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Assessing attitude toward Sikhism: The psychometric properties
of the Athwal-Francis Scale among Sikh adolescents

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Abstract

This paper describes the construction of the Athwal-Francis Scale of Attitude toward Sikhism, working in the tradition of the Francis Scale of Attitude toward Christianity, the Sahin-Francis Scale of Attitude toward Islam, the Katz-Francis Scale of Attitude toward Judaism, and the Santosh-Francis Scale of Attitude toward Hinduism. Drawing on data provided by 90 self-assigned 13- to 15-year-old Sikh students attending year-nine and year-ten classes in a state-maintained school in England with a Sikh foundation, the 24 items selected from a larger pool of items to comprise the Athwal-Francis Scale of Attitude toward Sikhism displayed good properties of internal consistency reliability and construct validity. No significant difference in mean scale scores were found between male students and female students, or between year-nine students and year-ten students. The instrument is commended for further use.

Keywords: attitude, Sikhism, adolescents, psychometrics, religion

Introduction

The social scientific study of religion routinely differentiates among different dimensions of religion, including belief, behaviour, affiliation, orientation, and attitude (see Francis, 2016). Working in the 1970s Francis (1978a, 1978b) advanced the view that the attitudinal dimension of religion offered a particularly fruitful basis for coordinating empirical enquiry into the correlates, antecedents, and consequences of religiosity across the life span.

The attitudinal dimension appeared attractive in the 1970s and continues to appear attractive for four main reasons. First, at a conceptual level, social psychologists have developed a sophisticated and well-established understanding of attitude as a deep-seated, relatively stable and enduring covert predisposition, in contrast with more volatile and surface behaviours and opinions. To assess attitude toward religion is to get close to the heart of religion in an individual's life. Second, attitudes provide a purer measure of religion than either belief or practice. The affective dimension with which attitudes are concerned is able to transcend the divisions between denominational perspectives, while beliefs tend to polarise such divisions. The attitudinal dimension of religion, being deep seated, is less likely to be distorted by personal and contextual factors, while practice tends to be subject to all kinds of personal and social constraints. Third, at an operational level, social psychologists have developed a range of sophisticated and well-established techniques for assessing and scaling attitudes, including the pioneering work of Thurstone (1928), Likert (1932), Guttman (1944), and Osgood, Suci, and Tannenbaum (1957). The social scientific study of religion is able to build on these foundations. Fourth, the attitudinal dimension of religion can be accessed by instruments which can function in a comparatively stable manner over a wide age range. While the sophistication with which beliefs are formulated and tested clearly develops over the life span (see, for example, Fowler, 1981), attitudinal statements concerned with positive

and negative affect can be formulated in ways which are equally acceptable during childhood, adolescence and adulthood (Francis, 1989; Francis & Stubbs, 1987).

Francis' original research concerned with the attitudinal dimension of religion and expressed through the Francis Scale of Attitude toward Christianity (Francis, 1978a, 1978b, 1989; Francis & Stubbs, 1987) was rooted both in the UK and in a Christian or post-Christian context. This instrument contained both negative and positive items concerned with affective responses to five components of the Christian faith accessible to and recognised by both children and adults, namely God, Jesus, Bible, prayer and church. The English language form of this instrument has been tested in a number of contexts. For example, Francis, Lewis, Philipchalk, Brown, and Lester (1995) reported on the internal consistency reliability and construct validity of this instrument among 255 students in Australia, 231 students in Canada, 212 students in the USA, and 378 students in the UK. By the mid-1990s, Kay and Francis (1996) were able to demonstrate how around one hundred studies, co-ordinated on the use of the Francis Scale of Attitude toward Christianity in a number of English-speaking locations, were able to begin to construct a rich and integrated account of the correlates, antecedents, and consequences of individual differences in attitude toward Christianity.

