

**Original citation:**

Francis, Leslie J., Yablon, Yaacov B. and Robbins, Mandy. (2014) Religion and happiness : a study among female undergraduate students In Israel. International Journal of Jewish Research, Volume 2014 (Number 7). pp. 77-92.

**Permanent WRAP url:**

<http://wrap.warwick.ac.uk/63440>

**Copyright and reuse:**

The Warwick Research Archive Portal (WRAP) makes this work of researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

**A note on versions:**

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP url' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: [publications@warwick.ac.uk](mailto:publications@warwick.ac.uk)

warwick**publications**wrap

highlight your research

<http://wrap.warwick.ac.uk/>

Religion and happiness: a study among female undergraduate students in Israel

Leslie J. Francis\*

The University of Warwick, UK

Yaacov B. Yablon

Bar-Ilan University, Israel

Mandy Robbins

Glyndŵr University, 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](mailto:leslie.francis@warwick.ac.uk)

**Abstract**

This study tests the hypothesis that higher levels of positive religious affect are associated with higher levels of personal happiness among a sample of 284 Hebrew-speaking female undergraduate students who completed the Katz-Francis Scale of Attitude toward Judaism, the Oxford Happiness Inventory, and the short-form Eysenck Personality Questionnaire Revised. The data reported a small but statistically significant association between religiosity and happiness after taking individual differences in personality into account.

*Keywords:* Religion, happiness, personality, psychology, Israel, Oxford Happiness Inventory.

## Introduction

Both from a theological perspective and from an educational perspective, religious education may be expected to have practical and visible effects on people's lives. Time and time again within the Jewish scriptures the link is voiced between religious commitment and human fulfilment, including the personal and social qualities of joy and happiness. The Psalmist in Psalm 1 proclaims 'Happy are those who reject the advice of evil men... Instead they find joy in obeying the Law of the Lord.' According to Psalm 128, 'Happy is everyone who fears the Lord, who walks in his way.' Similarly, the Book of Proverbs proclaims 'Happy are those who keep my ways' (Proverbs 8:32) and 'Happy are those who trust in the Lord' (Proverbs 16:20). Such claims voiced by the Jewish scriptures are clearly amenable to empirical investigation by the empirical science of the psychology of religion working within the tradition of positive psychology. The aim of the present study is to investigate the available evidence and to add to that evidence by conducting an original empirical enquiry specifically within a Jewish context. The first stage, however, is to provide a somewhat broader context by considering the problems and principles involved in building up secure empirical evidence within the empirical psychology of religion.

Michael Argyle's systematic reviews and evaluations of the knowledge generated from empirical studies in the psychology of religion published over four decades by Argyle (1958), Argyle and Beit-Hallahmi (1975), and Beit-Hallahmi and Argyle (1997), drew attention to two weaknesses in the field. The more systematic reviews and evaluations published by Spilka, Hood, Hunsberger, and Gorusch (2003) and Hood, Hill, and Spilka (2009) demonstrate the extent to which these two weaknesses still remain.

The first weakness concerns the fragmented nature of the main body of empirical evidence that has been amassed over the past five decades. The evidence is fragmented in the sense of the lack of agreement in the measurements and concepts employed. The point was

illustrated in detail by the review of empirical evidence concerning the association between religion and happiness reported by Robbins and Francis (1996). The review identified studies that demonstrated a positive association between religion and happiness, studies that demonstrated a negative association, and studies that demonstrated no association.

Robbins and Francis (1996) suggested that such discrepancies might be attributable, at least in part, to the wide range of conceptualisations and operationalisations of both religion and happiness in these studies. Drawing on the basic scientific principle of establishing a secure body of empirically-grounded knowledge through careful replication of well-designed studies, they proposed the value of initiating a co-ordinated series of studies exploring the association between religion and happiness by means of the same measures being applied in different contexts and among different samples. Specifically they identified the Oxford Happiness Inventory and the Francis Scale of Attitude toward Christianity as providing an appropriate basis for such a programme.

