



University of Warwick institutional repository: <http://go.warwick.ac.uk/wrap>

This paper is made available online in accordance with publisher policies. Please scroll down to view the document itself. Please refer to the repository record for this item and our policy information available from the repository home page for further information.

To see the final version of this paper please visit the publisher's website. Access to the published version may require a subscription.

Author(s): Tiliopoulos, Niko, Francis, Leslie J. and Slattery, Mary

Article Title: The internal consistency reliability of the Santosh-Francis scale of attitude toward Hinduism among bunts in South India.

Year of publication: 2010

Link to published article: <http://najp.8m.com/tblcontents.html>

Publisher statement: None

The internal consistency reliability of the Santosh-Francis Scale of Attitude  
toward Hinduism among Bunts in South India

Niko Tiliopoulos

The University of Sydney, Australia

Leslie J. Francis\*

The University of Warwick, UK

and

Mary Slattery

Queen Margaret University, Edinburgh, UK

Author note:

\*Corresponding author:

Leslie J Francis

Warwick Religions & Education Research Unit

Institute of Education

The University of Warwick

Coventry CV4 7AL United Kingdom

Tel: +44 (0)24 7652 2539

Fax: +44 (0)24 7657 2638

Email: leslie.francis@warwick.ac.uk

### **Summary**

The Santosh-Francis Scale of Attitude toward Hinduism was originally developed and tested among Hindu affiliates living in the United Kingdom. In the present study this instrument was completed by 100 Hindu affiliates from the Bunt caste in South India (48 males and 52 females). The data support the internal construct reliability of the scale in this context ( $\alpha = .91$ ) and commend the instrument for wider application within the Hindu community.

*Keywords:* psychology, religion, measurement, Hinduism, attitude scale

The internal consistency reliability of the Santosh-Francis Scale of Attitude  
toward Hinduism among Bunts in India

Empirical research in the social psychology of religion expanded considerably during the second half of the twentieth century, as clearly demonstrated by the developments charted in three editions of Michael Argyle's reviews of the field (Argyle, 1958; Argyle & Beit-Hallahmi, 1975; Beit-Hallahmi & Argyle, 1997). As yet, however, the empirical psychology of religion has remained largely shaped within the Christian tradition and, to a lesser extent, within the Jewish tradition. The important review of existing measures of religiosity published by Hill and Hood (1999) illustrated the paucity of measures appropriate for extending empirical studies in the psychology of religion to other faith traditions.

The establishment of comparable empirical studies across different faith traditions would be facilitated by the development of comparable measures of religiosity. In a series of earlier studies Francis and his associates have argued that such comparability might best be achieved by concentration on the attitudinal dimension of religion. The argument was first developed within the Christian tradition on the grounds that indices of affiliation, belief and practice function somewhat differently among, say, Catholics and Protestants. The argument was then extended across other faith traditions. The attitudinal dimension, on the other hand, functions in a similar way across faith traditions. On this account, attitudes are concerned with underlying predispositions of an affective nature. Scales concerned with attitude toward religion assess affective responses on a continuum anchored by positive and negative feelings.

Francis' case was first introduced at the end of the 1970s in two papers in which he introduced the Francis Scale of Attitude toward Christianity and invited colleagues to collaborate in building up a network of interrelated studies integrated through the application of a common measure (Francis, 1978a, 1978b). In the mid-1990s Kay and Francis (1996)

reviewed over a hundred studies employing the Francis Scale of Attitude toward Christianity and formulated emerging conclusions regarding the correlates, precursors and consequences of positive and negative attitude toward Christianity during childhood, adolescence and adulthood. The number of studies employing the Francis Scale of Attitude toward Christianity has continued to grow and to enrich empirically-based knowledge about the function of religion in the context of social-psychological theory (Francis, 2009).

Three attempts have been made to translate the concepts underpinning the Francis Scale of Attitude toward Christianity in ways relevant to other faith traditions. The Sahin-Francis Scale of Attitude toward Islam was developed and tested among 381 Muslim adolescents attending sixth-form colleges in Birmingham in the United Kingdom (Sahin & Francis, 2002). The psychometric properties of this new scale were then confirmed among a sample of 1,199 Muslim students in Kuwait (Francis, Sahin, & Al-Ansari, 2006; Francis, Sahin, & Al-Failakawi, 2008). The Katz-Francis Scale of Attitude toward Judaism was developed among 618 Hebrew-speaking Jewish students in Israel (Francis & Katz, 2007) and then tested among separate samples of 298 female Jewish students (Francis & Katz, 2002) and 203 male Jewish students (Francis, Katz, Yablon, & Robbin, 2004) also in Israel.