The first strategy to broaden the basis for diverse studies examining the correlates, antecedents, and consequences of individual differences in attitude toward religion involved the translation of the Francis Scale of Attitude toward Christianity into a range of languages, including: Arabic (Munayer, 2000), Chinese (Francis, Lewis, & Ng, 2002; Tiliopoulos, Francis, & Jiang, 2013), Czech (Francis, Quesnell, & Lewis, 2010), Dutch (Francis & Hermans, 2000), Estonian (Elken, Francis, & Robbins, 2010), French (Lewis & Francis, 2003, 2004), German (Francis & Kwiran, 1999; Francis, Ziebertz, & Lewis, 2002), Greek (Youtika, Joseph, & Diduca, 1999), Italian (Crea, Baiocco, Ioverno, Buzzi, & Francis, 2014), Norwegian (Francis & Enger, 2002), Portugese (Ferreira & Neto, 2002), Romanian (Francis,

Ispas, Robbins, Ilie, & Iliescu, 2009), Serbian (Flere, Francis, & Robbins, 2011), Slovakian (Lewis, Adamovová, & Francis, 2008), Slovenian (Flere, Klanjsek, Francis, & Robbins, 2008), Spanish (Campo-Arias, Oviedo, Dtaz, & Cogollo, 2006), Swedish (Eek, 2001), and Welsh (Evans & Francis, 1996; Francis & Thomas, 2003).

The second strategy to broaden the basis for diverse studies examining the correlates, antecedents, and consequences of individual differences in attitude toward religion involved the development of series of comparable instruments, building on the Francis Scale of Attitude toward Christianity, but shaped within other religious traditions. In the first initiative in this series, Sahin and Francis (2002) reported the development of the Sahin-Francis Scale of Attitude toward Islam. The items of the Francis Scale of Attitude toward Christianity were carefully scrutinised and debated by several Muslim scholars of Islam until agreement was reached on 23 Islam-related items which mapped closely onto the area assessed by the parent instrument. The psychometric properties of the new instrument of the Sahin-Francis Scale of Attitude toward Islam were assessed on 381 Muslim adolescents in England. Subsequently the instrument was tested among a sample of 1,199 Muslim adolescents in Kuwait (Francis, Sahin, & Al-Ansari, 2006; Francis, Sahin, & Al-Failakawi, 2008), among a sample of 150 students in Pakistan (Khan & Watson, 2006), among a sample of 174 students in Pakistan (Musharraf, Lewis, & Sultan, 2014), among a sample of 729 students in Pakistan (Hamid, Robbins, Nardeen, & Khan, 2016), and among 189 Sunni students in Malaysia (Francis, Tekke, & Robbins, 2016).

In the second initiative in the series, Francis and Katz (2007) reported the development of the Katz-Francis Scale of Attitude toward Judaism. In this case the 24 items of the Francis Scale of Attitude toward Christianity were recast in ways accessible for Hebrew-speaking Jews living in Israel. The psychometric properties of the instrument were assessed on a sample of 618 Hebrew-speaking undergraduate students attending Bar-Ilan

University. Subsequently this instrument was tested among a sample of 284 Hebrew-speaking female students at Bar-Ilan University (Yablon, Francis, & Robbins, 2014) and among a sample of 101 Australian Jews (Lumbroso, Fayn, Tiliopoulos, & Francis, 2016).

In the third initiative in the series, Francis, Santosh, Robbins, and Vij (2008) reported on the development of the Santosh-Francis Scale of Attitude toward Hinduism. Scholars familiar with the study of Hinduism debated the items presented in the Francis Scale of Attitude toward Christianity and suggested 19 equivalent translations into a Hindu context. The psychometric properties of the instrument were assessed on a sample of 330 individuals between the ages of 12 and 35 attending a Hindu youth festival in England. Subsequently the instrument was tested among a sample of 100 Hindu affiliates from the Bunt caste in the South India state of Karnataka (Tiliopoulos, Francis, & Slattery, 2010), among a sample of 309 Balinese Hindus (Lesmana, Tiliopoulos, & Francis, 2011), and among 149 students in India (Francis, Kamble, & Robbins, 2016).