The Oxford Happiness Inventory was developed by Michael Argyle and his associates (Argyle & Crossland, 1987; Argyle, Martin, & Crossland, 1989). This operationalisation of happiness embraced three components of the construct: the frequency and degree of positive affect or joy; the average level of satisfaction over a period; and the absence of negative feelings, such as depression and anxiety. Working from this definition, they developed the Oxford Happiness Inventory by reversing the twenty-one items of the Beck Depression Inventory (Beck, Ward, Mendelson, Hock, & Erbaugh, 1961) and adding eleven further items to cover aspects of subjective wellbeing not so far included. Three items were subsequently dropped, leading to a twenty-nine item scale.

Argyle, Martin, and Crossland (1989) reported an internal reliability of 0.90 using alpha (Cronbach, 1951), and a 7-week test-retest reliability of 0.78. The concurrent validity of 0.43 was established against happiness ratings by friends. Construct validity was

established against recognised measures of the three hypothesised components of happiness showing correlations of 0.32 with the positive affect scale of the Bradburn Balanced Affect measure (Bradburn, 1969), -0.52 with the Beck Depression Inventory, and +0.57 with Argyle's life satisfaction index.

Initial research employing the Oxford Happiness Inventory was restricted to the English language. More recently such research has been extended by a series of studies developing forms of the instrument in Arabic (Abdel-Khalek, 2005), Chinese (Lu & Shih, 1997; Lu, Shih, Lin, & Ju, 1997; Lu & Lin, 1998; Lu, Gilmore, Kao, Weng, Hu, Chern, Huang, & Shih, 2001), German (Lewis, Francis, & Ziebertz, 2002) Japanese (Furnham & Cheng, 1999), Hebrew (Francis & Katz, 2000), Persian (Liaghatdar, Jafarc, Abedi, & Samiee, 2008; Bayani, 2008), and Portugese (Neto, 2001).

The Francis Scale of Attitude toward Christianity was originally developed by Francis (1978a, 1978b). Francis agreed 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 appears particularly attractive for the following reasons.

Drawing on the pioneering analysis of Fishbein and Ajzen (1975), Francis (1978a, 1978b) argued that attitudes are concerned primarily with accessing the affective dimension of religiosity. The affective dimension is distinguished from the cognitive dimension (concerned with beliefs) and from the behavioural dimension (concerned with practice). The affective dimension is able to transcend the divisions between denominational perspectives, while beliefs tend to polarise such divisions. The affective dimension is less likely to be distorted by personal and contextual factors, while practice tends to be subject to all kinds of personal or social constraints. Moreover, the affective dimension of religiosity 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).

In the first of the series of studies, Robbins and Francis (1996) examined the association between scores recorded on the Oxford Happiness Inventory and on the Francis Scale of Attitude toward Christianity, after taking into account individual differences in personality as measured by the short-form Revised Eysenck Personality Questionnaire (Eysenck, Eysenck, & Barrett, 1985). Data provided by a sample of 360 first-year undergraduate students in Wales demonstrated a significant positive correlations between attitude toward Christianity and happiness scores ( $r = .26, p < .001$ ). This association remained positive after controlling for individual differences in sex, extraversion, neuroticism, psychoticism and scores recorded on the Eysenckian lie scale.

In a second study, Francis and Lester (1997) replicated the first study in a different cultural context. This time the Oxford Happiness Inventory, the Francis Scale of Attitude toward Christianity, and the short-form Revised Eysenck Personality Questionnaire were completed by a sample of 212 undergraduate students in the United States of America. This time a very similar correlation was reported between attitude toward Christianity and happiness scores ( $r = .28, p < .001$ ) and once again the association persisted after controlling for sex differences and for differences in personality.

Recognising that the first two studies had been conducted among undergraduate students, the third study reported by Francis and Robbins (2000) drew on a sample of 295 individuals, ranging in age from late teens to late seventies, recruited from participants attending a variety of courses and workshops on the psychology of religion. The same three instruments were included in the study: the Francis Scale of Attitude toward Christianity, the

Oxford Happiness Inventory and the short-form Revised Eysenck Personality Questionnaire. The association between attitude toward Christianity and happiness scores was positive ( $r = .30, p < .001$ ) and remained after controlling for sex differences and for differences in personality.

