social events (Stopa and Clark, 2001). The FNE has proven to have good psychometric properties. For example, the internal consistency of a Spanish sample was $\alpha = .94$ and the test-retest reliability was $r = .78$ (García-López, Olivares, Hidalgo, Beidel & Turner, 2001; Watson & Friend, 1969); this measure also proved to be sensitive to therapeutic change (Cox, Swinson & Direngeld, 1998; Heimberg et al., 1990). Leary (1983) created the BFNE with the aim of expanding the range of the FNE response scale so as to increase the reliability of its scores, while at the same time producing a questionnaire that could be administered quickly.

The BFNE (Leary, 1983) comprises 12 items with a 5-point Likert-type scale (0 = "not at all characteristic of me"; 5 = "extremely characteristic of me"). The BFNE was found to be highly correlated with the original scale ($r = .96$) in an American university population (Leary, 1983). As regards the reliability of this measure in the university sample, both high internal consistency ($\alpha = .91$) and high test-retest reliability ($r = .75$) were obtained (Miller, 1995). In a non-clinical population, Weeks et al. (2005) obtained a moderate internal consistency ($\alpha = .67$). The internal consistency obtained in samples of social phobics was high for both the American population ($\alpha = .89$) (Weeks et al., 2005) and the Spanish population ($\alpha = .90$) (Gallego, Botella, Quero, Baños & García-Palacios, 2007).

The BFNE proved to have good concurrent validity in the university population. More specifically, it obtained a moderate correlation with measures of SP such as the subscales on the Social Avoidance and Distress Scale (SAD) that measure anxiety in social situations ($r = .35$) and the avoidance or desire for avoidance in those situations ($r = .19$) (Leary, 1983); the *Liebowitz Social Anxiety Scale* ($r = .56$) (LSAS; Liebowitz, 1987); the *Social Interaction Anxiety Scale* ($r = .38$) (SIAS; Mattick and Clarke, 1998) and the *Social Phobia Scale* ($r = .35$) (SPS; Mattick and Clarke, 1998). In a Spanish clinical sample (Gallego et al., 2007), the BFNE also proved to be related to specific instruments that measure: a) fear of speaking in public, such as the *Personal Report of Confidence as a Speaker – Modified* (PRCS-M; Bados, 1986) ($r = .35$); b) *Public Speaking Self-Efficacy Questionnaire* (PSSEQ; adapted from Bados, 1986); and c) positive and negative cognitions related with speaking in public, such as the *Self-Statements during Public Speaking* (SSPS-P: $r = -0.35$; SSPS-N: $r = -0.41$) (SSPS; Hofmann and DiBartolo, 2000). Other constructs that have proven to be related to fear of negative evaluation in a Spanish clinical population (Gallego et al., 2007) are depression ($r = .43$) (*Beck Depression Inventory*; Beck, Rush, Shaw and Emery, 1979) and trait anxiety ($r = .47$) (*Trait Anxiety Inventory*, STAI-R; Spielberger, Gorsuch and Lushene, 1983).

Finally, it is important to note that the BFNE proved to be a measure that is sensitive to therapeutic changes in samples of Anglo-Saxon social phobics that were undergoing cognitive-behavioral treatment for SP (Collins, Westra, Dozois & Sterwart, 2005; Weeks et al., 2005).

The theoretical foundations of the BFNE took for granted the fact that the scale had just one dimension (for example Leary, 1983; Stopa & Clark, 2001; Turner, McCanna & Beidel, 1987) until studies were carried out to examine its factorial structure. Rodebaugh et al. (2004) performed a confirmatory factorial analysis for the FNE and BFNE in a university sample and concluded that the BFNE provided more information than the FNE because it used a Likert-type scale. They also concluded that the one-dimensional structure that had been presupposed in previous studies was not suitable and the factorial structure that they considered to be more appropriate was made up of two factors:

straightforwardly-worded (BFNE-S) and reverse-scored (BFNE-R) items. Like Duke, Krishnan, Faith and Storch (2006) and Weeks et al. (2005), these authors recommended using only straightforwardly-worded items (e.g. item 1: "I worry about what other people will think of me even when I know it doesn't make a difference") because the reverse-scored items (e.g. item 2: "I am frequently afraid of other people noticing my shortcomings") caused confusion and led to wrong answers.

