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# The Internal Consistency Reliability of the Katz-Francis Scale of Attitude toward Judaism among Australian Jews

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**Abstract:** The Katz-Francis Scale of Attitude toward Judaism was developed initially to extend among the Hebrew-speaking Jewish community in Israel a growing body of international research concerned to map the correlates, antecedents and consequences of individual differences in attitude toward religion as assessed by the Francis Scale of Attitude toward Christianity. The present paper explored the internal consistency reliability and construct validity of the English translation of the Katz-Francis Scale of Attitude toward Judaism among 101 Australian Jews. On the basis of these data, this instrument is commended for application in further research.

**Keywords:** psychology; religion; Australia; Judaism; attitude; Katz-Francis Scale of Attitude toward Judaism

## 1. Introduction

The measurement-based approach to the empirical psychology of religion, as reviewed for example by Spilka, Hood, Hunsberger, and Gorsuch [1] and Hood, Hill and Spilka [2], remains dominated by studies shaped within Christian or post-Christian contexts. Reviews of instruments developed for research within the empirical psychology of religion confirm the paucity of scales designed specifically for application within other religious traditions [3,4].

One highly productive strand of research within the measurement-based approach to the empirical psychology of religion within Christian or post-Christian contexts has focused on the affective dimension of religion as operationalized through the Francis Scale of Attitude toward Christianity. Developed first in English in the late 1970s, as reported by Francis [5,6], the Francis Scale of Attitude toward Christianity is currently available in Arabic [7], Czech [8], Chinese [9,10], Dutch [11], French [12,13], German [14,15], Greek [16], Italian [17], Norwegian [18], Portuguese [19], Romanian [20], Slovenian [21], Spanish [22], Swedish [23], and Welsh [24,25].

In order to extend this strand of research beyond the confines of the Christian and post-Christian context, three related instruments have been developed for application in Islamic, Hindu and Jewish contexts: The Sahin-Francis Scale of Attitude toward Islam [26], the Santosh-Francis Scale of Attitude toward Hinduism [27], and the Katz-Francis Scale of Attitude toward Judaism [28]. In order to develop the Katz-Francis Scale of Attitude toward Judaism, the 24-items of the original Francis Scale of Attitude toward Christianity were discussed by a group of theologians and religious educators representing both the Jewish tradition from Bar-Ilan University and the Christian tradition from the University

of Wales, Bangor. The items were first developed in English, then translated into Hebrew and then back-translated into English to check the reliability of the translation.

In their foundation study, Francis and Katz [28] confirmed the internal consistency reliability and construct validity of this instrument among 618 Hebrew-speaking undergraduates attending Bar-Ilan University. Alpha coefficients of 0.98 were reported among female students and of 0.97 among male students [29]. Significant positive correlations with synagogue attendance were reported among both female students ( $r = 0.35$ ) and male students ( $r = 0.72$ ) and with prayer were reported among both female students ( $r = 0.51$ ) and male students ( $r = 0.79$ ).

The internal consistency reliability and construct validity of the Hebrew form of the Katz-Francis Scale of Attitude toward Judaism was confirmed by Yablon, Francis, and Robbins [30] in an independent study conducted among 284 Hebrew-speaking female students at Bar-Ilan University. In this study an alpha coefficient of 0.94 was reported, together with significant positive correlations with synagogue attendance ( $r = 0.37$ ) and with prayer ( $r = 0.60$ ).

## 2. Research Question

The Katz-Francis Scale of Attitude toward Judaism, reported by Francis and Katz [28] and further tested by Yablon, Francis, and Robbins [30] was developed in Hebrew and has so far only been employed and tested in Israel. Against this background the aim of the present study was to establish and test an English language version of the instrument for use among Jewish communities in the English-speaking world. The opportunity to do this was provided by a study among Australian Jews.

## 3. Method

### 3.1. Participants

Participants were 101 members of the Australian Jewish community with females comprising 68% of the sample. The sample was acquired through synagogues in Sydney and Melbourne and through the Maccabi sporting clubs.