In the fourth initiative in this series, Astley, Francis, and Robbins (2012) reported on the development of the Astley-Francis Scale of Attitude toward Theistic Faith, they suggested that the same set of items should make it possible to access the attitudinal dimension of religion across the major theistic faith traditions. Building on the short seven-item form of the Francis Scale of Attitude toward Christianity, Astley, Francis, and Robbins (2012) identified seven items concerned with affective responses to God, places of worship, and prayer that they regarded as conceptually appropriate within a Christian context, an Islamic context, and a post-Christian context. The psychometric properties of the new instruments were assessed on a sample of 284 16- to 18-year-old students in England. Subsequently this instrument was tested among a sample of 4,353 students between the ages of 11 and 16 years in Northern England (Francis, Brockett, & Village, 2013), and among 10,678 students between the ages of 13 and 15 years drawn from across the four nations of the UK (Francis & Lewis, 2016).

In an independent initiative, Thanissaro (2011) attempted to broaden further the reach of the studies concerned with examining the correlates, antecedents, and consequences of individual differences in attitude toward Buddhism and attitude toward Sikhism. While these two scales displayed good criteria of internal consistency reliability they differed from the Francis family of instruments by operationalising a fundamentally different concept of attitude toward religion. While the Francis family of instruments (concerned with attitude toward Christianity, Hinduism, Islam, Judaism, and Theistic Faith) conceptualised 'attitude' as referring to the affective responses of individuals identifying with or living in cultures shaped by specific religious traditions, Thanissaro conceptualised 'attitude' as referring to the evaluation of religious traditions external to the participants' immediate experience. This fundamental difference is crucial in shaping the correlates, consequences, and antecedents in individual differences in attitude toward religion.

Research aim

Against this background, the aim of the present study is to develop a Scale of Attitude toward Sikhism that is consistent with the attitudinal construct operationalised within the Francis Scale of Attitude toward Christianity, the Sahin-Francis Scale of Attitude toward Islam, the Katz-Francis Scale of Attitude toward Judaism, the Santosh-Francis Scale of Attitude toward Hinduism, and Astley-Francis Scale of Attitude toward Theistic Faith, and to do so by following the method developed by the constructions of the earlier instruments, in this case working closely inside the Sikh tradition.

Method

Procedure

The survey was conducted during regular classes among 13- to 15-year-old students attending year-nine and year-ten classes in a state-maintained school with a Sikh foundation. The survey received ethical approval from the university and was approved by the school that

took a full part in agreeing the content. Students were assured of anonymity and confidentiality, and given the option not to participate in the survey.

Measures

Attitude toward Sikhism was assessed by 30 items relevant to the Sikh tradition generated by a small group of practising Sikhs that reflected within this religious tradition the underlying attitudinal construct assessed by the Francis Scale of Attitude toward Christianity (see Francis, 1978a, 1978b; Francis, Lewis, Philipchalk, Brown, & Lester, 1995). Responses to each item were recorded on a five-point scale: disagree strongly (1), disagree (2), not certain (3), agree (4), and agree strongly (5).

Sex and age were recorded as dichotomous variables: male (1) and female (2); year nine (1) and year ten (2).

Religious affiliation was recorded by a checklist of world faiths in response to the question 'What is your religion?'.

Religious attendance was assessed by the question 'Apart from special occasions (like weddings) how often do you attend religious worship services (e.g. gurdwara, church, mosque, temple etc.)?'. Responses were recorded on a four-point scale: never (1), occasionally (2), at least once a month (3), and at least once a week (4).

Personal prayer was assessed by the question, 'Do you pray by yourself?'. Responses were recorded on a five-point scale: never (1), occasionally (2), at least once a month (3), at least once a week (4), and nearly every day (5).

Self-perceived spirituality was assessed by a sequence of three questions: I am a religious person; I am a spiritual person; I am a superstitious person. Responses were recorded on a five-point scale: disagree strongly (1), disagree (2), not certain (3), agree (4), and agree strongly (5).

Ethnicity was assessed by the question, ‘What is your ethnic group?’. Responses were recorded on a checklist derived from the England and Wales census for 2011 (White, 2012).

