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Implicit religion, explicit religion and purpose in life: an empirical enquiry among 13- to 15- year-old adolescents

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Abstract

In his analysis of the construct 'implicit religion' Edward Bailey speaks of those individuals 'who believe in Christianity' but who do not display the behaviours of explicit religion, like church attendance. A recent research tradition has tried to operationalise this understanding of implicit religion by studying those who believe that they can be a Christian without going to church. A longer established research tradition has demonstrated the association between explicit religiosity and an enhanced sense of purpose in life. The aim of the present study is to test the hypothesis that implicit religiosity (in the sense of believing that you can be a Christian without going to church) is also associated with an enhanced sense of purpose in life. Data provided by a sample of 25,825 13- to 15- year-old adolescents support this hypothesis. In turn these findings support the notion that implicit religion (in the sense operationalised by this study) fulfils some functions similar to those fulfilled by explicit religion.

Keywords: implicit religion, psychology, purpose in life, wellbeing

Introduction

Explicit religion and purpose in life

Purpose in life is a construct of considerable interest within the broad field of individual differences. Following the pioneering work of Frankl (1978), purpose in life is understood to be central to the meaning-making process which confers meaningfulness. As such, purpose in life is a central component of psychological well-being. It is purpose in life which makes living worthwhile and which helps to prevent despair from leading to suicide.

Purpose in life is a construct of considerable interest not only to psychologists, but to theologians as well. Following the pioneering work of Tillich (1952), purpose in life is understood to be central to the very essence of religion. Substantive analyses of religion point to the beliefs, teaching and rituals which explicitly address the fundamental questions concerning the meaning and purpose of life. Functional analyses of religion point to the meaning-making process as central to the *raison d'être* of religious and para-religious systems. There are clear grounds, therefore, for hypothesising a positive relationship between religiosity and purpose in life.

A number of studies conducted since the mid-1970s have examined the relationship between scores recorded in the Purpose in Life Test (Crumbaugh, 1968; Crumbaugh & Maholick, 1969) and a range of different conceptualisations and operationalisations of explicit religiosity. The most consistently reported association concerns the positive relationship between purpose in life and intrinsic religiosity, as measured by various instruments. The association was reported by Crandall and Rasmussen (1975) among 71 students, by Bolt (1975) among 52 students, by Soderstrom and Wright (1977) among 427 students, by Paloutzian, Jackson, and Crandall (1978) among 84 students and 177 adults, by Chamberlain and Zika (1988) among 188 women having at least one child under the age of five and no paid employment, by Weinstein and Cleanthous (1996) among 11 protestant

ministers and 38 parishioners, by Ardelt (2003) among 103 community dwelling older adults (using a shortened form of the Purpose in Life Test), by Janssen, Bänziger, Dezutter, and Hutsebaut (2005) among 130 Dutch adults, by Dezutter, Soenens, and Hutsebaut (2006) among 472 adults, and by Byrd, Hageman, and Isle (2007) among 161 undergraduate students.

Using other conceptualisations of religiosity a positive association with purpose in life was reported by the following studies: Gladding, Lewis, and Adkins (1981) using their own scale of religiosity among 350 students; Paloutzian and Ellison (1982) using their Spiritual Wellbeing Scale among 206 students; Jackson and Coursey (1988) using a measure of church attendance among 98 black Baptists; Richards (1991) using a measure of intensity of prayer experience among 345 participants in a nondenominational programme; Carroll (1993) using an index of spiritual practices among 100 members of Alcoholics Anonymous; Gerwood, LeBlanc and Piazza (1998) using an index of spiritual satisfaction among 130 senior citizens; Sherman, Plante, Simonton, Adams, Harbison, and Buris (2000) using the Duke Religious Index among 104 cancer patients and 175 gynaecology patients; Piedmont and Leech (2002) using their Spiritual Transcendence Scale among 369 students in India; Litwinczuk and Groh (2007) using the Spiritual Involvement and Beliefs Scale Revised (Hutch, Burg, Naberhaus, & Hellmich, 1998), among 46 HIV-positive men and women; Piedmont (2007) using the Spiritual Transcendence Scale among 622 Filipino adults; Ciarrocchi and Brelsford (2009) using the Faith Maturity Scale (Benson, Donahue, & Erickson, 1993) among 602 participants in a general population study: Piedmont, Ciarrocchi, Dy-Liacco, and Williams (2009) using their own Religious Involvement Scale among 467 college students; Dy-Liacco, Piedmont, Murray-Swank, Rodgerson, and Sherman (2009) using a four-item index of religiosity among a convenience sample of 654 Filipino nationals; and Halama, Martos, and Adamovová (2010) using the short-form Francis Scale of Attitude toward Christianity (Francis, Lewis,