Of the female respondents, 12% were under the age of twenty, 28% were in their twenties, 8% were in their thirties, 8% in their forties, 12% in their fifties, 18% in their sixties, and 14% were in their seventies or older; 21% attended synagogue never or almost never, 8% attended only on Yom Kippur, 25% attended mainly on high holidays, 21% attended during all or most of the festivals, 23% attended weekly but not daily, and 2% attended synagogue daily; 27% prayed never or almost never, 6% prayed only on Yom Kippur, 12% prayed mainly on high holidays, 14% prayed during all or most of the festivals, 20% prayed weekly but not daily, and 20% prayed daily; 53% did not follow Kashrut, 17% followed Kashrut during Passover, 15% followed Kashrut at home, and 15% followed Kashrut all the time.

Of the male respondents, 12% were under the age of twenty, 33% were in their twenties, 12% were in their thirties, 10% in their forties, 10% in their fifties, 12% in their sixties, and 12% were in their seventies or older; 29% attended synagogue never or almost never, 12% attended only on Yom Kippur, 35% attended mainly on high holidays, 4% attended during all or most of the festivals, 16% attended weekly but not daily, and 4% attended synagogue daily; 34% prayed never or almost never, 8% prayed only on Yom Kippur, 22% prayed mainly on high holidays, 6% prayed during all or most of the festivals, 10% prayed weekly but not daily, and 20% prayed daily; 60% did not follow Kashrut, 13% followed Kashrut during Passover, 19% followed Kashrut at home, and 9% followed Kashrut all the time.

### 3.2. Measures

The Katz-Francis Scale of Attitude toward Judaism [28], based on the Francis Scale of Attitude toward Christianity [31,32], is a 24-item Likert type instrument, employing a 5-point response scale: Agree strongly, agree, not certain, disagree and disagree strongly. The individual items are concerned with an affective response toward God, bible, prayer, synagogue, and the Jewish religion. In this study

questions containing the word “bible” were adjusted by substituting “torah” instead, a word which is more appropriate to the Jewish faith.

Behavioral elements of religion were also assessed. Synagogue attendance was assessed on a 6-point scale: Never or almost never, only on Yom Kippur, mainly on high holidays, during all or most of the festivals, weekly but not daily and daily. Personal prayer was assessed on a 6-point scale: never or almost never, only on Yom Kippur, mainly on high holidays, during all or most of the festivals, weekly but not daily and daily. Observance of Kashrut Jewish dietary laws was assessed on a 4-point scale: I don't follow them, only during Passover, mainly in my home, and all the time.

### 3.3. Procedure

Participants were tested at the synagogue, in the Maccabi club rooms and at their home. The questionnaire was completed by individuals and in groups in quiet settings where participants were not allowed to discuss their answers.

### 3.4. Data Analysis

The data was analysed using the SPSS statistical package particularly the scale reliability and correlations analyses.

## 4. Results and Discussion

Table 1 presents the item rest of test correlation coefficients in respect of all 24 scale items, together with the alpha coefficient for females and for males separately. Table 1 also presents the loadings on the first factor of the unrotated solution proposed by principal-component analysis, together with the percentage of variance explained by the first factor for females and for males separately. Furthermore, the dataset possessed near perfect sampling adequacy, as assessed through the Kaiser-Meyer-Olkin (KMO) statistic ( $KMO = 0.94$ ). These sets of statistics support the conclusion that the scale is characterized by homogeneity, unidimensionality, and internal consistency reliability among females and males. The alpha coefficients (0.97 and 0.97) are of similar order to those reported by Francis and Katz [28], which ranged between 0.97 and 0.98. The proportions of variance accounted for by the first factor are also similar to those reported by Francis and Katz [28], which ranged between 61.8% and 66.9%. A two-factorial solution was also assessed; however, it was rejected since (a) the variance explained by the second factor was rather low (7.56%) and (b) the makeup of that factor was meaningless.