The most recent addition to this series, the Santosh-Francis Scale of Attitude toward Hinduism was developed and tested among 330 Hindu young people, between the ages of 12 and 35, attending the Hindu Youth Festival 2001 in London (Francis, Santosh, Robbins, & Vij, 2008). According to this study, the internal consistency reliability of the scale was demonstrated by an *alpha* coefficient of .89, while the proportion of variance accounted for by the first factor was established as 33%. It cannot be assumed, however, that a measure of attitude toward Hinduism developed among Hindu young people in the United Kingdom will necessarily transfer to nations at the heart of the Hindu faith.

Against this background, the aim of the present study is to examine the internal consistency reliability of the Santosh-Francis Scale of Attitude toward Hinduism among Hindus from south India.

## **Method**

### **Sample**

A total of 100 individuals took part in the study and were selected through availability sampling. Of them, 52 were females and 48 were males (age-range 18-84 years, *Mean* = 35.5 years, *SD* = 13.1 years). All participants were Indian residents from the town of Manipal, near Mangalore in the South Indian state of Karnataka. They all identified themselves as Hindu from the Bunt caste.

### **Procedure**

The study was conducted during a wedding in Manipal by a research assistant, who was a British Bunt and a guest to the event. Only individuals who claimed to possess adequate levels of English language comprehension were asked to fill in the questionnaire. Of a total of 150 such individuals, 100 agreed to participate (33% non-response rate). They all completed the questionnaire, which was presented to them in a pen-and-paper format, during the above event and in the presence of the research assistant, who was instructed to provide them with additional information as required.

### **Measures**

The Santosh-Francis Scale of Attitude toward Hinduism proposes 19 items concerned with an affective response toward the Hindu faith. Each item is assessed on a five-point Likert-type scale: agree strongly, agree, not certain, disagree, and disagree strongly.

## **Results and discussion**

- insert table 1 about here -

Table 1 presents the item-rest-of-test correlations and the factor loadings on the unrotated solution proposed by principal component analysis for the 19 items of the Santosh-Francis Scale of Attitude toward Hinduism, together with the *alpha* coefficient and the percentage of variance explained by the factor. Both sets of statistics support the conclusion that the scale is characterised by homogeneity, unidimensionality and internal consistency reliability within the sample.

- insert table 2 about here -

Table 2 presents the mean scale scores recorded on the Scale of Attitude toward Hinduism by gender. These statistics demonstrate that there are no significant differences between the mean attitude scores recorded by males and females in this sample. The finding that there is no significant difference between the attitude scores of males and females in the sample is worthy of further exploration and comment. In their classic review of the social psychology of religion, Argyle and Beit-Hallahmi (1975) concluded that the finding that women are more religious than men is one of the most securely based empirical findings within the psychology of religion. A similar conclusion is drawn in the more recent review by Francis (1997). The problem with this conclusion, however, is that the empirical evidence reviewed is very largely grounded in a Christian context. In their challenge to this conclusion, Loewenthal, MacLeod, and Cinnierella (2001) assess gender differences in religious *activity* across four faith groups in the United Kingdom. Their data demonstrated that there was a differential effect of religious groups on gender differences in religious activity, such that Christian women were slightly more active than men, while Hindu, Jewish, and Muslim women were less active than men. Using *attitude* as an index of religiosity, studies using the Francis Scale of Attitude toward Christianity consistently have reported higher scores among girls and women than among boys and men (Kay & Francis, 1996). On the other hand, the foundation study reporting on the Katz-Francis Scale of Attitude toward

Judaism found higher scores among males than among females (Francis & Katz, 2007) and the foundation study reporting on the Sahin-Francis Scale of Attitude toward Islam also found higher scores among males than among females (Sahin & Francis, 2002). The foundation study reporting on the Santosh-Francis Scale of Attitude toward Hinduism found no significant differences between scores recorded among male and female Hindus in the United Kingdom (Francis, Santosh, Robbins, & Vij, 2008) and now the same finding has been reported in the present study among Hindus from south India. Cumulatively these studies provide an important challenge to a key conclusion formulated within the psychology of religion on the basis of data provided only within a Christian context.

### **Conclusion**

The present study has explored the scale properties of the Santosh-Francis Scale of Attitude toward Hinduism among a sample of 100 Hindu affiliates in south India. The data support the unidimensionality and internal consistency reliability of this instrument. The scale can, therefore, be recommended for further use and should lead to valuable cross-cultural comparisons in an empirical psychology of religion. A weakness with the present study concerns the non-representative nature of the sample, a weakness that needs to be addressed by future studies. A connected programme of empirical research employing this instrument within a Hindu context would be capable of building up a secure knowledge about the empirical correlates of religion comparable with the knowledge generated by the programme of research using Francis' original instrument within a Christian context.