Given the results obtained by Rodebaugh et al. (2004), in later work carried out by Collins et al. (2005) and Cartelon, McCleary, Norton and Asmundson (2006) the items on the BFNE-R subscale were converted into straightforward items so as not to reduce the sensitivity of the measure. The resulting scale, known as the BFNE-II (Cartelon et al., 2006), had a unifactorial structure (Cartelon, Collimore & Asmundson, 2007; Cartelon et al., 2006). The internal consistency of the BFNE-II obtained in an American sample was high ($\alpha = .95$) and the corrected item-total correlation for the items that were converted into straightforward items ($M = .75$, $SD = .06$) was significantly higher than that of those same items in indirect form ($M = .36$, $SD = .11$; $F_{(1, 6)} = 39.85$, $p < .0001$). With regard to the discriminant validity of this version of the BFNE, Collins et al. (2005) observed that persons with SP scored significantly higher on this measure than persons who had been diagnosed with panic disorder and the non-clinical population.

In the study by Gallego et al. (2007) in a Spanish clinical sample, findings also lent support to the affirmative formulation of reverse-scored items as in the BFNE-II. The BFNE-II was not used in the present study because the collection of data from the clinical sample began before the study by Cartelon et al. was published. The version made up of straightforward items (BFNE-S) recommended by Rodebaugh et al. (2004) was therefore used.

As we have seen, the studies carried out to validate the BFNE have displayed good psychometric properties that have lent support to the use of this scale as a measure of fear of negative evaluation. These studies were carried out in Anglo-Saxon clinical and non-clinical populations, but only one has examined a Spanish population (Gallego et al., 2007). The study was conducted in a clinical population and the version that was validated was the original 12-item BFNE. It is important to determine whether the BFNE-S is a valid, reliable instrument in different types of populations in order to justify its use, and also to know whether its score follows a continuum between the non-clinical population and the clinical population.

The main aim of this work was to determine the psychometric properties of the BFNE-S in a Spanish non-clinical population. The specific aims were as follows: 1) To analyze the factorial structure of the BFNE-S; 2) To analyze the reliability of this measure; 3) To test the concurrent validity of this scale; and 4) To identify the presence of significant differences in the scores of subjects with different diagnoses according to the classification by Heimberg et al. (1993).

## Method

### Participants

A total of 664 persons took part in the present study; the sample was taken from the non-clinical population and the rest came from the clinical population. The non-clinical sample consisted of 542 participants (71.3% females; 28.7% males), all of whom were students at the Universitat Jaume I in Castellón (Spain). The mean age was 21.71 years (4.78) and the proportion of participants in each age band can be seen in Table 1. In terms of studies, 60.1% were in Teacher Training, 13.3% in Psychology, 9.2% in Advertising, and 17.4% were studying other degrees.

Table 1
*Proportions of participants from the non-clinical population according to age bands*

| Age | N | % |
|---|---|---|
| 18-21 | 334 | 62.9 |
| 22-28 | 156 | 30.7 |
| 29-60 | 34 | 6.4 |

The clinical sample comprised 122 participants who were part of a study to validate the BFNE in a clinical population (Gallego et al., 2007). By sexes, 84.43% of the sample were females and 15.57% were males; the mean age was 24.14 years (5.34) and ranged from 17 to 48 years. Most of the participants had studied in higher education (97.54%). With respect to the diagnostic classification by Heimberg et al. (1993), 44.26% of the participants satisfied criteria for specific SP, 36.07% for non-generalized SP and 19.67% met generalized SP criteria. Eligibility criteria were: a) satisfy DSM-IV criteria for SP, b) at least one year since onset of disorder, and c) age between 18 and 60 years. Exclusion criteria were: a) alcoholism, b) drug addiction, c) major depression, d) psychosis, and e) mental retardation. More details about these participants can be found in the original paper (Gallego et al., 2007).

### Instruments

*Brief version of the Fear of Negative Evaluation Scale – straightforward items* (BFNE-S; Rodebaugh et al., 2004). This questionnaire measures the extent to which a person experiences apprehension when s/he expects to be negatively evaluated, and it consists of 8 straightforwardly-

worded items. Items were to be answered with 5-point Likert-type responses. The internal consistency of the BFNE-S in the Spanish clinical population was α = .91 (Gallego et al., 2007). This scale has also proven to have good concurrent validity in different American samples (Rodebaugh et al., 2004).

