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**Measuring attitude towards Buddhism and Sikhism: internal consistency reliability for two new instruments**

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**Abstract**

This paper describes and discusses the development and empirical properties of two new 24-item scales – one measuring attitude toward Buddhism and the other measuring attitude toward Sikhism. The scale is designed to facilitate inter-faith comparisons within the psychology of religion alongside the well-established Francis Scale of Attitude toward Christianity. Data were obtained from a multi-religious sample of 369 school pupils aged between 13 and 15 in London. Application of the two scales demonstrated that adolescents had a more positive attitude to Buddhism than Sikhism. The findings confirm the reliability of the scales and commend them for further use.

**Keywords**

adolescents, spiritual attitudes, Buddhism, Sikhism, religiosity

## **Introduction**

The effort to model the religious sphere of life has led to the development of over 125 measurement scales for religiosity (Hill & Hood 1999). Since the majority of these measures have been grounded in Christianity alone, it cannot be assumed that they would apply equally to Buddhism or Sikhism. Some of the scales of attitude to religion seem more readily applicable to non-Christian religions than others. One style of attitude measure which has proved valid and reliable for religiosity in Christianity (Francis 1978), Hinduism (Francis et al. 2008), Islam (Sahin & Francis 2002) and Judaism (Francis & Katz 2007) is that of the Francis Scale of Attitude toward Christianity (FSAC). In brief, it has employed attitude questions on religious values using a five-point Likert scale, to yield a score of between the extremes of 24 (negative attitude) and 120 (positive attitude). The design generally includes reverse-coded questions to control for mechanical ticking by respondents. The practicality of the FSAC has been in its assumption of unidimensionality of religiosity rather than focussing on other dimensions of religious life such as frequency of worship. Thus, although Christianity has some degree of internal diversity, FSAC has managed to overcome this in practice to allow, for example, experimental control for religiosity in comparison of values between the Catholic and Protestant communities in Northern Ireland (Greer & Francis 1992).

A FSAC-equivalent scale has not yet been developed for either Buddhist or Sikh religiosity. If Buddhist or Sikh religiosity were to be measured, it is not clear whether the internal diversity problems could be overcome with the same ease as for previously researched religions, because for Buddhism issues of internal diversity seem particularly challenging (Gombrich 1996) – and the same appears to be true of Sikhism in the UK (Lall 1999; Nesbitt 2009, 47).

Quantitative measurement of Buddhist religiosity has, however, already been employed in several other academic disciplines. Within the context of clinical

psychology, part of the Thai language testing of the Tennessee Self-Concept Scale (TSCS) involved comparison of TSCS factors and the Lifestyle Index (LSI) with an arbitrarily (i.e. without any scriptural or researched basis) constructed eleven-question schedule of Buddhist beliefs and practices (Emavardhana & Tori 1997; Tori 2004, 41) which could be construed as a measure of Buddhist religiosity. Buddhist religiosity has recently been analysed qualitatively in terms of its sources, beliefs, practices, positive consequences and prognosis of future benefits (Yeung & Chow 2010). Furthermore, Buddhist religiosity has been taken into account in psychiatric contexts (Scotton 1998), alcohol abuse (Assanangkornchai et al. 2002), moral training (Pupatana 2000), psychosocial change (Thananart 2000), psychoanalytic defence mechanisms (Tori & Bilmes 2002), psychological therapy (de\_Silva 1996) and learning English as a foreign language (Adamson 2003). Smith and Kay designed (2000, 190) and ascertained reliability of a sixteen-question, FSAC-equivalent scale for Buddhism but did not validate it against degree of Buddhist practice (Kay & Smith 2002).

For Sikhism, measures of religiosity have already been employed in several academic disciplines. Smith and Kay designed (2000, 189) a sixteen-question, FSAC-equivalent scale for Sikhism in their research on how classroom factors affected Religious Education (Kay & Smith 2002) but did not validate it against degree of Sikh observance. However, a scale of 'Sikh-ness' has been described qualitatively in ethnographic studies (Nesbitt 1999, 319). Comparisons between the attitudes of young Sikhs and adolescents of other or no religious affiliation have been made by Alan Smith (2002; 2006), Francis (2001) and Francis and Robbins (2005, 186-193).

Given the ethnological maxim that interpretations made about religious identity ought to be acceptable to insiders of that religion (Cantwell-Smith 1981, 97), part of the brief of this research was to explore quantitative methods of measuring attitude to Buddhism and Sikhism acceptable to outsiders as well as insiders of those religions. Against this background, the brief of the present study was to explore, in a sample of

UK adolescents, whether reliable scales of Buddhist and Sikh religiosity could be constructed in a way comparable to those of previously researched religions.