Philipchalk, Lester, & Brown, 1995) among 274 students in Slovakia and 249 students in Hungary.

Using a somewhat different approach, Stones and Philbrick (1980) found a significant increase in purpose in life scores four months after 100 English-speaking South African students became members of religiously orientated groups. Further support to this finding was provided by Stones (1981) who compared the purpose in life scores of 72 of these members of religiously oriented groups with a control group of non-members, matched for age, sex, home-languages, educational level and occupation of father. Taking group membership as an indicator of religiosity, in a study of 91 students Paloutzian (1981) found higher purpose in life scores among those who recently experienced a religious conversion following an evangelistic mission. In a study of 232 students, Dufton and Perlman (1986) found higher purpose in life scores among conservative believers than among non-conservative believers and non-believers.

Not all studies using the Purpose in Life Test, however, reported a positive association with religiosity. While Pearson and Sheffield (1975) reported a positive correlation between purpose in life and the religion-puritanism subscale of the Wilson and Patterson Conservatism Scale among 84 male psychiatric patients, they failed to find any significant relationship among these same variables among 97 female patients. While French and Joseph (1999) reported a positive correlation between purpose in life and the Francis Scale of Attitude toward Christianity among 101 students, Lewis, Lanigan, Joseph, and de Fockert (1997) failed to find any significant relationship between the same two variables among 154 students. Taking group membership as an indicator of religiosity, in a study among 118 elderly persons from three senior citizen centres, Gerwood, LeBlanc, and Piazza (1998) found no significant relationship between purpose in life scores and religious affiliation as Catholic or Protestant. In a study among 31 gay men with AIDS Bechtel (1994)

found a significant negative association between purpose in life and active membership of a religious organisation.

The more recently developed Purpose in Life Scale (first reported by Robbins and Francis, 2000) has been used in two studies to assess the connection between purpose in life and explicit religion. In the first study, Robbins and Francis (2000) found a positive correlation between church attendance and scores on the Purpose in Life Scale among 517 first-year undergraduate students in Wales. In the second study, Francis, Jewell, and Robbins (2010) found a positive correlation between intrinsic religiosity and scores on the Purpose in Life Scale among 407 older Methodists in England.

A somewhat different strand of research has assessed the relationship between purpose in life and religiosity, by using a single-item measure of purpose in life. For example, Francis and Burton (1994) found a positive correlation between personal prayer and perceived purpose in life among a sample of 674 12- to 16-year-olds attending a Catholic school and who identified themselves as members of the Catholic Church, even after controlling for individual differences in frequency of church attendance. Francis and Evans (1996) found a significant positive relationship between frequency of personal prayer and perceived purpose in life among two samples of pupils: 669 pupils who attended church most weeks, and 1,640 pupils who never attended church. Francis (2005) replicated and extended the study by Francis and Evans (1996), drawing on two samples of 13- to 15-year olds. The first sample comprised 7,083 males and 5,634 females who never attend church. The second sample comprised 1,738 males and 2,006 females who attend church nearly every week. The data demonstrated a significant positive relationship between frequency of personal prayer and perceived purpose in life among both the churchgoers and the non-churchgoers. Robbins and Francis (2005) extended the study by Francis and Evans (1996) in a different way by drawing a sample of adolescents from Northern Ireland where religion has a much higher