The next three studies were drawn together and published in one paper by Francis, Jones, and Wilcox (2000). The three samples reported in this paper covered adolescence, young adulthood, and later life. The adolescent sample comprised 994 secondary school pupils during the final year of compulsory schooling (15- to 16-year-olds). The young adult sample comprised 456 first-year undergraduate students in Wales. The third sample comprised 496 members of the University of the Third Age, a relatively informal educational network for senior citizens (10% were in their fifties, 50% in their sixties, 34% in their seventies, and 6% were aged eighty or over; 66% were female and 34% were male). All participants completed the Francis Scale of Attitude toward Christianity, the Oxford Happiness Inventory and the short-form Revised Eysenck Personality Questionnaire. The partial correlations between attitude toward Christianity and happiness scores, after controlling for sex and for personality, were as follows: adolescence,  $r = .10, p < .01$ ; young adulthood,  $r = .20, p < .001$ ; later life,  $r = .16, p < .01$ .

The next study reported by Francis, Robbins, and White (2003) among 89 students in Wales did not include the personality measure. However, after controlling for age and for sex, there was a significant correlation between attitude toward Christianity and happiness scores ( $r = .38, p < .001$ ).

Taken together these seven samples ( $N = 360, 212, 295, 995, 456, 496, 89$ ) demonstrated a consistent pattern of findings based on employing the same instruments in different contexts. The scientific strategy of replication seemed to be bearing fruit, although further studies remain desirable.



The second weakness with the main source of evidence available in the empirical psychology of religion concerns the concentration of research within Christian or post-Christian contexts. All seven samples reported above employing the Oxford Happiness Inventory alongside a constant measure of religiosity remain vulnerable to this basic criticism. All seven samples were recruited from Christian or post-Christian contexts and completed the Francis Scale of Attitude toward Christianity.

Recognising the desirability of establishing comparable measures of the attitudinal dimension of religion across different religious traditions, Francis and his associates initiated a programme to produce a family of measures equivalent to the Francis Scale of Attitude toward Christianity, appropriate for other specific religions. The first development was the Katz-Francis Scale of Attitude toward Judaism (Francis & Katz, 2007). In order to achieve a proper comparability between the two instruments the attempt was made to translate each of the original 24 items in a way appropriate for a Hebrew speaking Jew living in Israel. The psychometric properties of the instrument were assessed on a sample of 618 Hebrew-speaking undergraduate students attending Bar-Ilan University.

The second development was the Sahin-Francis Scale of Attitude toward Islam (Sahin & Francis, 2002). 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 instrument 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).

The third development was the Santosh-Francis Scale of Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008). 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, 2011).

The first study to extend Francis' series of studies concerned with the association between religion and happiness beyond the Christian and post-Christian context was reported by Francis and Katz (2002) among a sample of 298 Hebrew-speaking female undergraduate students who completed the Hebrew translation of the Oxford Happiness Inventory together with the Katz-Francis Scale of Attitude toward Judaism. This study found a small positive association between religion and happiness ( $\beta = + .11$ ;  $p < .05$ ). Subsequently Francis, Katz, Yablon, and Robbins (2004) replicated this study among a sample of 203 Hebrew-speaking male undergraduate students who completed the same measures. This replication also found a small positive association between religion and happiness ( $\beta = + .21$ ;  $p < .01$ ).

The majority of studies reviewed above concerning the association between religion and happiness included the Eysenckian dimension of personality as a set of control variables to guard against the accusation that observed connections between religion and happiness may emerge as an artefact of individual differences in personality. The consensus from this body of research is that personality is largely irrelevant in explaining the connection between religion and personality for the following reason. The dimension of personality that predicts substantial individual differences in religion is psychoticism, while the dimensions of personality that predict substantial differences in happiness are extraversion and neuroticism.

Against this background, the aim of the present study is to make a further independent contribution to knowledge by addressing the two weaknesses still prevalent within the

empirical psychology of religion identified in the opening paragraphs of the present paper. The first weakness concerned the fragmenting nature of the literature caused by lack of agreement on the measures employed. The present study addresses this weakness by building on the solid commitment to the replication and extension of existing research through employing an established battery of instruments. The second weakness concerned the concentration of empirical research in the psychology of religion within Christian or post-Christian contexts. The present study addresses this weakness by working specifically within a Hebrew-speaking Jewish environment in Israel. Specifically the study builds directly on the work reported by Francis and Katz (2002) and Francis, Katz, Yablon and Robbins (2004), employing the Oxford Happiness Inventory, the Katz-Francis Scale of Attitude toward Judaism and the Eysenck Personality Questionnaire Revised among a sample of undergraduate students in Israel.

