

Argentinean Adaptation of the Five Facet Mindfulness Questionnaire

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Abstract

In this poster we present the Argentinean adaptation of the FFMQ. We carried out different studies in order of reaching this goal. First, we revised the items of the original version developed in United States and translate the items using a backward translation method. Then, we carried out psychometric analysis to assess the validity and reliability of the instrument. We collected evidence based on test content through expert judges who evaluated the quality and the relevance of the items. In a following study, we provided validity evidence based on the internal structure of the instrument using exploratory and confirmatory factor analysis. Finally, we calculated composite reliability coefficients and also studied the sensitivity of the scales for detecting changes after an intervention. Results are discussed

Introduction

In this poster we present the preliminary results of the Argentinean Adaptation of the FFMQ, an instrument developed to assess five elements of mindfulness: Observing, Describing, Acting with awareness, Accepting without judgment and Acting without react. While it is an instrument that have already been adapted to other Spanish speakers countries (Cebolla, García-Palacios, Soler, Guillen, Baños & Botella, 2012; Loret de Mola Gubbins, 2009), we don't have a local version of it. Taking that into account the purpose of this study was to carry out some preliminary studies in order to provide validity evidence and to investigate reliability of the FFMQ in Argentinean population following the guidelines of the specialized literature (APA, AERA, NCME, 1999).

Method

First Study: Translation of the items

Participants: Three bilingual experts in mindfulness

Procedure: We carried out a backward translation through three bilinguals persons. The first of them, translated the original version from English into Spanish. Then, a second bilingual person translated the Spanish version to English again. Finally, a third translator evaluate the equivalence of the two English version.

Second Study: Evidence based on test content

Participants: Eight experts in psychometrics and mindfulness

Procedure: The items were revised by the expert using a structured form of assessment of the quality of the items. In this form, experts assessed each item in terms of quality of drafting and adequacy for evaluating the concept in the target population. They also had the possibility of including some suggestions to improve the quality of the items. Once we received the returned forms we performed an analysis of the observations and suggestions about the items and calculated the Aiken's V coefficient of inter-rater agreement.

Third study: Evidence based on internal structure. and reliability .

Participants: We selected a sample of participants with age between 14 and 78 years old (M= 29,09, S= 11,09 , 32 % Males and 68 % Females). We randomly split the sample in two sub samples one to carry out EFA (sample 1) and the other for CFA (sample 2). After cleaning the data base the sample 1 was composed for N = 576 and the sample 2 for N = 565

Procedure: We analyzed the 39 items with Exploratory Factor Analysis (EFA), using Principal Components Analysis (PCA) in a first stage to identify the number of factors (as suggested by Tabachnick & Fidell, 2007), and then we used Maximum Likelihood as the extraction method. Finally, we estimated the internal consistence of each factor using the Cronbach α coefficient. For this procedure, we used the SPSS 20 software.

For the CFA covariance matrices were used to analyze the measurement models, and maximum likelihood estimation was used to assess their fit. These analyses were conducted with the structural equation modeling software program AMOS 18 (Arbuckle, 2003). As the chi-square (χ^2) statistic is very sensitive to sample size and may overestimate the lack of model fit , we considered multiple statistic indicators to evaluate the goodness of fit of the model: the normed chisquare (NC) ,the comparative fit index (CFI), the goodness of fit index (GFI), and the root mean square error of approximation (RMSEA). To evaluate the obtained index values we followed the recommendations of Hu and Bentler (1995), and Hair, Anderson, Tatham and Black (1999). Finally, we estimated the composite reliability for each of the factors, using the criteria proposed by Hair et al. (1999) for interpretation.

Fourth study : Evidence based on the experimental sensibility of the instrument to an intervention.

Participants: 14 psychotherapists aged between 29 and 43 years old (M= 34 S= 5 , just one male) We carried out two Mindfulness based programs aimed to train Psychotherapist skills. Each program was administrated in 12 session of two hours, two times a week. The first program included Mindfulness exercises based on a MBSR program. The second one also included training modules of Validation, Emotional regulation and Interpersonal Skills based on a DBT Skills training program. Only ten participants finished the program and the pre-post test assessment. We calculated t test of means and Cohen d as effect size measure.

Results

1. We carried out a backward translation of the items according to the suggestions of three bilingual persons. The two English version was equivalent and we changed some word according to the suggestions of a bilingual person expert in mindfulness to conserved the original meaning of the items.
2. We carried out some modification in the wording of the items according to the suggestions of the experts . We observed that all items obtained a V value higher than the minimum of 0.50, whit a confidence interval of 90 % indicating that all the judges agree about the good quality of the translated items.