**References**

- Argyle, M. (1958). *Religious behaviour*. London: Routledge and Kegan Paul.
- Argyle, M., & Beit-Hallahmi, B. (1975). *The social psychology of religion*. London: Routledge and Kegan Paul.
- Beit-Hallahmi, B., & Argyle, M. (1997). *The psychology of religious belief and experience*. London: Routledge.
- Francis, L. J. (1978a). Attitude and longitude: A study in measurement. *Character Potential*, 8, 119-130.
- Francis, L. J. (1978b). Measurement reapplied: Research into the child's attitude towards religion. *British Journal of Religious Education*, 1, 45-51.
- Francis, L. J. (1997). The psychology of gender differences in religion: A review of empirical research. *Religion*, 27, 81-96.
- Francis, L. J. (2009). Comparative empirical research in religion: Conceptual and operational challenges within empirical theology. In L.J. Francis, M. Robbins, and J. Astley (Eds.), *Empirical theology in texts and tables: Qualitative, quantitative and comparative perspectives* (pp.127-152). Leiden: Brill.
- Francis, L. J., & Katz, Y. J. (2002). Religiosity and happiness: A study among Israeli female undergraduates. *Research in the Social Scientific Study of Religion*, 13, 75-86.
- Francis, L. J., & Katz, Y. J. (2007). Measuring attitude toward Judaism: The internal consistency reliability of the Katz-Francis Scale of Attitude toward Judaism. *Mental Health, Religion and Culture*, 10, 309-324.
- Francis, L. J., Katz, Y. J., Yablon, Y. & Robbins, M. (2004). Religiosity, personality, and happiness: A study among Israeli male undergraduates. *Journal of Happiness Studies*, 5, 315-333.

- Francis, L. J., Sahin, A., & Al-Ansari, E. (2006). The psychometric properties of the Sahin-Francis Scale of Attitude toward Islam among young adults in Kuwait. *Muslim Educational Quarterly*, 23, 69-82.
- Francis, L. J., Sahin, A., & Al-Failakawi, F. (2008). Psychometric properties of two Islamic measures among young adults in Kuwait: The Sahin-Francis Scale of Attitude toward Islam and the Sahin Index of Islamic Moral Values. *Journal of Muslim Mental Health*, 3, 9-34.
- Francis, L. J., Santosh, R., Robbins, M., & Vij, S. (2008). Assessing attitude toward Hinduism: The Santosh-Francis Scale. *Mental Health, Religion and Culture*, 11, 609-621.
- Hill, P. C., & Hood, R. W. (Eds.) (1999). *Measures of religiosity*. Birmingham, Alabama: Religious Education Press.
- Kay, W. K., & Francis, L. J. (1996). *Drift from the churches: Attitude toward Christianity during childhood and adolescence*. Cardiff: University of Wales Press.
- Loewenthal, K. M., MacLeod, A. K., & Cinnirella, M. (2001). Are women more religious than men? Gender differences in religious activity among different religious groups in the UK. *Personality and Individual Differences*, 32, 133-139.
- Sahin, A. & Francis, L. J. (2002). Assessing attitude toward Islam among Muslim adolescents: The psychometric properties of the Sahin-Francis scale. *Muslim Education Quarterly*, 19(4), 35-47.

Table 1

*Scale of attitude toward Hinduism: Item-rest-of-test correlations and factor loadings*

	r	factor loading
I find it hard to believe in God*	.70	.77
Spirituality is important in my life	.64	.49
I have a close relationship with God	.71	.80
I find it easy to understand Hinduism	.74	.58
I think Hindu rituals are a waste of time*	.23	.36
Knowing about the law of Karma helps me to lead a better life	.50	.54
I am happy to be a Hindu	.62	.79
My religion helps me to lead a better life	.61	.72
I find Hindu scriptures inspiring	.55	.58
It is easy to understand Hindu rituals	.56	.51
I benefit from attending services, prayer meetings or places of worship	.57	.62
Prayer helps me a lot	.82	.89
I am religious	.83	.88
Reincarnation gives me hope	.47	.53
It is important for me to practise my religion/spiritual beliefs	.71	.76
In my experience meditation does have a positive impact	.39	.54
I have noticed the benefits of practising yoga	.30	.51
I think Hindu scriptures are out of date*	.67	.58
Hinduism is relevant in the modern world	.63	.54
<i>alpha</i> /% variance	.91	41.9%

Note \* these items are reverse coded

Table 2

*Mean attitude scores by gender*

group	N	mean	sd	t	P<
male	48	82.9	7.7		
female	52	82.8	7.0	0.06	NS