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## RESEARCH ARTICLE

### **Internal consistency reliability and construct validity of the Attitude toward Muslim Proximity Index (AMPI): A measure of social distance**

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**Internal consistency reliability and construct validity of the Attitude toward Muslim Proximity Index (AMPI): A measure of social distance**

**Abstract**

The Attitude toward Muslim Proximity Index (AMPI) is a 6-item scale that uses tolerance to different degrees of social distance to assess prejudice towards Muslims. It was tested on 1777 teenage school children from Northern England who indicated their religion as either 'Christian' or 'no religion', and demonstrated good internal reliability (Cronbach's  $\alpha = .81$ ). The index was higher among pupils who supported the views of the British National Party and among those who believed that British Muslims should adopt Western culture; but lower among those who knew Muslims or had Muslim friends. The AMPI is a useful measure of Islamophobic attitudes that does not rely on responses to specific events or on detailed knowledge of the Muslim religion.

**Keywords:** Social distance; Islamophobia; Likert scale.

## **Introduction**

There has been a widespread and long-term interest among sociologists regarding the relationships between groups of different ethnic or religious backgrounds that co-exist in the same societies. In Western societies this interest includes studies of attitudes of the majority toward minorities, such as whites toward African-Americans in the USA (Bogardus 1928; Hughes and Tuch 2003; Johnson and Marini 1998; Westie 1953), indigenous European populations towards immigrants (McLaren 2003; Pettigrew et al. 1997; Pettigrew and Meertens 1995; Stephan, Ybarra, and Bachman 1999) and those from a predominantly Christian background toward Jews or Muslims (Duriez and Hutsebaut 2000; Eisinga, Billiet, and Felling 1999; Jacobson 1998). Such studies generally rely on measures that attempt to operationalize an underlying attitude of prejudice, fear or loathing linked to concepts such as racism and Islamophobia.

A recognized way of operationalizing such constructs involves identifying items that typify stereotypes found among the majority population being investigated. In a study of religion and racism among undergraduates in Belgium, for example, Duriez and Hutsebaut (2000) used a range of items considered to be related to specific fears about immigrants in that country, such as: ‘Guest workers come here to exploit our social security’, ‘Guest workers endanger the employment of Belgians’ and ‘In some neighborhoods, government is doing more for immigrants than for the Belgians who live there’. An advantage of such measures is that they are relevant to the attitudes of the majority group under study, and may therefore be said to have high face validity. In addition, they enable assessment of the relative importance of different personal and contextual factors that might contribute to the overall attitude toward the outgroup.

There are, however, some disadvantages in using such scales. First, they may be overly specific to particular groups and their interactions. This means that scales may not be generalizable across different populations, or even within the same population over time. A measure designed to assess attitudes of whites toward Afro-Caribbeans in Britain, for example, may not be easily compared with a measure constructed to assess attitudes of whites toward Muslims in Britain; measures used in Britain may not work if applied elsewhere in Europe; and measures developed in response to a particular context, event or crisis might be incomprehensible to later generations. Field (2007) found that British opinion polls between 1988 and 2006 concerned with negative attitudes toward Muslims ('Islamophobia') drew on stereotypes and were often conducted in response to particular events or crises. Although Field was able to identify some trends, comparison was hindered by the way that items in surveys tended to reflect particular preoccupations at the time when the questionnaires were constructed.

A second problem with attitude scales developed in relation to specific interactions is that they sometimes require a fairly sophisticated and detailed knowledge of the outgroup. An example of this sort of instrument is provided by a measure of attitude toward Islam developed for use among school children by Smith and Kay (2000). This instrument was designed for use among children who were expected to have been taught about Islam, and consequently many items drew on particular Islamic beliefs or practices. Typical items included: 'I respect Moslems who try to follow the Five Pillars of Islam', 'I like the Moslem idea of only eating halal meat' and 'I admire the moral beliefs of Islam'. Children who had not been taught about these aspects of Islam, or who had been exposed to such teaching but who had not retained the knowledge, would find these items difficult to answer. In

this case, neutral answers (such as a 'not certain' response) may betoken lack of understanding, rather than a particular attitudinal stance.

A third problem with using items relating to specific aspects of an inter-group relationship is that they may measure matters of fact or legitimate belief, rather than indicators of underlying prejudice. A respondent who agrees that immigrants should learn the language of their adopted country, for example, might be drawing on a genuine concern that incomers might find integration more difficult if they do not make the effort to learn the local language, rather than a cultural arrogance demanding that outsiders conform to the majority convention.