Participants

The present analyses were conducted on the responses of the 90 students who self-identified as Sikh. In terms of ethnicity, 88 self-identified as Asian-Indian, one as Asian-Pakistani, and one as of mixed ethnicity. Of the 90 participants, 35 were male and 55 female; 48 were in year nine and 42 were in year ten. In terms of worship attendance, 27 attended gurdwara at least once a week, 16 at least once a month, 41 occasionally, 5 never, and 1 declined to answer. In terms of personal prayer, 12 prayed daily, 32 at least once a week, 4 at least once a month, 20 occasionally, 21 never, and 1 declined to answer. In terms of self-perceived spirituality, responding to the three separate items, 36 agreed or agreed strongly that they were a religious person, 24 that they were a spiritual person, and 15 that they were a superstitious person.

Analysis

The data were analysed by the SPSS statistical package using the frequency, reliability factor and correlation routines.

Results and discussion

- insert table 1 about here -

The 30 items constructed to reflect the construct of attitude toward Sikhism, as modelled on the Francis Scale of Attitude toward Christianity, were subjected to factor analysis and to reliability analyses. Table 1 presents the 24 items that provided the strongest single factor solution, together with correlation between the individual items and the sum of the other 23 items, the alpha coefficient (Cronbach, 1951), and the item endorsement in terms of the sum of the agree and agree strongly responses. Four main conclusions emerge from these statistics. The alpha coefficient indicates a high level of internal consistency reliability.

The correlations between the individual items and the sums of the other 23 items demonstrate that each item is playing a good part within the set of items. The items with the highest correlations suggest that affective responses to God and to prayer sit at the heart of how this measure conceptualises and operationalises attitude toward Sikhism: Vaheguru (God) means a lot to me (.82); Prayer helps me a lot (.80); Praying with the Sadh Sangat (holy gathering) is important to me (.79); and I believe that Vaheguru (God) listens to my prayers (.78). The item endorsements demonstrate that the items cover a wide range of discrimination from 83% who agree that the Gurdwara (place of worship) is very important to me to 27% who agree that amrit (baptism) helps them to lead a better life. The 24 selected items also include seven negatively voiced items to guard against response setting. Endorsement of these negatively voiced items ranged from 2% who think the people who pray are unwise to 33% who agree that at the Gurdwara (place of worship) they found it hard to listen to gurbani (sacred text).

- insert table 2 about here -

Table 2 explores the construct validity of the scale of attitude toward Sikhism against two theoretical frameworks predicting different levels of correlation with the attitudinal dimension of religion. First, following Francis (2009), in terms of religious practice it is predicted that the affective dimension of religion is more closely related to the internal practice of prayer than to the external practice of worship attendance. This hypothesis is supported by the data that show a significant correlation of .56 with frequency of personal prayer, compared with a significant correlation of .37 with frequency of gurdwara attendance. Second, in terms of self-perceived spirituality among self-identified Sikhs it is predicted that the affective dimension of religion is closely related with self-perception as being a religion person and with self-perception as being a spiritual person, but unrelated with self-perception as being a superstitious person. The Sikh tradition affirms the nurturing of religion and spirituality, but not the nurturing of superstition. The hypothesis is supported by the data that

show a significant correlation of .70 with self-assessment as a religious person and a significant correlation of .69 with self-assessment as a spiritual person, but no significant correlation with self-assessment as a superstitious person (-.12).

- insert table 3 about here -

Table 3 examines the mean scale scores recorded on the scale of attitude toward Sikhism in terms of sex differences (male and female) and in terms of age difference (year nine and year ten). Sex and age differences are of particular interest for the following reasons. In terms of sex differences there is a long tradition of research in the psychology of religion, as reviewed initially by Argyle (1958), that finds within a Christian and post-Christian context women being more religious than men, including in the sense of recording higher scores of religious affect (see Francis & Penny, 2014). A similar finding is not, however, routinely reported within all religious traditions (see, for example, Kamal & Loewenthal, 2002; Loewenthal, MacLeod, & Cinnirella, 2002; Ruffle & Sosis, 2007; Momtaz, Hamid, Yahaya, & Ibrahim, 2010; Gonzalez, 2011). Table 3 demonstrates that there was no significant sex difference in mean scores recorded on the scale of attitude toward Sikhism. In terms of age differences, there is a long tradition of research in the psychology of religion, as reviewed by Kay and Francis (1996), that finds within a Christian and post-Christian context that there is a steady decline in religiosity during the years of childhood and adolescence, including in the domain of religious affect. Table 3 demonstrates that there was no significant difference in mean scores on the scale of attitude toward Sikhism recorded by year-nine and year-ten students.