saliency than in the rest of the United Kingdom and where the community is strongly divided on denominational grounds. These data, provided by 1,206 13- to 15-year-olds in Catholic schools and by 1,464 in Protestant schools, once again demonstrated a clear relationship between frequency of prayer and perceived purpose in life, after controlling for the effects of sex, age, personality, and church attendance, in both denominational communities. Building on this study, Francis and Robbins (2006, 2009) take their analyses one stage further to examine the wider association between prayer, purpose in life and prosocial attitudes, including attitude toward school, attitude toward law and order, and attitude toward substances.

Other studies have also employed this single item measure of purpose in life alongside indices of explicit religiosity. For example, Francis (2000) found a significant positive correlation between bible reading and purpose in life among a sample of 25,888 13-to 15-year-old pupils. Francis and Kaldor (2001) found significant positive correlations between purpose in life and three measures of explicit religiosity (personal prayer, belief in God and church attendance) among 1,021 adults participating in an Australian population survey.

Operationalising implicit religion

One of the strengths of Bailey's notion of implicit religion concerns the ways in which it functions as a multi-faceted construct. One of these ways is illustrated by Bailey's perceptive analysis of the implicit religion of a British suburb. Here Bailey (1998, p.67) spoke in terms of those whose religious commitment was most adequately expressed in the confession 'Well, you see, I believe in Christianity'. 'Christianity' in this context, argues Bailey, seems to have three sides: belief in God, in Christ, and in the church. This belief in Christianity is more likely to be reflected in the quest for infant baptism than in the commitment to frequent church attendance. Those who express this implicit religiosity

through belief in Christianity are likely to take the view that 'You don't have to go to church to be a Christian.'

Within their study examining the motivations of individuals who leave church,
Francis and Richter (2007) located the notion that you don't have to go to church to be a
Christian within the wider context of the move from churchgoing to the attraction of a 'deinstitutionalised faith'. Developing their questionnaire survey from the rich resources of
previous surveys and their interview data, Francis and Richter selected four statements that
epitomised for them the position of those individuals who became church leavers in their
quest to express a 'de-institutionalised faith'. These statements were: 'I believed that you do
not need to go to church to be a Christian'; 'People have God within them, so churches aren't
really necessary'; 'I wanted to follow my own private spiritual quest, without religious
institutions'; and 'I distrusted most institutions, including the church'. It is statements like
these that may capture the essence of the implicit religion of people who, in Bailey's words,
believe in Christianity but who do not attend church. Drawing further on their interview data,
Francis and Richter illustrate this position by citing Peter Kendall, a television producer in his
forties who had left a Methodist church and who associated his church-leaving with a more
general distrust of institutions.

I tend not to like institutions that much. I don't mean that I don't like them in any sort of glib way, I just think that institutions tend to always have alternative agendas

Certainly the Methodist church was the first time that I began to formulate my opposition to institutions, and my first move away from the church was not to reject Christianity, but to reject what I call Churchianity. (Francis & Richter, 2007, p. 229),

Drawing on their statistical data from over 800 church-leavers, Francis & Richter (2007) reported that 75% of church-leavers had taken the view that they did not need to go to church to be a Christian. Moreover, this proportion did not vary significantly when the data

were examined for sex differences, generational differences, cohort differences, or age of leaving. There were, however, significant differences according to the main denomination with which the church-leavers identified. The Anglicans were significantly more likely to believe that you don't have to go to church to be a Christian. This view was endorsed by 78% of Anglicans, compared with 70% of Roman Catholics and by 67% of Free Church members.

