

Replications and Refinements

Under this heading are brief reports of studies providing data that substantiate, challenge, or refine what we think we know. These notes consist of a summary of the study's procedure and as many details about the results as space allows. Additional details concerning the results can be obtained by communicating directly with the author. Submissions to this section must provide a meaningful conceptual replication that extends the construct validity of the work.

Internal Consistency of a Five-Item Form of the Francis Scale of Attitude Toward Christianity Among Adolescent Students

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ABSTRACT. The short form of the Francis Scale of Attitude Toward Christianity (L. J. Francis, 1992) is a 7-item Likert-type scale that shows high homogeneity among adolescents. The psychometric performance of a shorter version of this scale has not been explored. The authors aimed to determine the internal consistency of a 5-item form of the Francis Scale of Attitude Toward Christianity among 405 students from a school in Cartagena, Colombia. The authors computed the Cronbach's alpha coefficient for the 5 items with a greater corrected item-total punctuation correlation. The version without Items 2 and 7 showed internal consistency of .87. The 5-item version of the Francis Scale of Attitude Toward Christianity exhibited higher internal consistency than did the 7-item version. Future researchers should corroborate this finding.

Keywords: adolescents, religiosity, students, validation studies

FRANCIS (1978) DESIGNED A 24-ITEM SCALE regarding attitude toward Christianity. This scale concerns responses to questions about God, Jesus, the Bible, prayer, and church, which are scored on 5-point Likert-type scales ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Further, Francis (1992) developed a short seven-item Likert-type form of the scale for administration purposes when time is short. The translations of the short form, which have shown high internal consistency, are available in several languages (Campo-Arias, Oviedo, Díaz, & Cogollo, 2006; Francis & Enger, 2002; Francis, Lewis & Ng, 2002; Lewis & Francis, 2004a; Lewis & Francis, 2004b; Lewis, Francis, & Enger, 2003; Lewis, Francis, & Kerr, 2003; Lewis, Francis, Ziebertz, & Kwiran, 2005; Lewis & Hermans, 2003). In factor analysis studies, researchers reported a one-dimensional structure (Francis et al.; Lewis, Francis, & Enger, 2003; Lewis & Hermans, 2003; Lewis, Shevlin, Lloyd, & Adamson, 1997). However, researchers observed that Item 2 (“I think that going to church is a waste of time”) and Item 7 (“I think the Bible is out-dated”) repeatedly exhibited the lowest item-total correlations or loading factors (Campo-Arias et al.; Francis & Enger; Lewis et al., 1997; Lewis & Francis, 2004a; Lewis, Francis, & Enger; Lewis, Francis, & Kerr, 2003; Lewis & Hermans). These items could be misunderstood as a poor measure of personal (intrinsic or private) religiosity (Joseph & Lewis, 1997; Maltby, 2001).

In the present study, we offer a secondary analysis of data that have been published elsewhere (Campo-Arias et al., 2006) and examine whether a five-item form of the Francis scale exhibited similar internal consistency as the seven-item form of the Francis Scale of Attitude Toward Christianity.

A total of 203 girls and 202 boys (M age = 14.7 years, SD = 1.3 years, range 13–17 years) completed the Spanish translation of the 7-item Francis Scale of Attitude Toward Christianity (Campo-Arias et al., 2006). All students were from low-income families and attended a public school in Cartagena, Colombia. We calculated an exploratory factor analysis and Cronbach’s alphas by means of the SPSS statistical package (Version 13.0).

The unidimensionality of the Spanish translation of the seven-item Francis Scale of Attitude Toward Christianity did not corroborate a principal components factor analysis with promax rotation (see Table 1). We found that the Spanish translation of the seven-item scale without Item 2 (“I think that going to church is a waste of time”) and without Item 7 (“I think the Bible is out-dated”) showed satisfactory Cronbach’s alpha (α = .86 and α = .76, respectively). We observed that the Spanish translation of the 5-item Francis Scale of Attitude Toward Christianity,

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TABLE 1. Factor Matrix With Promax Rotation of a Five-Item Form of the Francis Scale of Attitude Toward Christianity Among Colombian Secondary School Students

Item	Factor	
	1	2
I know that Jesus helps me (Yo sé que Cristo me ayuda).	.762	.274
I think that going to church is a waste of time (Pienso que ir a la iglesia es una pérdida de tiempo). ^a	.238	.903
God helps me to lead a better life (Dios me ayuda a llevar una vida mejor).	.833	.303
God means a lot to me (Dios significa mucho para mí).	.839	.128
Prayer helps me a lot (Orar me sirve de mucho).	.824	.236
I know that Jesus is very close to me (Sé que Jesús está muy cerca de mí).	.852	.226
I think the Bible is out-dated (Pienso que la Biblia pasó de moda). ^a	.262	.894

Note. Bolded values are coefficients higher than .500. Eigenvalues are 3.60 and 1.42 for Factors 1 and 2, respectively. Variance percentages are 51.44 and 20.26 for Factors 1 and 2, respectively.

^aReverse-scored items.

without Items 2 and 7 (“I think that going to church is a waste of time” and “I think the Bible is out-dated,” respectively) exhibited a higher internal consistency ($\alpha = .87$) than did the seven-item scale used for Colombian adolescents students ($\alpha = .80$; Campo-Arias et al., 2006).

The Spanish translation of the five-item Francis Scale of Attitude Toward Christianity does not contain the reverse-scored items that exhibited the worst psychometric property, lowest correlations, and lowest factor loadings in other studies (Campo-Arias et al., 2006; Francis & Enger, 2002; Lewis et al., 1997; Lewis & Francis, 2004a; Lewis, Francis, & Enger, 2003; Lewis, Francis, & Kerr, 2003; Lewis & Hermans, 2003). Researchers believe the reverse-scored items are problematic. Respondents often confuse reverse-scored items and make errors (Spector, Van Katwyk, Brannick, & Chen, 1997). Moreover, according to Joseph and Lewis (1997) and Maltby (2001), the construct validity may later be used to demonstrate personal religiosity only—for example, with the omission of Item 2, which asks for information about church attendance. Similarly, Francis and McCarron (2001) did not observe a correlation between attitude toward religion and personal or parental church attendances.

On the basis of this finding, we can recommend the Spanish translation of the five-item Francis Scale of Attitude Toward Christianity for use among Spanish-speaking samples of low-income secondary students. Others researchers should replicate this study in other Latin American countries.

AUTHOR NOTES

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