3. In the EFA we observed nine items with low loadings (4, 9, 18, 19, 21, 22, 24, 29 33 & 36) and two items with inverse redaction (12 & 16) that increase the α coefficient of the describing factor when deleted. We excluded these items because they not present good psychometric properties and because of that one original factor was not present (acting without react). We obtained a 27 items multifaceted structure with an α value from .78 to .87 that explained 52,59% of the variance

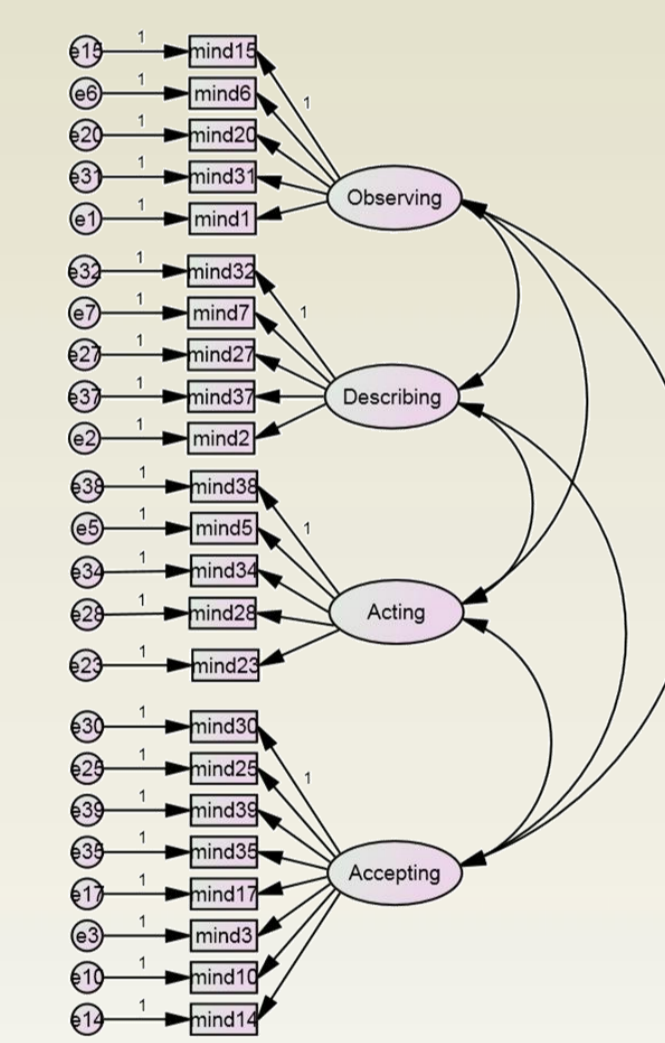


Figure 3: CFA diagram of the FFMQ-AR

In CFA, the goodness of fit indexes did not reach adequate values (considering criteria proposed by Hu & Bentler, 1995), but we obtained very approximate values (CFI = .83, GFI = .85, RMSEA = .071). We proceeded to re-specify the model discarding the items that presented high standardized residual covariances (greater than 2.58, according to Hair et al., 1999) also considering the Modification Indexes and the conceptual relevance of the item. All the indices indicated good model fit for the structure of twenty three items (NC= 2.40, CFI= .93, GFI= .92 and RMSEA= .050). All unstandardized factor loadings were significant at p.000 and ranged from .54 to .96.. We also obtained adequate composite reliability coefficient (ranging from .65 to .82)

4. We did not observe significant differences between pre and posttest in any group. However, in the DBT based program we observed a medium effect size ($d = .75$). In the Mindfulness group we observed a medium effect size in Factor 1 ($d = .76$) and high effect size in Factor 2 ($d = .86$) and Factor 4 ($d = 1.96$)

Discussion

Based on the observed results we can conclude that the FFMQ-AR is a reliable and valid measure of four process of mindfulness (observing, describing, acting with awareness and accepting without judgment) and that it can be used to evaluate the process in clinical settings. However we need another evidence that include studies of differences between clinical and non clinical samples, and evidence about the relations of the scores of the FFMQ-AR with other clinical instruments. We also need to carry out studies of structural invariance in different states of Argentina.