Social psychologists have sometimes drawn on the widely used concept of 'social distance' to measure discrimination or prejudice (Bogardus 1928, 1959; Ethington 2007). This concept is conceived of as a mixture of physical and spatial proximity and more metaphorical understandings of distance relating to differences in social class or social location. The underlying theory assumes that prejudice is related to how comfortable people feel at different levels of proximity to members of an outgroup. Researchers measure levels of prejudice by creating items that specify different levels of spatial (e.g. living in the same area, eating in the same restaurant, encountering headscarves, etc.) or social (e.g. attending the same school, being related by marriage, etc.) proximity. Summated scales are then created on the assumption that low tolerance of proximity equates with underlying discrimination, prejudice or fear of the outgroup in question. Social distance has been used in this way to assess prejudice associated with race (Bogardus 1928; Westie 1953), mental illness (Angermeyer and Matschinger 1997; Brockman and D'Arcy 1978; Corrigan et al. 2001) and religion (Brinkerhoff and Jacob 1994). Although the concept of 'distance' has sometimes been used entirely metaphorically rather than spatially, there are good

reasons for including an element of spatial proximity in such scales (Ethington 2007). Spatial distance may be a direct way of examining the extent of irrational fear or prejudice towards a racial or religious outgroup.

This study reports on the development of a social distance scale to measure attitude toward Muslims that should be generalizable across different populations. Likert-type items (Likert 1932) were used to create a summated rating scale that was tested for internal consistency reliability and construct validity among predominantly white teenage pupils in two areas of Britain specifically selected because of their different proportions of Muslims in the local population.

## **Method**

### *Sample*

Questionnaires were administered by class teachers during normal school activities to pupils between the ages of 14 and 18 years in 2003 and 2004 within three areas of northern England (Blackburn, Kirklees and York) as part of a wider study into attitude toward Muslims and Islam (Brockett et al. 2007). All pupils were assured of anonymity and confidentiality, and given the opportunity to opt out of the survey. Response rates were high, and nearly all pupils agreed to complete the questionnaire. Data for Blackburn and Kirklees were combined due to small sample sizes and the similarity of these areas. The catchment area of the Blackburn and Kirklees schools included a higher proportion of Muslims than that of the York schools. In 2001, the proportion of Muslims in the populations of Blackburn, Kirklees and York was 19%, 10% and <1% respectively (Office for National Statistics 2003, Table KS07). This trend was reflected in the samples in this study, which included 23% Muslims in Blackburn and Kirklees and <1% Muslims in York. Respondents from other

categories (Buddhist, Hindu, Jewish, Other Religion) made up less than 4% of the total sample and were excluded from the final sample. Analyses reported in the present paper were confined to respondents who classed their religion as ‘Christian’ or ‘no religion’ (490 in Blackburn and Kirklees and 1287 in York).

### *Measures*

A number of items were included in the questionnaire to assess attitude toward having Muslims in some sort of proximity to the respondent (Table 1). Items were introduced with the words ‘How would you feel about...’ and responses were scored from 1 (= very pleased) to 5 (= very unhappy). Of these items, four referred to spatial proximity (having Muslims living next door, in the same street, in the next street, or elsewhere in the town), one to social proximity (having a Muslim marry into the family) and one to proximity to those who are noticeably different (pupils wearing of headscarves in school).

Other items included in the questionnaire were designed to assess correlates (and hence construct validity) of the proximity items: ‘I agree with the views of the British National Party (BNP)’ (1 = strongly disagree to 5 = strongly agree); ‘Muslims should adopt Western culture when living in the UK’ (1 = strongly disagree to 5 = strongly agree); ‘Do you have any Muslim friends?’ (0 = no, 1 = yes); ‘Do you know any Muslims?’ (0 = no, 1 = yes).

### *Data analysis and scale properties*

The six items were initially subject to exploratory factor analysis using principal components extraction, which identified a single factor accounting for 58% of the variance. Reliability analysis was based on Cronbach’s method (Cronbach 1951).

Item – rest-of-test correlations (ranging from .48 to .72, Table 1) and the Cronbach's alpha coefficient ( $\alpha = .81$ ) indicated that the six items formed a scale with good internal reliability, so item scores were summed to create the Attitude toward Muslim Proximity Index (AMPI).

[Table 1 about here]

## Results

Construct validity of the AMPI was investigated by comparing the correlation coefficients between the total scale score and the four items presented in Table 2. In view of the different proportions of Muslims living in the different communities, the correlations were calculated separately for pupils in Blackburn and Kirklees and those in York.

[Table 2 about here]

Higher scale scores were associated with agreement with the views of the BNP and with agreement that Muslims in the UK should adopt Western culture; and lower scale scores were associated with knowing Muslims and with having Muslim friends. These correlations support the view that the scale is a measure of prejudice against Muslims.