Building on this framework, Walker, Francis, and Robbins (2010) included the item 'You don't have to go to church to be a good Christian' within their survey of 1226 individuals attending harvest festival services in Anglican churches in rural Worcestershire. The data demonstrated that around two out of every three attenders (63%) endorsed this view of Christianity. The levels were highest among those who attended church less than six times a year (84%), and among those who never prayed (81%). Such high levels of endorsement among those who attend church for harvest festival services led Walker, Francis and Robbins (2010) to conclude that de-institutionalised implicit religion may be superseding commitment to conventional explicit religious attendance.

Influence of personality

Research concerning the relationship between religiosity and purpose in life needs to be aware of the potential contaminating influence of personality. A number of recent studies have demonstrated, for example, that Eysenck's three dimensional model of personality (Eysenck & Eysenck, 1991) is able to predict individual differences in religiosity, including studies among school pupils (Francis & Wilcox, 1994, 1996; Smith, 1996; Fearn, Lewis & Francis, 2003; Williams, Robbins, & Francis, 2005, 2006; Francis, Williams, & Robbins, 2009, 2010; Robbins, Francis, & Williams, 2010), students (Maltby, 1995; Lewis & Maltby, 1996; Francis, 1997, 2010), school teachers (Francis & Johnson, 1999), senior citizens (Francis & Bolger, 1997), and the general adult population (Kaldor, Francis, & Fisher, 2002). Another set of studies have demonstrated that Eysenck's three dimensional model of

personality is able to predict individual differences over a range of areas concerned with subjective well-being in general (Francis, Brown, Lester, & Philipchalk, 1998; Francis, 1999; Hills & Argyle, 2001; Stewart, Ebmeier, & Deavy, 2005; Robbins, Francis, & Edwards, 2010) and with purpose in life in particular (Pearson & Sheffield, 1974, 1989; Addad, 1987; Moomal, 1999; Francis, 2000; Robbins & Francis, 2000; Francis & Kaldor, 2001; Francis, Jewell, & Robbins, 2010; Francis & Robbins, 2009).

The present study addresses this problem by drawing on a database which includes a reliable measure of the Eysenckian dimensional model of personality. This model argues that individual differences can be most economically and adequately expressed in terms of three higher order orthogonal dimensions characterised as extraversion, neuroticism, and psychoticism. Eysenck's instruments designed to operationalise this model also routinely include a lie scale (Eysenck & Eysenck, 1991). Eysenck's extraversion scales measure sociability and impulsivity. The opposite of extraversion is introversion. The high scorers on the extraversion scale are characterised by Eysenck and Eysenck (1975) in the test manual as sociable individuals, who like parties, have many friends, need to have people to talk to and prefer meeting people to reading or studying alone. Typical extraverts crave excitement, take chances, act on the spur of the moment, are carefree and easy-going. Eysenck's neuroticism scales measure emotional lability and over-reactivity, and identify the underlying personality traits which at one extreme define neurotic mental disorders. The opposite of neuroticism is emotional stability. The high scorers on the neuroticism scale are characterised by Eysenck and Eysenck (1975) in the test manual as anxious, worrying individuals, who are moody and frequently depressed, likely to sleep badly, and to suffer from various psychosomatic disorders. Eysenck's psychoticism scales identify the underlying personality traits which at one extreme define psychotic mental disorder. The opposite of psychoticism is normal personality. The high scorers on the psychoticism scale are characterised by Eysenck and

Eysenck (1976), in their study of psychoticism as a dimension of personality, as being cold, impersonal, hostile, lacking in sympathy, unfriendly, untrustful, odd, unemotional, unhelpful, lacking in insight, strange, with paranoid ideas that people were against them.

The lie scales were originally introduced into personality measures to detect the tendency of some respondents to 'fake good' and so to distort the resultant personality scores (O'Donovan, 1969). The notion of the lie scales has not, however, remained as simple as that and the continued use of lie scales has resulted in them being interpreted as a personality measure in their own right (McCrae & Costa, 1983; Furnham, 1986). According to one prominent account, the lie scale measures social acquiescence or social conformity (Finlayson, 1972; Massey, 1980).