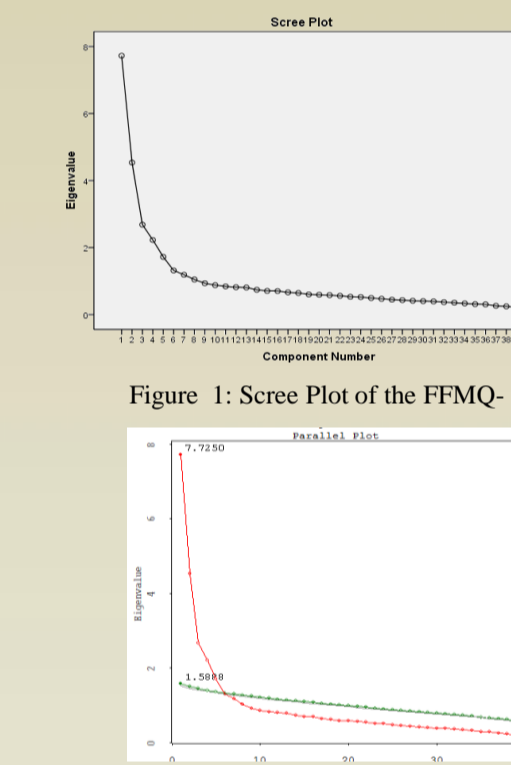


Figure 1: Scree Plot of the FFMQ-AR

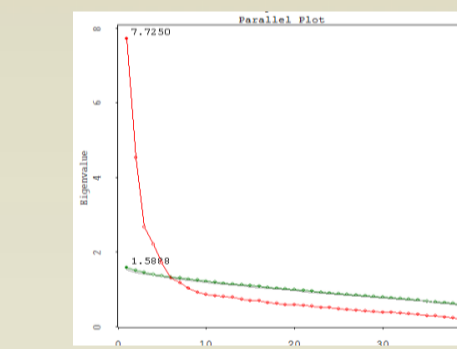


Figure 2: HPA Plot of the FFMQ-AR

ITEM	Factor 1	Factor 2	Factor 3	Factor 4
15. Presto atención a sensaciones, tales como las del viento en mi cabello o el sol en mi cara	.686			
6. Cuando me ducho o me baño, presto atención a las sensaciones del agua sobre mi cuerpo	.646			
20. Presto atención a los sonidos, tales como el tic tac de los relojes, el canto de los pájaros o el sonido de los autos	.611			
31. Percibo los elementos visuales del arte o la naturaleza, como los colores, formas, texturas o patrones de luz y sombra	.597			
1. Mientras camino, observo intencionalmente las sensaciones de mi cuerpo al moverse	.555			
26. Percibo los olores y aromas de las cosas	.485			
11. Me doy cuenta cómo las comidas y bebidas afectan mis pensamientos, sensaciones corporales y emociones	.401			
32. Pongo en palabras mis experiencias de manera natural	.746			
7. Pongo fácilmente en palabras mis creencias, opiniones y expectativas	.640			
27. Aun cuando me siento terriblemente alterado/a, encuentro la forma de expresar en palabras lo que siento	.635			
37. Describo con detalles como me siento en el momento	.628			
2. Me resulta fácil encontrar las palabras adecuadas para describir mis sentimientos	.577			
38. Me encuentro haciendo cosas sin prestar atención	.788			
5. Cuando hago algo, mi mente divaga y me distraigo fácilmente	.744			
8. No presto atención a lo que estoy haciendo por estar fantaseando, preocupado o distraído de algún modo	.718			
34. Hago trabajos o tareas automáticamente sin ser consciente de lo que estoy haciendo	.715			
13. Me distraigo fácilmente	.707			
28. Realizo diversas actividades rápidamente sin prestarle demasiada atención a cada una de ellas	.634			
23. Me parece que estoy "funcionando en automático" sin mucha conciencia de lo que estoy haciendo	.506			
30. Me digo que algunas de mis emociones son malas o inapropiadas y no debería sentirlas	.790			
25. Me digo a mí mismo/a que no debería estar pensando de esta manera	.784			
39. Me desapruebo cuando tengo pensamientos que considero que son irracionales	.694			
35. Cuando tengo pensamientos o imágenes perturbadoras, me juzgo a mí mismo/a como bueno/a o malo/a según el contenido del pensamiento o imagen	.681			
17. Hago juicios sobre si mis pensamientos son buenos o malos	.662			
3. Me crítico por tener emociones que considero irracionales o inapropiadas	.609			
10. Me digo a mí mismo/a que no debería estar sintiéndome de esta manera	.591			
14. Creo que algunos de mis pensamientos son malos o anormales y que no debería pensar de esa manera	.576			

Note: Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization. Rotation converged in 6 iterations.