AMPI scores were significantly higher in Blackburn and Kirklees (mean ( $\pm$  SE) =  $18.4 \pm 0.2$ ,  $n = 490$ ) than in York ( $16.2 \pm 0.1$ ,  $n = 1287$ ;  $t = 159.5$ ,  $p < 0.001$ ), and this was reflected in the endorsement of individual items in the scale (Table 3). For each of the six items, the proportion of pupils who chose the 'very unhappy' or 'unhappy' categories was significantly higher in Blackburn and Kirklees than in York.

[Table 3 about here]

Pupils in Blackburn or Kirklees were also more likely than those in York to agree with the views of the BNP and to agree that Muslims should adopt Western culture when living in the UK. At the same time, pupils in Blackburn and Kirklees were twice as likely to know Muslims or to have Muslim friends compared to pupils in York (Table 3), clearly reflecting the considerably higher proportion of Muslims among the Blackburn and Kirklees communities compared with the community in York. The greater contact with Muslims in Blackburn and Kirklees was not, however, reflected in more tolerant overall attitudes toward Muslims among non-Muslims within those communities. Although knowing Muslims or having Muslim friends reduced prejudice within these areas, the absolute measures of prejudice were higher in Blackburn and Kirklees than in York (Table 4).

[Table 4 about here]

## **Discussion**

### *Reliability and validity of the AMPI scale*

The main purpose of this paper has been to establish the possibility of using a social distance scale to measure Islamophobia among young people in Britain. The six items in the AMPI formed an internally reliable scale with an acceptably high Cronbach's alpha of .81. This implies that a given individual is likely to respond in the same direction to each item. The underlying construct linking the six items seems to be fear of interacting with Muslims, and a general aversion to them. The item related to the wearing of the hijab was the least well correlated with the overall scale, representing as it does a slightly different way of measuring fear of proximity. However, its inclusion slightly increased the alpha measure of reliability and extended

the construct into different modes of proximity. In the case of the hijab, aversions may also be linked to a desire to remove markers of cultural or religious difference.

The other items generally showed an expected pattern of increasing unhappiness with increasing proximity of contact. An exception was attitude toward Muslims living in the same city, where responses were slightly more negative than expected from the items that referred to Muslims living in specific spatial proximity (in the same street or next door) to the respondent. It may be that this reflects the nature of immigrant settlement in Britain, which has been much higher in some areas than in others, resulting in the sort of uneven distribution of religious groups displayed in the communities in this study. Rejection of Muslims living ‘in your city’ may reflect unease with the possibility of the community having a large proportion of poorly-integrated religious or ethnic groups. For the other items there was an incremental increase in scores from the item referring to Muslims living in the next street through to Muslims marrying into the family, which was the most negatively rated item.

These scores suggest that a mixture of daily social contact, spatial proximity and social proximity may be useful items in a social distance scale of this sort. We concur with Ethington (2007) who argues that social distance scales should retain elements of both geometric and metaphorical distance. The items included in this scale were the only ones available on the questionnaire, but future studies could investigate a wider range of items referring to different sorts of distance.

The positive correlation of AMPI scores with attitude toward the views of the BNP is in line with the argument that the scale measures prejudice towards, and irrational fear of, Muslims. Whatever the policies of the BNP, the party is widely perceived to be anti-immigration and anti-Muslim and to draw its followers from

those who hold prejudiced or phobic attitudes toward Muslims. The positive correlation with the belief that Muslims should adopt Western culture when living in the UK probably also indicates fear of outgroup difference, though this belief might not necessarily be driven by religious prejudice.

The levels of knowing Muslims and having Muslims friends in the two main study areas reflect the very different opportunities of meeting Muslims in the different communities. Nonetheless, in both areas, those who knew or had befriended Muslims were likely to have lower scores on the AMPI. This agrees with many studies that have shown that prejudice is lower among those who have close contact with the outgroup (Alexander and Link 2003; Corrigan et al. 2001; Pettigrew 1998; Pettigrew and Tropp 2006), and again confirms the validity of the AMPI as a measure of social distance related to religious prejudice.

Results from other parts of the questionnaire suggest that knowledge of Muslim practices among the white populations was generally low (Brockett et al. 2007), so a scale of prejudice based on aspects of Islam or Muslim culture might have confounded racism with ignorance of the outgroup. Where religion and race are closely associated it is not easy to separate out which is the cause of the prejudice and more detailed research is required to test if religious prejudice is distinct from racial prejudice in the case of Islam. However, we believe the current measure indicates a way of measuring a general attitude toward a minority group that taps into irrational fear or prejudice and that is not dependent on detailed knowledge of the religious beliefs or practices of Muslims. As such it may be a useful measure of attitude toward Muslims, or 'Islamophobia', that could be employed across different communities and over time. It should also be possible to convert it fairly easily into a scale related to different ethnic or religious groups.