The majority of the previous studies within this research tradition have also taken into account the potential contamination of the observed association between religion and happiness by individual differences in personality, by means of including a recognised measure of the Eysenckian dimensional model of personality (see Eysenck & Eysenck, 1991). This model maintains that the most adequate, economical and efficient summary of individual differences is provided by three higher order orthogonal dimensions defined by the high scoring end of the three continua as extraversion, neuroticism, and psychoticism. The Eysenckian self-report measures also routinely include a lie scale. Previous research has demonstrated that the two dimensions of personality relevant to happiness as assessed by the Oxford Happiness Inventory are extraversion and neuroticism (Francis, Brown, Lester & Philipchalk, 1998; Francis, 1999).

## **Method**

### **Sample**

A sample of 284 Hebrew-speaking female undergraduate students attending a university in the centre of Israel completed a short questionnaire as part of their coursework. They were assured of complete confidentiality and anonymity and given the option not to participate in the project. All students attending the coursework session willingly participated. The majority of the participants were in their twenties (93%), with 3% under the age of twenty, and 4% aged thirty or over. The majority of participants described themselves as Religious Jews (67%), 12% as Secular Jews, 11% as Traditional Jews, and 9% as Ultra-orthodox Jews; 1% failed to answer this question.

### **Measures**

The participants completed three measures: happiness was assessed by the Oxford Happiness Inventory; religiosity was assessed by the Katz-Francis Scale of Attitude toward Judaism; personality was assessed by the Short-form Eysenck Personality Questionnaire Revised.

The Oxford Happiness Inventory (Argyle, Martin, & Crossland, 1989) is a 29-item multiple choice instrument. Each item contains four options, constructed to reflect incremental steps defined as: unhappy or mildly depressed, a low level of happiness, a high level of happiness, and mania. The respondents are asked to 'pick out the one statement in each group which best describes the way you have been feeling over the past week, including today.' An example item reads: 'I don't feel life is particularly rewarding' (unhappy or mildly depressed), 'I feel life is rewarding' (a low level of happiness), 'I feel that life is very rewarding' (a high level of happiness), and 'I feel that life is overflowing with rewards' (mania). Information on the internal consistency reliability and construct validity of the Hebrew translation of this instrument is provided by Francis and Katz (2000).

The Katz-Francis Scale of Attitude toward Judaism (Francis & Katz, 2007) is a 24-item Likert type instrument, concerned with affective response toward G\_d, Bible, prayer,

synagogue and the Jewish religion. Each item is rated on a five-point scale ranging from agree strongly, through agree, not certain and disagree, to disagree strongly. Example items include: 'I know that my religion helps me a lot' and 'G\_d means a lot to me'.

The short form of the Eysenck Personality Questionnaire Revised (Eysenck, Eysenck, & Barrett, 1985) is a 48-item instrument composed of four twelve-item measures of extraversion, neuroticism, psychoticism and a lie scale. Each item is assessed on a two point scale: yes and no. Example items from the extraversion scale include: 'Are you a talkative person?' and 'Can you easily get some life into a rather dull party?' Example items from the neuroticism scale include: 'Does your mood often go up and down?' and 'Are you a worrier?' Example items from the psychoticism scale include: 'Do you prefer to go your own way rather than act by the rules?' and 'Do you enjoy co-operating with others?'. Example items from the lie scale include: 'Have you ever blamed someone for doing something you knew was really your fault?' and 'Have you ever taken advantage of someone?'

Further information on the reliability of the Hebrew translation of this instrument is provided by Katz and Francis (2000).