*Brief version of the Fear of Negative Evaluation Scale* (BFNE; Leary, 1983). This questionnaire also measures the degree of fear of being negatively evaluated by others. The difference between this questionnaire and the previous one is that it is made up of two subscales – one consisting of 8 straightforwardly-worded items (BFNE-S) and the other having 4 reverse-scored items (BFNE-R). This questionnaire is a translation of the original BFNE that was created for the study by Villa (1999). The internal consistency of this questionnaire in a Spanish clinical population was shown to be high (α = .90) (Gallego et al., 2007). Furthermore, this scale has also proven to have good concurrent validity and discriminant validity in American samples (Leary, 1983; Weeks et al., 2005).

*Social Avoidance and Distress Scale* (SAD; Watson & Friend, 1969; trans.: García-López et al., 2001). This scale comprises 28 items requiring "true or false" answers. This questionnaire is made up of two subscales each containing 14 items; one scale evaluates the anxiety experienced by the person in social situations and the other one measures the active avoidance or desire for avoidance in those situations. This measure has shown good temporal stability ($r = .85$) and discriminated adequately between subjects with specific SP, generalized SP and controls in a Spanish teenage population (García-López et al., 2001).

*Public Speaking Self-Efficacy Questionnaire* (PSSEQ; adapted from Bados, 1986). This measure was adapted from the "Self-efficacy for speaking in public" questionnaire (Bados, 1986) and yielded a test-retest reliability value of .94 in Spanish clinical and non-clinical populations (Bados, 1986). This 6-item instrument measures the capacity to cope with different situations involving public speaking on a scale from 0 ("I'm sure I couldn't do it") to 10 ("I'm sure I could do it").

*Self-Statements during Public Speaking* (SSPS; Hofmann & DiBartolo, 2000; trans.: Rivero, García-López & Hofmann, 2010). This measure evaluates the self-statements and levels of distress while speaking in public. It consists of 10 items on a scale from 0 ("totally disagree") to 5 ("totally agree") and has two subscales; both the positive self-statements (SSPS-P) and the negative self-statements (SSPS-N) subscales contain 5 items. Both subscales have shown excellent internal consistency in Spanish populations (SSPS-P α = .69; SSPS-N α = .86) (Rivero et al., 2010).

*Personal Report of Confidence as a Speaker - Modified*, PRCS-M; Paul, 1966; trans.: Bados, 1986). This 30-item instrument evaluates fear of speaking in public. Bados (1986) replaced the "true/false" answer format with a scale from 1 ("completely agree") to 6 ("completely disagree").

Half the items are straightforwardly worded and the rest are reverse-scored. Despite its name, higher scores indicate a greater fear of speaking in public. The internal consistency of the PRCS-M was high in the Spanish population (α = .91) (Gallego, Botella, García-Palacios, Quero & Baños, 2009).

*Trait Anxiety Inventory* (STAI-R; Spielberger et al., 1983; trans.: Seisdedos, 1990). Trait anxiety is an increased likelihood to perceive situations as being threatening. This measure is made up of 20 items with a Likert-type scale ranging from 0 ("hardly ever") to 3 ("nearly always"). With regard to its psychometric properties, both internal consistency (α = .90) and the test-retest reliability coefficient obtained by Spielberger et al. (1983) were high ($r = .81$).

*Short Form of the Beck Depression Inventory* (BDI-13; Beck, Rial & Rickels, 1974; trans.: Sanz & Vázquez, 1998). This questionnaire has 13 items, each made up of four statements that describe different moods. The correlation between this version and the original 21-item version was high ($r = .96$). The internal consistency obtained by Beck et al. (1974) for the BDI-13 was α = .89.

## Procedure

The participants in the non-clinical sample were all university students. The first step was to ask their lecturers for permission to administer the questionnaires and the next involved going to their lectures and asking the students to collaborate and to fill them out. Questionnaires were administered during lecture time at the Universitat Jaume I in a single session that lasted an average of 20 minutes. The questionnaires were filled out in the following order: BFNE, BFNE-S, SSPS, PSSEQ, PRCS-M, SAD, STAI-R and BDI.