Conclusion

The present study set out to construct and to test a scale of attitude toward Sikhism that was rooted in the conceptualisation of the attitudinal dimension of religion that has shaped the Francis Scale of Attitude toward Christianity (Francis, 1978a, 1978b), the Sahin-

Francis Scale of Attitude toward Islam (Sahin & Francis, 2002), the Katz-Francis Scale of Attitude toward Judaism (Francis & Katz, 2007), the Santosh-Francis Scale of Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008), and the Astley-Francis Scale of Attitude toward Theistic Faith (Astley, Francis, & Robbins, 2012). This research aim has resulted in the 24-item Athwal-Francis Scale of Attitude toward Sikhism. Conceptually this new instrument is rooted within the same conceptual framework as the earlier instruments, has been designed and rooted within the Sikh community, and tested among young people who have self-identified as Sikhs. The data demonstrate that this new instrument achieves a high level of internal consistency reliability and good characteristics of construct validity.

The main limitations with the present study clearly arise from the small sample of 90 self-assigned Sikh students attending year-nine and year-ten classes within one state-maintained school with a Sikh foundation. The initial promising qualities of the instrument nonetheless indicate that such limitations are worth addressing by building on this foundation study. Future studies could now extend this work in two ways. The first way involves identifying other clearly defined groups of Sikhs, including a wider age range of students attending Sikh-related schools, Sikh-related associations within universities, and Sikhs who meet for worship within the gurdwara. The second way involves incorporating within such studies measures that have been employed to explore the correlations, antecedents, and consequences of individual differences in attitude toward religion within other faith contexts as reviewed, for example, by Francis (2009).

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Table 1

Francis-Athwal Scale of Attitude toward Sikhism: Scale properties

	<i>r</i>	Yes %
At the Gurdwara (place of worship I find it hard to listen to gurbani (sacred text) *	.31	33
I know Vaheguru (God) helps me	.63	73
Praying is a waste of my time *	.74	3
Amrit (baptism) doesn't mean anything to me *	.58	17
The Gurdwara (place of worship) is very important to me	.71	83
I want to love Vaheguru (God)	.76	81
I think Gurdwara (place of worship) programmes are boring *	.47	16
I think people who pray are unwise *	.44	2
Vaheguru (God) means a lot to me	.82	81
I believe that Vaheguru (God helps people)	.73	79
The Panj Kakkars (five Ks) are important in today's society	.49	76
Prayer helps me a lot	.80	64
I know Vaheguru (God) is very close to me	.68	56
I think praying is a good thing	.74	87
Following Rehat Maryada (Sikh code of conduct) is important to me	.70	51
Going to the Gurdwara (place of worship) is important to me	.73	75
Praying with the Sadh Sangat (holy gathering) is important to me	.79	55
I believe that Vaheguru (God) listens to my prayers	.78	61
Vaheguru (God) is very real to me	.77	68
I think saying prayers does no good *	.66	7
I find it hard to believe in Vaheguru (God) *	.64	20
My Kesh (hair) is important to me	.47	49
Vaheguru (God) doesn't mean anything to me *	.73	3
Amrit (baptism) helps me lead a better life	.64	27
Alpha coefficient	.95	

Note: *r* = correlation between the individual item and the sum of the other 23 items; yes % = sum of agree and agree strongly response; * = these items were reverse coded.

Table 2

Construct validity of Francis-Athwal Scale of Attitude toward Sikhism

	<i>r</i>
<i>Religious practice</i>	
Frequency of personal prayer	.56***
Frequency of gurdwara attendance	.37***
<i>Self-perceived spirituality</i>	
I am a religious person	.70***
I am a spiritual person	.69***
I am a superstitious person	-.12

Table 3

Mean attitude scores by sex and by school year

	N	Mean	SD	<i>t</i>	<i>p</i> <
<i>Sex difference</i>					
Male	35	93.3	16.1		
Female	55	92.7	16.3	.02	NS
<i>School year differences</i>					
Year nine	48	93.3	17.7		
Year ten	42	92.6	14.3	.02	NS