## **Results**

Table 1 presents the scale properties of the Oxford Happiness Inventory, the Katz-Francis Scale of Attitude toward Judaism, and the short form of the Eysenck Personality Questionnaire Revised. Apart from the psychoticism scale all measures achieve satisfactory levels of internal consistency reliability as demonstrated by the alpha coefficient (Cronbach, 1951). The weaker performance of the psychoticism scale is consistent with the recognised difficulties involved in operationalising this construct and with the performance of this scale in the original study reporting the Hebrew translation (Katz & Francis, 2000). In light of the weaker performance of the psychoticism scale, it has been excluded from the subsequent analysis.

- Insert tables 1 and 2 here –

Table 2 presents the correlation coefficients between happiness, religiosity, extraversion, neuroticism and lie scale. The two main findings from these data are that happiness is associated with high extraversion ( $r = .42, p < .001$ ) and with low neuroticism ( $r = -.39, p < .001$ ) and that there is a positive association between happiness and religiosity ( $r = .24, p < .001$ ).

- Insert table 3 here –

Table 3 takes the analysis one step further. In this multiple regression model, happiness stands as the dependent variable and the predictor variables were entered in the following fixed order: extraversion, neuroticism, and religiosity. The main finding from these data is that, after individual differences in personality have been taken into account, scores of attitude toward Judaism provide a further small but statistically significant predictor of a happiness, demonstrating that religious people are happier people.

### **Conclusion**

Recognising two key weaknesses within the empirical psychology of religion identified by the early review published by Argyle (1958) and still evidenced by recent reviews (Spilka, Hood, Hunsberger, & Gorsuch, 2003; Hood, Hill, & Spilka, 2009), the present study was designed to build on a series of studies concerned with mapping the association between religion and happiness by employing the Oxford Happiness Inventory together with the Francis family of instruments accessing the attitudinal dimension of religion. Working within this research tradition, the present study presents the findings from the third sample to have completed the Oxford Happiness Inventory alongside the Katz-Francis Scale of Attitude toward Judaism among Hebrew speaking participants in Israel (see Francis & Katz, 2002; Francis, Katz, Yablon, & Robbins, 2004 for the two other studies). The findings of all three samples (N = 298, 203, 284) present a consistent pattern of a

significant positive association between religion and happiness, after taking into account individual differences in personality as assessed by the Eysenckian dimensional model.

Within the multiple regression model the positive association between religion and happiness is reflected in beta weights of similar size ( $\beta = +.11, +.21, +.17$ ).

Taken together, these three studies conducted within the Jewish tradition and the seven studies conducted within the Christian tradition (Robbins & Francis, 1996; Francis & Lester, 1997; Francis & Robbins, 2000; Francis, Jones, & Wilcox, 2000; Francis, Robbins, & White, 2003) lead to the secure conclusion that religious people are happier people, at least when happiness is conceptualised and operationalised by the Oxford Happiness Inventory and religion is conceptualised and operationalised by the Francis family of attitude scales. In this sense, a patient commitment to the scientific principle of replication seems to be able to bear fruit in terms of developing a secure base of knowledge within the empirical psychology of religion.

This conclusion can help to provide empirical support for the contribution being made to human wellbeing and to human flourishing by religious education. The promises held out by the Jewish scriptures are not merely theological aspirations but empirical realities. Fear of the Lord and religious commitment are indeed reflected in greater wellbeing and happiness.

Also, from the pedagogical point of view, more effort is being made in recent years to enhance education based on the premise of positive psychology and preventative counselling (Seligman & Csikzentmihalyi, 2000). This means enhancing the development of resilient students who have the necessary capabilities and psychosocial strength for dealing with various modern life stressors. Since some studies have pointed to other resilience factors embedded in religious life (e.g., spirituality), the findings of the present study further support such studies and specifically point to a connection between religion and happiness. The findings of the present study suggest that religion education may result in happier, and

therefore also resilient, students.

Taking a broader perspective, the findings of the study also have social relevance. One of the most extensive studies on Jewish identity in contemporary Israel (The Israel Democracy Institute and The Avi-Chai Foundation, 2012) shows that religion is strongly present in the lives of Israeli Jews, such as those who participated in the study. According to the study, Israeli Jews are becoming more religious, and higher numbers of people state that the Jewish law influences their everyday life. For example, 50% reported that Jewish tradition influences what they do on the Sabbath, 85% stated that it is important for them to celebrate Jewish holidays in the traditional Jewish manner, and most Israeli Jews reported that they eat only kosher food at home (76%) and outside the home (70%). 80% of the Israeli Jewish population believes in God and in "reward and retribution" and 72% believe in the power of prayer. While many studies focus on the social correlates of religiosity, our study points to the personal correlates of religiosity. Research of this nature may shed light not only on individuals, but also on groups and even nations.