The clinical sample from the study by Gallego et al. (2007) was obtained from educational centers in Valencia and Castellón. Posters were put up in the centers advertising psychological therapy to treat fear of speaking in public. A psychologist with experience in evaluating anxiety disorders conducted admission interviews with persons interested in taking part in the study; those who met the eligibility and exclusion criteria voluntarily signed the informed consent document and filled out the instruments.

## Data analysis

The KMO (Kaiser-Meyer-Olkin) index and Bartlett's Test of Sphericity were used to determine whether carrying out a factorial analysis on the non-clinical sample was an appropriate procedure. When the KMO index is above .60 and Bartlett's Test of Sphericity is significant, it can be concluded that performing a factorial analysis is appropriate. In the present study an exploratory factorial analysis was performed using polychoric correlations to determine the factorial structure of the BFNE-S, and three factor

extraction rules were employed: parallel analysis, Kaiser's eigenvalues-greater-than-one rule, and Cattell's Scree test (1966). The Promin rotation method (Lorenzo-Seva, 1999) was used, since it tends to obtain the simplest possible solution. The goodness of fit index used to determine the fit of the factorial structure was the Root Mean Square Residual (RMSR), an RMSR value below .08 indicating a good fit (Hu & Bentler, 1999).

A descriptive analysis of the non-clinical sample was performed to calculate the mean, the standard deviation, the median, and the range of the BFNE-S and its subscales. In the descriptive analysis of the items, the mean and standard deviation were found for each of them, and the correlations between each item and the corrected total score were also calculated. The reliability of the scale was calculated in two different ways: a) the internal consistency was found by calculating the Cronbach's α coefficient, and b) by means of the split-half procedure using the Spearman-Brown coefficient.

Concurrent validity was tested by finding the Pearson correlations between the BFNE-S and SP measures, trait anxiety and depression. In all the preceding analyses only data from the non-clinical sample were used, but to calculate the differential scores on the BFNE-S, however, data from both the non-clinical sample and the clinical sample were used (Gallego et al., 2007), and four groups were set up: non-clinical population, persons with specific SP, non-generalized SP, and generalized SP (Heimberg et al., 1993). A one-factor ANOVA, in which the factor was the diagnosis (Heimberg et al., 1993) and the dependent variable was the score on the BFNE-S, was employed to determine whether there were any significant differences between groups; Tukey's HSD test was used to analyze post-hoc differences between groups.

## Results

### Factorial structure

The KMO index for the non-clinical sample was .85 and Bartlett's Test of Sphericity $\chi^2$ (28) = 2472.6, $p < .001$; both these data indicated that it was appropriate to carry out the factorial analysis.

An exploratory factorial analysis was performed based on the polychoric correlation matrix in order to establish the factorial structure of the questionnaire. The method employed was to extract the non-weighted least-squares, and the rotation method was Promin (Lorenzo-Seva, 1999); this method was chosen because it tends to obtain the simplest possible solution. The parallel analysis recommends a one-dimensional factorial structure. Kaiser's criterion and Cattell's Scree test (1966) also suggest the existence of a single factor: this factor accounted for 51.28% of the variance and its eigenvalue was 4.72.

Table 2 shows the saturations of the factorial solution and, as can be observed, all the items yielded saturations above .60. The RMSR index was calculated in order to evaluate the fit of the factorial solution that was adopted, its value being .074. According to Hu and Bentler (1999), an RMSR value below .08 indicates good model fit.

Table 2

*Factorial loads of the items in the BFNE-S*

| Item | Factor 1 | *Rc* |
|---|---|---|
| BFNE-S | | |
| 1 | .66 | .63 |
| 2 | .69 | .64 |
| 3 | .76 | .70 |
| 4 | .73 | .68 |
| 5 | .80 | .72 |
| 6 | .74 | .67 |
| 7 | .82 | .75 |
| 8 | .61 | .57 |

Note: BFNE-S: Brief version of the Fear of Negative Evaluation Scale – straightforwardly-worded item subscale; rc: corrected item-total correlation

### Descriptive analysis

The mean of the BFNE-S was 21.35 (6.68), the median was 21 and the range between 8 and 39. An ANOVA was conducted to ascertain whether there were significant differences in the BFNE-S according to sex, and significant differences were found between males and females in the BFNE-S score ($F_{(1, 524)}$ = 5.86, $p < .05$; $d = .21$). The mean BFNE-S score for males was 20.25 (6.49) and for females it was 21.81 (6.70).