Research question

Against this background, the aim of the present study is to examine the relative impact of explicit religiosity (defined as church attendance) and implicit religiosity (defined as believing that you can be a Christian without going to church) on self-reported sense of purpose in life. In a simple sense, this research question can be tested by comparing the strength of the correlation between explicit religiosity and purpose in life and the correlation between implicit religiosity and purpose in life. In a more sophisticated and complex sense, the associations will also be compared within a regression model that allows other (potentially contaminating) factors to be taken into account. Before examining the predictive power of explicit religiosity and implicit religiosity on purpose in life, the regression model will take three categories of variables into account. The first category comprises the personal demographic factors of sex and age. The second category comprises the personality dimensions of extraversion, neuroticism and psychoticism (as well as the lie scale). The third category comprises the two religious factors that may underpin the selected operational forms of both explicit religiosity and implicit religiosity employed in the study, namely self-

identified religious affiliation (none or Christian) and belief in God (theist, agnostic, and atheist).

Method

Sample

The Religion and Values Today Survey, described in detail by Francis (2001), was completed by a total of 33,982 pupils attending year-nine and year-ten classes throughout England and Wales. This database was constructed to be thoroughly representative of young people in this age group (13- to 15-year-olds) being educated within both the statemaintained sector and the independent sector of schools. Data were provided from 163 schools, stretching from Pembrokeshire in the west to Norfolk in the east, and from Cornwall in the south to Northumberland in the north. A proper mix of rural and urban schools was included, as was a proper mix of independent and state-maintained schools. Within the statemaintained sector proper attention was given to the balance between Roman Catholic voluntary schools, Anglican voluntary schools, and non-denominational schools. Of the total respondents, 51% were male and 49% were female; 53% were in year nine and 47% were in year ten. Of those educated within the state-maintained sector, 86% were in non-denominational schools, 9% in Roman Catholic schools, and 5% in Anglican schools. Of the total sample of pupils, 10% were being educated outside the state-maintained sector.

Procedure

Participating schools were asked to follow a standard procedure. The questionnaires were administered in normal class groups to all year-nine and year-ten pupils throughout the school. Pupils were asked not to write their name on the booklet and to complete the inventory under examination-like conditions. Although pupils were given the choice not to participate, very few decided not to take part in the survey. They were assured of confidentiality and anonymity. They were informed that their responses would not be read by

anyone in the school, and that the questionnaires would be despatched to the University of Wales for analysis.

Measures

In addition to basic information about sex and school year, the present analysis draws on the following measures included in the questionnaires.

Explicit religiosity was operationalised by the item, 'Do you go to church or other place of worship?' rated on a five-point scale, ranging from 'never', through 'once or twice a year', 'sometimes', and 'at least once a month', to 'nearly every week'.

Implicit religiosity was operationalised by the item, 'I believe that I can be a Christian without going to church' rated on a five-point Likert-type scale, ranging from 'agree strongly', through 'agree', 'not certain', and 'disagree' to 'disagree strongly'.

Religious affiliation was measured by the item, 'Do you belong to a church or other religious group?' followed by a check list of Christian denominations and other faith groups. The first category in the list was 'none' and the last category was 'other (please specify)'.

Belief in God was measured by the item, 'I believe in God' rated on a five-point Likert-type scale, ranging from 'agree strongly', through 'agree', 'not certain', and 'disagree' to 'disagree strongly'.

Purpose in life was measured by the item, 'I feel my life has a sense of purpose' rated on a five-point Likert-type scale, ranging from 'agree strongly', through 'agree', 'not certain', and 'disagree' to 'disagree strongly'.

Personality was assessed by the short-form Junior Eysenck Personality Questionnaire (Francis & Pearson, 1988). This instrument proposes four six-item indices of extraversion, neuroticism, psychoticism, and a lie scale. Each item is rated on a two-point scale: 'yes' and 'no'.