**Table 1.** The Katz-Francis scale of attitude toward Judaism.

	Female		Male	
	<i>r</i>	<i>f</i>	<i>r</i>	<i>f</i>
I find it boring to learn the Torah *	0.71	0.66	0.57	0.71
I know that my religion helps me	0.63	0.61	0.70	0.83
Saying my prayers helps me a lot	0.73	0.82	0.78	0.89
The synagogue is very important to me	0.63	0.74	0.61	0.82
I think going to synagogue is a waste of my time *	0.61	0.90	0.66	0.82
I want to love G_d	0.86	0.78	0.82	0.87
I think synagogue services are boring *	0.59	0.82	0.51	0.78
I think people who pray are stupid *	0.55	0.57	0.70	0.75
G_d helps me to lead a better life	0.90	0.86	0.90	0.87
I like to learn about G_d very much	0.74	0.58	0.54	0.75
G_d means a lot to me	0.86	0.80	0.87	0.93
I believe that G_d helps people	0.80	0.73	0.84	0.84
Prayer helps me a lot	0.83	0.89	0.80	0.92

Table 1. Cont.

	Female		Male	
	<i>r</i>	<i>f</i>	<i>r</i>	<i>f</i>
I know that I am very close to G_d	0.79	0.82	0.86	0.88
I think praying is a good thing	0.83	0.74	0.86	0.84
I think the Torah is out of date *	0.66	0.49	0.64	0.64
I believe that G_d listens to prayers	0.79	0.85	0.82	0.85
G_d doesn't mean anything to me *	0.80	0.68	0.88	0.85
G_d is very real to me	0.89	0.88	0.84	0.82
I think saying prayers does no good *	0.75	0.72	0.86	0.89
The idea of G_d means much to me	0.90	0.85	0.77	0.76
I believe that my religion still helps people	0.65	0.76	0.60	0.72
I know that G_d helps me	0.86	0.83	0.88	0.86
I find it hard to believe in G_d *	0.84	0.75	0.72	0.83
Alpha/percent of variance	0.97	61.9%	0.97	61.3%

Notes: \* Reverse-coded items; *r* correlation between item and sum of other items; *f* factor loading.

Steps towards assessing the construct validity of this scale can be made by assessing the extent to which certain predictions about the theoretical variations in attitude scores are reflected empirically [33,34]. While attitudes alone may not be simple or direct predictors of behavior [35,36], substantial evidence suggests a fairly close relationship between attitude toward religion and religious behavior, as demonstrated, for example, by Francis, Lewis, Philipchalk, Brown, and Lester [32]. For this reason, the construct validity of the Francis Scale of Attitude toward Christianity has generally been established by means of correlation with indices of religious behavior. In the case of Judaism, the path between attitudinal predisposition and religious behavior can be considered as not dissimilar from the case of Christianity. For this reason, three behavioral measures of religious practice were included in the current survey, namely measures of personal prayer, synagogue attendance, and observation of the dietary laws of Kashrut. Significant positive correlations were found between scores recorded on the Katz-Francis Scale of Attitude toward Judaism and all three behavioral measures among both men and women. For men the following correlations were reported: prayer,  $r = 0.72$ ; synagogue,  $r = 0.67$ ; Kashrut,  $r = 0.44$ . For women the following correlations were reported: prayer,  $r = 0.71$ ; synagogue,  $r = 0.71$ ; Kashrut,  $r = 0.59$ . These statistics support the construct validity of the attitude scale.

## 5. Conclusions

The present study set out to build on the work of Francis and Katz [28] and Yablon, Francis, and Robbins [30] who constructed and tested the Hebrew language Katz-Francis Scale of Attitude toward Judaism, rooted in the theory and empirical research pioneered by the Francis Scale of Attitude toward Christianity [32]. The objective of the present study was to examine the internal consistency reliability and construct validity of an English language version of this instrument among a sample of Australian Jews. Data provided by 101 members of the Australian Jewish community accessed through synagogues in Sydney and Melbourne and through the Maccabi sporting clubs reported highly satisfactory statistics of internal consistency reliability and construct validity among both men and women. On this basis the scale can be commended for further empirical studies concerned to map the personal and social correlates of individual differences in attitude toward Judaism among Jews living in Australia.

This instrument can also be commended for application and examination among the Jewish community in other English-speaking countries and for translation and testing in other languages.

**Author Contributions:** Patrick Lumbroso, Kirill Fayn and Niko Tiliopoulos jointly conceived and designed the project, conducted the data analyses, and organized the argument. Leslie J Francis served as project leader and assisted with the contextualization and writing.

**Conflicts of Interest:** The authors declare no conflict of interest.

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