The descriptive analysis of the items was performed with data from the non-clinical population, and the mean scores from the subscale of straightforwardly-worded items ranged between 3.02 and 2.34 (see Table 3). The item with the highest score was number 6 ("I am usually worried about what kind of impression I make") and the one with the lowest score was number 4 ("I am afraid that other people will find fault with me").

### Analysis of items and reliability of the scale

The internal consistency of the BFNE-S in the non-clinical population was calculated, the value of Cronbach's α being .89 for this scale. The Spearman-Brown reliability coefficient was also calculated for the BFNE-S scale, the value being .74 in this case.

Table 3

*Descriptive analysis of the items*

| | M | SD |
|---|---|---|
| 1. I worry about what other people will think of me even when I know it doesn't make a difference. | 2.83 | 1.59 |
| 2. I am frequently afraid of other people noticing my shortcomings. | 2.43 | 1.07 |
| 3. I am afraid that others will not approve of me. | 2.57 | 1.12 |
| 4. I am afraid that other people will find fault with me. | 2.34 | 1.14 |
| 5. When I am talking to someone, I worry about what they may be thinking about me. | 2.54 | 1.08 |
| 6. I am usually worried about what kind of impression I make. | 3.02 | .98 |
| 7. Sometimes I think I am too concerned with what other people think of me. | 2.67 | 1.23 |
| 8. I often worry that I will say or do the wrong things. | 2.94 | 1.12 |

As can be seen in Table 2 the correlations between each of the items on the scale and the corrected score for the scale ranged between .57 (item 8: "I often worry that I will say or do the wrong things") and .75 (item 7: "Sometimes I think I am too concerned with what other people think of me").

*Concurrent validity*

The BFNE-S questionnaire was significantly correlated ($p < .05$) with measures of SP, depression and anxiety (see Table 4). In accordance with the criteria established by Cohen (1988) concerning size effects, the BFNE-S yielded a high correlation with the BFNE and the SSPS-N. The BFNE-S was moderately and positively correlated with the SAD, the PRCS-M, the STAI-R and the BDI; however, a moderate negative correlation was obtained with the PSSEQ, and a low negative correlation with the SSPS-P.

Table 4

*Analysis of correlations between the BFNE-S and other measures*

| | BFNE-S |
|---|---|
| BFNE | .94** |
| SAD | .44** |
| PSSEQ | -.38** |
| SSPS-P | -.22** |
| SSPS-N | .53** |
| PRCS-M | .44** |
| STAI-R | .49** |
| BDI | .34** |

*Note:* BFNE: Brief version of the Fear of Negative Evaluation Scale; BFNE-S: Brief version of the Fear of Negative Evaluation Scale – straightforwardly-worded item subscale; SAD: Social Anxiety and Distress Scale; PSSEQ: *Public Speaking Self-Efficacy Questionnaire;* SSPS-P: *Positive Self-Statements during Public Speaking;* SSPS-N: *Negative Self-Statements during Public Speaking;* PRCS-M: *Personal Report of Confidence as a Speaker-Modified;* STAI-R: State-Trait Anxiety Inventory; BDI: Beck Depression Inventory; **$p < .001$; *$p < .05$

*Differential scores on the BFNE-S according to the diagnostic classification (Heimberg et al., 1993)*

An ANOVA was performed with the aim of testing whether there were significant differences in the BFNE-S scores of four groups: the three subtypes of SP described by Heimberg et al. (1993) and a non-clinical population group. Results showed significant differences among the four groups ($F_{(3, 647)} = 23.94, p < .001$); the means and standard deviations for each of the groups can be seen in Table 5. In the post-hoc analyses (Tukey's HSD), the non-clinical population group proved to be significantly different from the specific SP group, the non-generalized SP group, and the SP group. Significant differences were also observed between the specific and the generalized SP groups (see Table 6).

Discussion

The aim of this work was to conduct a study to validate the BFNE-S in a Spanish non-clinical population. This kind of validation work is essential within the area of clinical psychology, as it makes it possible to obtain rigorous measurement instruments that evaluate relevant clinical features (e.g. Hofmann & DiBartolo, 2000).