Analysis

The present analysis was conducted on a subset of the total database defined by two key parameters. First, the item in the survey concerned with religious affiliation was employed to exclude from analysis all pupils who identified with a non-Christian world faith, and all the Christian denominations were combined to form the single category 'Christian'. The analysis therefore was capable of comparing the two categories of no religious affiliation and Christian affiliation. Second, since not all versions of the survey included the personality measure, the participants for whom these data were missing were also excluded. The analysis was, consequently, conducted on the subset of 25,825 pupils. This subset included 13,210 males and 12,615 females, 13,632 year-nine pupils and 12,193 year-ten pupils. The data were analysed by the SPSS statistical package.

Results

Table 1 presents the scale properties of the four indices proposed by the short-form Junior Eysenck Personality Questionnaire in terms of the alpha coefficients (Cronbach, 1951) and the means and standard deviations. These data are in line with the performance of these measures as reported by Francis and Pearson (1988).

- Insert tables 1 and 2 about here -

Table 2 presents the correlation matrix for all the variables included in the study. Four features of these data merit comment. First, the usual small positive correlations were found between sex and the conventional indicators of religiosity (affiliation, belief in God and church attendance). The indicator of implicit religion functioned in relation with sex in the same way as the indicator of explicit religion. In all cases females recorded higher religiosity scores than males. Second, the usual correlations were reported between sex and the four Eysenckian measures, with females recording higher scores than males on the extraversion scale, the neuroticism scale and the lie scale, and with males recording higher scores than females on the psychoticism scale. Third, the personality variables demonstrated a range of

statistically significant correlations with the religious variables and with the index of purpose in life, confirming the need to take personality variables into account when examining the association between religiosity and purpose in life. Fourth, all four indicators of religiosity demonstrated a significant positive correlation with purpose in life, including both the indicator of explicit religiosity and the indicator of implicit religiosity.

- Insert table 3 about here –

Table 3 presents the two regression models in which purpose in life is the dependent variable and in which the predictor variables have been entered in the fixed order of personal characteristics (sex and age), personality (extraversion, neuroticism, psychoticism, and lie scale) and religiosity. In both models Christian affiliation has been entered first, followed by belief in God. Then in model one, the indicator of explicit religiosity (church attendance) has been entered as the final predictor variable; in model two the indicator of implicit religiosity (being a Christian without going to church) has been entered as the final predictor variable. In both models the final predictor variable explained small (but statistically significant) additional variance in the dependent variable. Moreover, the proportion of variance explained by the indicator of implicit religion is close to that explained by the indicator of explicit religion.

Conclusion

Bailey's notion of implicit religion is a multi-faceted construct. One aspect of this construct values and respects popular reformulations of Christian identity outside the confines of strict doctrinal orthodox belief and conventional observance of practice. Bailey does not dismiss those whose religious commitment was most adequately expressed in the confession 'Well, you see, I believe in Christianity' as secular or merely cultural Christians. He understands such formulation as a sincere expression of implicit religion.

The contention of the present study has been that for such an unconventional formulation of Christian identity to count as 'religious' believing there has to be evidence of some functional equivalence of implicit religion in the lives of such believers to match the functions of explicit religion in the lives of conventional Christian believers. In the present study this contention has been tested empirically by operationalising implicit religion through the belief position, 'I believe that I can be a Christian without going to church', and by operationalising explicit religion through church attendance. Recognising that other dimensions of religion may underpin these operationalised forms of both implicit religion and explicit religion, self-assigned religious affiliation as Christian and self-reported belief in God were taken into account before comparing the functional equivalence of the selected indicators of implicit religion and explicit religion on a predetermined outcome variable.

The outcome variable selected to test the working hypothesis of this study was the construct 'purpose in life' as assessed by a single-item measure used in previous research concerned with mapping the association between religiosity and the broad area of human flourishing. The data support the thesis that (within the operationalisations employed) implicit religion and explicit religion serve similar functions in association with an enhanced sense of purpose in life.