## **Method**

### ***Sample***

Research was undertaken upon a convenience sample of 369 young people – 237 boys and 132 girls – aged between 13 and 15 years attending London schools. Ethnically the sample consisted of 150 whites (41%), 103 blacks (30%), 58 Asians (16%), 41 of mixed race (11%) and 7 Chinese (2%). The religious composition of the sample was 149 Christians (41%), 120 of no religion (33%), 45 Moslems (12%), 17 Hindus (5%), 15 Buddhists (4%), 5 Sikhs (1%), 3 Jews (1%) and 13 of other religions (4%). Of the pupils in the sample, 49% had studied Buddhism and 43% had studied Sikhism in their Religious Education lessons of the past year.

### ***Instrument***

A multi-purpose survey (detail of the survey can be found in Thanissaro 2010, 184-191) was deployed as part of a wider research project. The survey contained biographical questions adapted from Francis's (2001) adolescent values inventory and 48 Likert five-point response scale: *strongly agree, agree, not certain, disagree* and *disagree strongly*. Attitude questions focussed on Buddhist and Sikh values adapted from previous qualitative and quantitative adolescent attitudes research in the UK (Nesbitt 2000; Kay & Smith 2002; Thanissaro 2011).

### ***Procedure & Analysis***

Three schools volunteered their participation in response to a circular letter from their local Standing Advisory Council on Religious Education. Surveys were delivered to participating schools in the quantities they required and administered to pupils by Year 9 and 10 teachers under examination conditions in their regular Religious Education

classes in the period January and February 2010. In keeping with constraints of ethical approval non-consenting pupils had the option of destroying their questionnaires after completion instead of submitting them and completed surveys were kept anonymous to protect participants from having their views traced back to them. The resulting dataset was analyzed by means of the SPSS statistical package (SPSS\_Inc. 1988) using the reliability routine and a non-parametric test of related samples.

## Results

### *Scale of Attitude toward Buddhism*

**Table 1 Reliability of a Scale of Attitude toward Buddhism**

	<i>Item Rest of Test Correlation</i>
I like the way Buddhists train their minds through prayer and meditation <sup>§</sup>	.785
I like the way Buddhists offer flowers and incense to statues of Buddha <sup>§</sup>	.757
Eightfold Path seems a good way to achieve happiness <sup>§</sup>	.738
Admire Buddhists for respecting all living things <sup>§</sup>	.731
I find it inspiring to hear Buddhist stories	.717
I like the Buddhist idea of encouraging people to become friends on Sangha Day <sup>§</sup>	.708
Spending time as a Buddhist monk is beneficial to the world at large	.704
I respect the way some Buddhists spend time in meditation by becoming monks or nuns <sup>§</sup>	.692
It is important for Buddhists to have respect for those worthy of respect	.689
I think the Buddhist idea of having a calm mind is a good one <sup>§</sup>	.656
I respect Buddhists for giving food and money to their monks <sup>§</sup>	.617
I respect the Buddhist idea that understanding is more important than belief <sup>§</sup>	.607
It is important for Buddhists to spend time meditating	.582
It is necessary for us to share what we have with others	.568
Whether we enjoy life or hate it depends on how we see the world	.562
Spending time meditating is a constructive use of one's time	.554
It is important for Buddhists not to kill any sort of animal	.546
It is necessary for us to give support to the poor and the needy	.544
Nirvana is the ultimate peace	.539
If you are a Buddhist it is important to avoid drinking alcohol	.493
If you are a Buddhist it is important to look after your parents in their old age	.475
Some people who have helped us a lot deserve our special respect	.468
If a person does good deeds, bad things will come back to them <sup>®</sup>	.460
I would enjoy killing any sort of animal <sup>®</sup>	.405
<i>Alpha coefficient for all 24 items together =</i>	<b>.938</b>

® Indicates that this item was reverse scored for correlation purposes.  
§Attitude Items derived from Smith & Kay (2000)

The study was able to verify the internal consistency of a new Scale of Attitude toward Buddhism using the usual measures of reliability (Cronbach 1951; DeVellis 1991). Cronbach's alpha coefficient for all 24 items of Buddhist attitude together was .938, with item-total reliabilities ranging from .405 to .785 – well within the bounds of

acceptability since Kline indicates that an alpha-coefficient of over .8 is acceptable in psychological testing (1999) – and the score also offers a modest improvement on the reliability of the 16-item scale of Sikhism developed by Smith and Kay (2000, 189) which achieved an overall alpha-coefficient of .8138, even though the 24-item scale described here shares a third of their question items. Table 1 shows the contributing reliabilities for each item, arranged in decreasing order of reliability.