The results of the exploratory factorial analysis of the BFNE-S supported the existence of a one-dimensional structure; both Kaiser's criterion and Cattell's Scree test (1966), as well as the parallel analysis, recommended this factorial structure. The goodness-of-fit statistic that was used (RMSR) also demonstrated the appropriateness of the one-dimensional structure. Rodebaugh et al. (2004), Duke et al. (2006) and Weeks et al. (2005) recommended using the BFNE-S instead of the original BFNE. The reason for this change was to overcome the drawbacks that result from being composed of two subscales that were more a methodological artifact than two real factors from the BFNE. Collins et al. (2005) overcame this problem by converting the items from the BFNE-R subscale into straightforwardly-worded items, as did Cartelon et al. (2006). These latter authors called the resulting scale the

Table 5
*Means and standard deviations of the BFNE-S according to the classification by Heimberg et al. (1993)*

|  | Groups | *N* | *Mean* (*SD*) |
|---|---|---|---|
| Diagnosis according to Heimberg et al. (1993) | General population | 527 | 21.35 (6.68) |
|  | Specific SP | 54 | 24.54 (6.69) |
|  | Non-generalized SP | 44 | 27.16 (7.82) |
|  | Generalized SP | 24 | 30.30 (6.21) |

Note: SP: Social phobia.

Table 6
*Post-hoc analysis of the ANOVA that calculates the differential scores of the BFNE-S according to the diagnostic classification*

| Differences between | Lower limit | Upper limit | *p* < |
|---|---|---|---|
| Non-clinical population – specific SP | -5.71 | -.66 | .01 |
| Non-clinical population – non-generalized SP | -8.50 | -3.11 | .001 |
| Non-clinical population – generalized SP | -12.66 | -5.25 | .001 |
| Specific SP – generalized SP | -10.12 | -1.41 | .005 |

Note: SP: Social phobia.

BFNE-II and compared it with the original version of the BFNE (Leary, 1983). Cartelon et al. also concluded that the two factors that made up the original BFNE were more a methodological artifact than two different dimensions that actually existed. These authors defended the BFNE-II because it yielded a one-dimensional factorial structure that was congruent with the theoretical foundations of the BFNE (Leary, 1983; Stopa & Clark, 2001; Turner et al., 1987) and, thus, there would be no risk of losing sensitivity due to dispensing with items.

The data thus obtained confirmed a high internal consistency for the BFNE-S scale ($\alpha$ = .89). Similar results were obtained by Weeks et al. (2005) in adult clinical ($\alpha$ = .92) and non-clinical populations ($\alpha$ = .90); by Duke et al. (2006) in a non-clinical population ($\alpha$ = .94); and by Gallego et al. (2007) in a sample of social phobics ($\alpha$ = .91) for the BFNE-S subscale of the BFNE questionnaire.

The descriptive analysis of the scale showed that females presented a significantly greater fear of negative evaluation than males. Similar results were obtained by Duke et al.
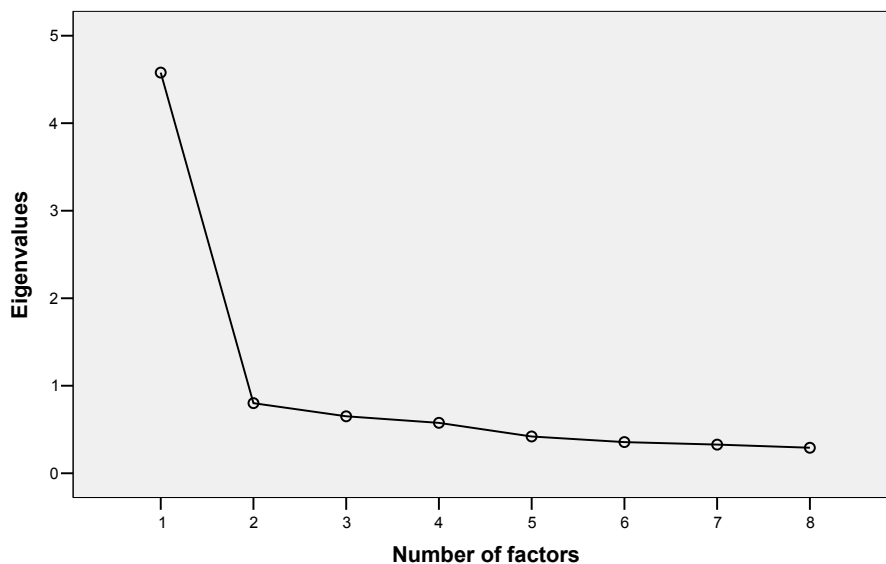


*Figure 1.* Cattell's Scree test (1966).