The notion of operationalising one aspect of Bailey's multi-faceted construct of implicit religion through the belief that 'I can be a Christian without going to church' was first employed in a study of individuals attending harvest festival services in Anglican churches in rural Worcestershire, reported by Walker, Francis, and Robbins (2010). The present study is the first to have employed this operationalistion of implicit religion to test whether implicit religion serves similar functions in the lives of believers to the functions served by explicit religion. A positive answer has been given to this question in terms of one empirical test: purpose in life.

There are two clear weaknesses with the present study that can be addressed by further research The first weakness concerns the problematic nature of employing single-item measures as the dependent variable. The present study needs to be replicated with a recognised psychometric measure of purpose in life, for example the Purpose in Life Scale (Francs & Robbins, 2000). The second weakness concerns the highly specific nature of the dependent variable, focusing specifically and exclusively on the notion of purpose in life. The present study needs to be extended with a wider range of dependent variables. For example, the focus of the present study on positive affect (purpose in life) could be properly complemented by a focus on negative affect (say suicidal ideation). The extension of research in this direction would test incrementally the functional similarities (and dissimilarities) between implicit religion and explicit religion within the lives of the adherents to these different forms of religiosity.

Table 1

Personality scales

| | N items | Alpha | Mean | SD |
|--------------|------------|-------|------|------|
| extraversion | 6 | .68 | 4.56 | 1.54 |
| neuroticism | 6 | .69 | 3.37 | 1.83 |
| psychoticism | 6 | .61 | 1.60 | 1.44 |
| lie scale | 6 | .57 | 2.22 | 1.54 |

Table 2

Correlation matrix

| sex .01 .08*** .08*** .12*** .08*** .09*** 32*** .24*** .10*** age 01 00 04*** 00 10*** .04*** .00 .02*** extraversion .15*** .03*** 01 01 01 12*** .12*** 12*** neuroticism 19*** .07*** .06*** .06*** .06*** .06*** 12*** psychoticism 12*** 09*** 21*** 21*** 09*** 43*** lie scale .16*** .06*** .23*** .23*** .09*** affiliation .13*** .16*** .54*** .37*** belief .29*** .30*** .47*** | | purpose | implicit | explicit | belief | affil | L | P | N | Е | age |
|--|--------------|---------|----------|----------|--------|--------|--------|--------|--------|--------|-----|
| extraversion $.15^{***}$ $.03^{***}$ 01 01 01 12^{***} $.12^{***}$ 12^{***} neuroticism 19^{***} $.07^{***}$ $.06^{***}$ $.06^{***}$ $.06^{***}$ $.06^{***}$ 12^{***} psychoticism 12^{***} 09^{***} 21^{***} 21^{***} 09^{***} 43^{***} lie scale $.16^{***}$ $.06^{***}$ $.23^{***}$ $.23^{***}$ $.09^{***}$ affiliation $.13^{***}$ $.16^{***}$ $.54^{***}$ $.37^{***}$ | ex | .01 | .08*** | .08*** | .12*** | .08*** | .09*** | 32*** | .24*** | .10*** | .01 |
| neuroticism 19^{***} $.07^{***}$ $.06^{***}$ $.06^{***}$ $.06^{***}$ $.06^{***}$ $.06^{***}$ 12^{***} psychoticism 12^{***} 09^{***} 21^{***} 21^{***} 09^{***} 43^{***} lie scale $.16^{***}$ $.06^{***}$ $.23^{***}$ $.23^{***}$ $.09^{***}$ affiliation $.13^{***}$ $.16^{***}$ $.54^{***}$ $.37^{***}$ | ige | 01 | 00 | 04*** | 04*** | 00 | 10*** | .04*** | .00 | .02*** | |
| psychoticism 12^{***} 09^{***} 21^{***} 21^{***} 09^{***} 43^{***} lie scale $.16^{***}$ $.06^{***}$ $.23^{***}$ $.23^{***}$ $.09^{***}$ affiliation $.13^{***}$ $.16^{***}$ $.54^{***}$ $.37^{***}$ | extraversion | .15*** | .03*** | 01 | 01 | 01 | 12*** | .12*** | 12*** | | |
| lie scale .16*** .06*** .23*** .23*** .09*** affiliation .13*** .16*** .54*** .37*** | neuroticism | 19*** | .07*** | .06*** | .06*** | .06*** | .06*** | 12*** | | | |
| affiliation .13*** .16*** .54*** .37*** | sychoticism | 12*** | 09*** | 21*** | 21*** | 09*** | 43*** | | | | |
| | ie scale | .16*** | .06*** | .23*** | .23*** | .09*** | | | | | |
| belief .29*** .30*** .47*** | ffiliation | .13*** | .16*** | .54*** | .37*** | | | | | | |
| | elief | .29*** | .30*** | .47*** | | | | | | | |
| explicit .17*** .07*** | explicit | .17*** | .07*** | | | | | | | | |
| implicit .11*** | mplicit | .11*** | | | | | | | | | |