Finally, the outcome of our study can also help to shape a future agenda for empirical research in the psychology of religion in two ways. First, the ten studies discussed in this paper concerned with religion and happiness still remain limited to the Christian and Jewish tradition. Future research may wish to employ the Sahin-Francis Scale of Attitude toward Islam (Sahin & Francis, 2002) and the Santosh-Francis Scale of Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008) to extend this series of studies within the Islamic and Hindu traditions. Second, the ten studies concerned with religion and happiness have offered a model that could be applied to other questions within the empirical psychology of religion where currently a lack of clarity in extant empirical findings could also be attributed to lack of agreement and lack of consistency in the measures employed. The scientific principle of replication may hold the key to clarifying other areas as it seems to have done



with the question of religion and happiness.

### References

- Abdel-Khalek, A. M. (2005). Happiness and death distress: Two separate factors. *Death Studies, 29*, 949-958.
- 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.
- Argyle, M., & Crossland, J. (1987). Dimensions of positive emotions. *British Journal of Social Psychology, 26*, 127-137.
- Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J. P. Forgas and J. M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp. 189-203). North Holland: Elsevier Science Publishers.
- Bayani, A. A. (2008). Test-retest reliability, internal consistency, and construct validity of the Farsi version of the Oxford Happiness Inventory. *Psychology Reports, 103*, 139-144.
- Beck, T., Ward, C. H., Mendelson, M., Hock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 7*, 158-216.
- Beit-Hallahmi, B., & Argyle, M. (1997). *The psychology of religious belief and experience*. London: Routledge.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297-334.
- Eysenck, H. J., & Eysenck, S. B. G. (1991). *Manual of the Eysenck Personality Scales*. London, Hodder and Stoughton.
- Eysenck, S. B. G., Eysenck, H. J., & Barrett, P. (1985). A revised version of the psychoticism scale. *Personality and Individual Differences, 6*, 21-29.

- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. Reading, Massachusetts: Addison-Wesley.
- Fowler, J. W. (1981). *Stages of faith: The psychology of human development and the quest for meaning*. San Francisco: Harper and Row.
- 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. (1989). Measuring attitude towards Christianity during childhood and adolescence. *Personality and Individual Differences*, 10, 695-698.
- Francis, L. J. (1999). Happiness is a thing called stable extraversion: A further examination of the relationship between the Oxford Happiness Inventory and Eysenck's dimensional model of personality and gender. *Personality and Individual Differences*, 26, 5-11.
- Francis, L. J., Brown, L. B., Lester, D., & Philipchalk, R. (1998). Happiness as stable extraversion: A cross-cultural examination of the reliability and validity of the Oxford Happiness Inventory among students in the UK, USA, Australia and Canada. *Personality and Individual Differences*, 24, 167-171.
- Francis, L. J., Jones, S. H., & Wilcox, C. (2000). Religiosity and happiness: During adolescence, young adulthood and later life. *Journal of Psychology and Christianity*, 19, 245-257.
- Francis, L. J., & Katz, Y. (2000). The internal consistency reliability and validity of the Hebrew translation of the Oxford Happiness Inventory. *Psychological Reports*, 87, 193-196.
- 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., & Lester, D. (1997). Religion, personality and happiness. *Journal of Contemporary Religion, 12*, 81-86.
- Francis, L. J., & Robbins, M. (2000). Religion and happiness: A study in empirical theology. *Transpersonal Psychology Review, 4*(2), 17-22.
- Francis, L. J., Robbins, M., & White, A. (2003). Correlation between religion and happiness: A replication. *Psychological Reports, 92*, 51-52.
- 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*, 9-24.
- 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.
- Francis, L. J., & Stubbs, M. T. (1987). Measuring attitudes towards Christianity: From childhood to adulthood. *Personality and Individual Differences, 8*, 741-743.