### *Scale of Attitude toward Sikhism*

**Table 2 Reliability of Scale of Attitude toward Sikhism**

	<b>Item Rest of Test Correlation</b>
I find listening to Sikh scriptures such as the Guru Granth Sahib inspiring	.750
Sikh festivals are inspiring to me	.749
Going to the Gurdwara is an important part of life	.735
Sikhism relevant to the modern world	.716
The way Sikh festivals are linked to the cycle of nature is helpful <sup>§</sup>	.715
It is important for Sikhs to wear the steel bracelet [ <i>kara</i> ] at all times	.682
I like the Sikh idea of seeing God everywhere in the world <sup>§</sup>	.678
The Sikh festival of Diwali is very meaningful to me	.674
It is important for Sikhs to take the <i>amrit</i> initiation	.673
I am fascinated to hear Sikh stories	.670
It is important for Sikhs to wear the comb [ <i>kangha</i> ] at all times	.653
The Sikh custom of opening temples to everyone is good <sup>§</sup>	.640
I respect the idea in Sikhism that anyone can be a priest because everyone is equal <sup>§</sup>	.607
I like the Sikh way of praying by repeating the name of God <sup>§</sup>	.593
Knowing the Sikh code of conduct helps me lead a better life	.592
I can see how Sikhs like to believe the stories about Guru Nanak <sup>§</sup>	.581
It is easy to understand Sikh rituals	.579
It is important for Sikhs to wear the shorts [ <i>kachh</i> ] at all times	.578
I find it easy to understand Sikhism	.564
It is important for Sikhs <u>not</u> to cut their hair [ <i>kesh</i> ] or beard	.520
I find the duties of the Sikh brotherhood easy to understand <sup>§</sup>	.512
It is important for Sikhs to wear the dagger [ <i>kirpan</i> ] at all times	.509
I disagree with the way Sikhs give one tenth of their income to charity <sup>®§</sup>	.509
I think the Sikh scriptures are out of date <sup>®</sup>	.502
Alpha coefficient for all 24 items together =	<b>.944</b>

® Indicates that this item was reverse scored for correlation purposes.  
§Attitude items derived from Smith & Kay (2000)

The study was also able to verify the internal consistency of a new Scale of Attitude toward Sikhism. Cronbach's alpha coefficient for all 24 items of Sikh attitude together was .944, with item-total reliabilities ranging from .502 to .750 – also well within the bounds of acceptability – and the score also offers a modest improvement on the



reliability of the 16-item scale of Sikhism developed by Smith and Kay (2000, 190) which achieved an overall alpha-coefficient of .8431, even though the 24-item scale described here shares half of their question items. Table 2 shows the contributing reliabilities for each item, arranged in decreasing order of reliability.

### ***Comparison of Attitudes between Buddhism and Sikhism***

As an example of how the scales can be applied, comparisons were made by a Wilcoxon Signed Ranks Test, between the pupils attitudes to Buddhism as compared with Sikhism. On the Buddhist attitude scale, scores were found to be significantly more positive (*mean=78.78*) than scores on the Sikh scale of attitude (*mean=71.50, z = -7.30, p<.000*).

### **Discussion**

Two 24-item scales of attitude – one for Buddhism and one for Sikhism – with satisfactory levels of reliability are commended here for further use. They offer an improvement on the reliability of previous measures of Buddhist and Sikh religiosity, including aspects of identity thought important by adherents of those religions while avoiding religious jargon to the extent they are accessible for completion by respondents who are outsiders to those religions.

Although the two scales were developed in parallel, some caution may be attached to interpreting the significant difference between attitudes reported by participants since it can still not be guaranteed that the two scales are equal in their ability to tap into the features considered by insiders most central to their particular faith. For the Buddhist scale, much more than for the Sikhism scale, it was possible to word questions in terms less explicit to that religion, thereby finding more compatibility with outsiders' own points of view. It is possible that a more favourable attitude to Sikhism would be measured if Sikh values could be expressed in less explicitly Sikh terms.

Before generalizing the results of this research, it should be borne in mind, at this stage, that validity of the scales of attitude to Buddhism and Sikhism for tests of religiosity can still not be assumed – and similarly, in the absence of further testing, reliability across a broader age range than the 13-15 year-old target group can still not be guaranteed. It would be recommended that the two 24-item scales be further tested in comparison between much larger samples of Buddhist/Sikh adolescents and a control group – and across a wider age-range. Such further testing should include cross-correlation for gender, age and religious involvement to verify validity of this scale in a way the sample of the present study has not allowed. It would also be instructive to make correlations between this Buddhist measure and scales of self-compassion (Neff 2003) and mindfulness (e.g. Lau et al. 2006).

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