(2006) in a non-clinical population and by García-López et al. (2001) in a teenage population. In the descriptive analysis of the items, a characteristic feature in adult non-clinical populations was their concern about the impression they could cause in others, while being afraid that people would discover their defects was uncharacteristic.

The BFNE-S showed good concurrent validity, as it correlated significantly with other measures of SP, depression and trait anxiety; similar results were obtained by Gallego et al. (2007) in a validation of the BFNE in the clinical population. The BFNE-S was seen to be very highly correlated with the previous 12-item version of the BFNE (Leary, 1983). Fear of negative evaluation yielded a high correlation with measures of negative self-statements about speaking in public (SSPS-N) (Rivero et al., 2010). The BFNE proved to be moderately and positively related with social avoidance and distress (SAD) (Leary, 1983), measures of fear of speaking in public (PRCS-M), depression (BDI) and trait anxiety (STAI-R) (Turner et al., 1987). The BFNE-S was moderately and negatively correlated with a measure of self-efficacy when speaking in public (PSSEQ). Finally, the BFNE-S showed a low negative correlation with a measure of positive self-statements about speaking in public (SSPS-P) (Rivero et al., 2010).

The results obtained with regard to the relationship between BFNE-S and other social anxiety questionnaires were as expected, that it is to say, this measure yielded a high or moderate correlation with other measures of social anxiety (Leary, 1983; Liebowitz, 1987). The only exception that was found was that positive self-statements on speaking in public are not related to fear of negative evaluation. This finding is in the line of those obtained by Rivero et al. (2010) in the study that they conducted to validate the SSPS. The correlation that was obtained with the BDI and the STAI-R was expected to be lower, since they measure different constructs. It must be noted, however, that Gallego et al. (2007) also obtained moderate correlations between the BFNE-S and these measures. It therefore seems that the higher the degree of depression is, the higher the degree of fear of negative evaluation will be. Likewise, a greater tendency to interpret different situations as being threatening is related to a greater degree of fear of negative evaluation by others.

Heimberg et al. (1993) proposed the existence of three subtypes in the diagnosis of SP. In the previous study carried out in a Spanish clinical population to validate the BFNE, significant differences were observed (Gallego et al., 2007) in the scores on this measure between the groups defined by Heimberg et al. Moreover, a continuum was also seen to exist between the three groups. In the present study significant differences in the BFNE-S were obtained between the non-clinical population group and the following groups: specific SP ($p < .01$), non-generalized SP ($p < .001$) and generalized SP ($p < .001$). Significant differences were also found between the specific SP and the generalized SP groups

($p < .005$). The mean score obtained by the non-clinical population was consistent with the continuum suggested by Gallego et al. (2007), since this is the population that obtains the lowest mean score on the BFNE-S.

On the one hand, one limitation of our study is the fact that the sample used was made up of students and hence future research should validate the questionnaire with Spanish samples that are more representative of the general population, as in the studies by Duke et al. (2006) for the American population. Its main contribution, on the other hand, lies in the fact that it obtains psychometric data on the BFNE-S in a sample from the Spanish non-clinical population. Together with the work carried out on a clinical population (Gallego et al., 2007), these two studies represent the first two steps toward validating and adapting the Spanish version of the BFNE.

Future research should study the sensitivity of this measure to therapeutic improvement by using preferred treatments such as cognitive-behavioral therapy for social phobia (Heimberg & Becker, 2003). It is also important to conduct studies that focus on determining which version of the BFNE yields the best psychometric properties: the version that we have used, proposed by Rodebaugh et al. (2004) and in which the BFNE is reduced to straightforwardly-worded items, or the one put forward by Collins et al. (2005), where the reverse-scored items are converted into straightforwardly-worded items.

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