- Furnham, A., & Cheng, H. (1999). Personality as predictors of mental health and happiness in the East and West. *Personality and Individual Differences*, 27, 395-403.
- Hood, R. W. Jr., Hill, P. C., & Spilka, B. (2009). *The psychology of religion: An empirical approach* (fourth edition). New York: The Guilford Press.
- Katz, Y. J., & Francis, L.J. (2000). Hebrew Revised Eysenck Personality Questionnaire: short form (EPQR-S) and abbreviated form (EPQR-A). *Social Behaviour and Personality*, 28, 555-560.
- Lewis, C. A., Francis, L. J., & Ziebertz, H. - G. (2002). The internal consistency reliability and construct validity of the German translation of the Oxford Happiness Inventory. *North American Journal of Psychology*, 4, 211-220.
- Liaghatdar, M. J., Jarfarc, E., Abedi., M. R., & Samiee, F. (2008). Reliability and validity of the Oxford Happiness Inventory among university students in Iran. *Spanish Journal of Psychology*, 11, 310-313.
- Lu, L., Gilmore, R., Kao, S. F., Weng, T. H., Hu, C. H., Chern, J. G., Huang, S. W., & Shih, J. B. (2001). Two ways to achieve happiness: When the East meets West. *Personality and Individual Differences*, 30, 1161-1174.
- Lu, L., & Lin, Y. Y. (1998). Family roles and happiness in adulthood. *Personality and individual differences*, 25, 195-207.
- Lu, L., & Shih, B. (1997). Personality and happiness: Is mental health a mediator? *Personality and Individual Differences*, 22, 249-256.
- Lu, L., Shih, J. B., Lin, Y. Y., & Ju, L.S. (1997). Personal and environmental correlates of happiness. *Personality and Individual Differences*, 23, 453-462.
- Neto, F. (2001). Personality predictors of happiness. *Psychological Reports*, 88, 817-824.
- Robbins, M., & Francis, L. J. (1996). Are religious people happier? A study among undergraduates. In L. J. Francis, W. K. Kay, & W. S. Campbell (Eds.), *Research in*

*religious education* (pp. 207-218). Leominster: Fowler Wright Books.

Sahin, A. and 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.

Seligman, M. E., & Csikzentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14.

Spilka, B., Hood, R.W., Hunsberger, B., & Gorsuch, R.L. (2003). *The psychology of religion: An empirical approach* (third edition). New York: Guilford Press.

The Israel Democracy Institute and The Avi-Chai Foundation (2012). *A portrait of Israeli Jews: Beliefs, observance, and values of Israeli Jews, 2009*. Jerusalem: Israel Democracy Institute Publications.

Tiliopoulos, N., Francis, L. J., & Slattery, M. (2011). The affective dimension of religion and happiness among Hindu Bunts in South India. *Transpersonal Psychology Review*, 14(2), 25-29.

**Table 1***Scale properties*

Measures	alpha	Mean	SD
Oxford Happiness Inventory	.88	44.91	10.72
Katz-Francis Scale	.94	106.74	14.45
Extraversion	.76	7.58	2.93
Neuroticism	.74	5.95	2.72
Psychoticism	.42	1.97	1.46
Lie scale	.66	4.78	2.42

**Table 2***Correlation matrix*

	Happiness	L	N	E
Religion	.24***	.06	-.14*	.04
Extraversion (E)	.42***	.14*	-.20***	
Neuroticism (N)	-.39***	-.16**		
Lie scale (L)	.14*			

Note: \*,  $p < .05$ ; \*\*,  $p < .01$ ; \*\*\*,  $p < .001$



**Table 3***Regression model*

Predictors	Increase				<i>Beta</i>	<i>t</i>	<i>p</i> <
	<i>r</i> <sup>2</sup>	<i>r</i> <sup>2</sup>	F	<i>p</i> <			
Extraversion	.18	.18	60.0	.001	+.39	7.5	.001
Neuroticism	.28	.10	36.8	.001	-.26	-5.1	.001
Lie scale	.30	.02	9.0	.01	+.15	2.9	.01
Religion	.33	.03	12.1	.001	+.17	3.5	.001