### *Application of the scale*

An interesting finding that requires further investigation is that although contact with Muslims reduced prejudice *within* communities, this was not so *between* communities. Pupils in Blackburn and Kirklees were more likely to contact with Muslims than were those in York, but average AMPI scores were still significantly higher, implying greater levels of prejudice. The notion that frequent contact reduces prejudice is based on the assumption that prejudice is largely driven by fear of the unknown. Bringing different religious groups into contact should increase familiarity, reduce fear and therefore reduce prejudice. This seemed to happen within each of the communities, where knowing Muslims (even without having Muslim friends) significantly reduced AMPI scores. However, this ‘familiarity effect’ was small compared with differences between communities, which worked in the opposite direction. Here, the communities with highest likelihood of encounter with Muslims (Blackburn and Kirklees) had the highest level of prejudice. As a result, AMPI scores were higher among respondents in Blackburn and Kirklees who knew Muslims than among those in York who did not. Perhaps it is easier to be open to the idea of increased proximity with a minority when the possibility of this happening is small. This study sampled only two communities with very different proportions of Muslims: future work could apply the AMPI scale to more communities with varying proportions of Muslims in the population in order to investigate this phenomenon more fully.

Table 1. Scale properties of the Attitude toward Muslim Proximity Index (AMPI)

	Mean	SD	IRC
How you feel about Muslims living in your city?	2.68	1.20	.64
How you feel about Muslims living in the next street?	3.10	0.45	.62
How you feel about Muslims living in your street?	3.14	0.51	.71
How you feel about Muslims living next door?	3.23	0.63	.72
How would you feel about a close relative marrying a Muslim person?	3.27	0.92	.56
Would you mind if girls in your school/college wore a headscarf? (scale 1-3)	1.42	0.81	.48

Note.  $N = 1777$ . IRC =Item-Rest Correlation

Table 2. Construct validity of the Attitude toward Muslim Proximity Index (AMPI)

	AMPI	
	BK	YK
I agree with the views of the BNP	.35 <sup>***</sup>	.25 <sup>***</sup>
Muslims should adopt Western culture	.24 <sup>***</sup>	.35 <sup>***</sup>
Know Muslims	-.13 <sup>**</sup>	-.11 <sup>***</sup>
Have Muslims friends	-.14 <sup>**</sup>	-.17 <sup>***</sup>

Note. Table reports bivariate Pearson correlation coefficients. BK= Blackburn and

Kirklees; YK = York. <sup>\*\*</sup>  $p < 0.01$ ; <sup>\*\*\*</sup>  $p < 0.001$ .

Table 3. Percentage of item endorsement in the AMPI and its correlates

	BK	YK	
	<i>N</i> = 490	1287	
	%	%	$\chi^2$
How do you feel about: <sup>1</sup>			
Muslims living in your city?	36	14	118.7***
Muslims living in the next street?	20	6	81.7***
Muslims living in your street?	26	9	86.0***
Muslims living next door?	38	16	96.2***
A close relative marrying a Muslim person?	43	24	58.2***
Girls in your school wearing a headscarf?	33	15	70.1***
I agree with the views of the British National Party (BNP) <sup>2</sup>			
	13	5	31.0***
Muslims should adopt Western culture when living in the UK <sup>2</sup>			
	41	26	40.5***
Do you know any Muslims? <sup>3</sup>			
	79	41	207.5***
Do you have any Muslim friends? <sup>3</sup>			
	64	28	197.7***

Note: BK= Blackburn and Kirklees; YK = York; \*\*\*  $p < 0.001$ .

<sup>1</sup> Items in the AMPI; endorsement reported on sum of 'very unhappy' or 'unhappy'

<sup>2</sup> Correlates with AMPI; item endorsement reported on sum of 'agree strongly' or 'agree'.

<sup>3</sup> Item endorsement reported as 'yes' response.

Table 4. Mean (SD) AMPI scores in relation to knowing or not knowing Muslims or having Muslim friends

		BK	<i>n</i>	YK	<i>n</i>
Do you know any Muslims?	No	19.5 (4.6)	101	16.5 (2.9)	757
	Yes	18.1 (3.8)	389	15.9 (2.9)	530
Do you have any Muslim friends?	No	19.2 (4.5)	175	16.5 (2.9)	926
	Yes	18.0 (3.7)	315	15.5 (2.7)	361

Note: BK= Blackburn and Kirklees; YK = York

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