Note, *, p< .05; **, p< .01; *** p< .001

Table 3

Regression models

| | Expl Beta | Explicit religiosity Beta t p < | | | Implicit religiosity Beta t p < | | |
|-----------------------|--------------|---------------------------------|------|-----|---------------------------------|------|--|
| sex | 03 | -4.1 | .001 | 03 | -4.2 | .001 | |
| age | .01 | 2.3 | .05 | .01 | 2.2 | .05 | |
| extraversion | .15 | 26.0 | .001 | .15 | 25.6 | .001 | |
| neuroticism | 19 | -31.2 | .001 | 19 | -31.3 | .001 | |
| psychoticism | 06 | -9.4 | .001 | 06 | -9.3 | .001 | |
| lie scale | .08 | 12.2 | .001 | .08 | 12.4 | .001 | |
| Christian affiliation | .02 | 2.4 | .01 | .03 | 5.1 | .001 | |
| belief in God | .25 | 37.1 | .001 | .25 | 38.6 | .001 | |
| explicit religiosity | .04 | 5.3 | .001 | - | - | - | |
| implicit religiosity | - | - | - | .03 | 4.9 | .001 | |

References

- Addad, M. (1987). Neuroticism, extraversion and meaning of life: A comparative study of criminals and non-criminals. *Personality and Individual Differences*, 8, 879-883.
- Ardelt, M. (2003). Effects of religion and purpose in life on elders' subjective well-being and attitudes toward death. *Journal of Religious Geronotology*, 14: 55-77.
- Bailey, E. I. (1998). Implicit religion: An introduction. London: Middlesex University Press.
- Benson, P. L., Donahue, M. J., & Erickson, J. A. (1993). The Faith Maturity Scale:

 Conceptualisation, measurement, and empirical validation. *Research in the Social Scientific Study of Religion*, 5, 1-26.
- Bechtel, G. A. (1994). Purpose in life among gay men with HIV disease. *Nursing Connections*, 7(4), 5-11.
- Bolt, M. (1975). Purpose in life and religious orientation. *Journal of Psychology and Theology*, 3, 116-118.
- Byrd, K. R., Hageman, A., & Isle, D. B. (2007). Intrinsic motivation and subjective well-being: The unique contribution of intrinsic religious motivation. *International Journal* for the Psychology of Religion, 17, 141-156.
- Carroll, S. (1993). Spirituality and purpose in life in alcoholism recovery. *Journal of Studies* on Alcohol, 54, 297-301.
- Chamberlain, K., & Zika, S. (1988). Religiosity, life meaning and wellbeing: Some relationships in a sample of women. *Journal for the Scientific Study of Religion*, 27, 411-420.
- Ciarrocchi, J. W., & Brelsford, G. M. (2009). Spirituality, religion, and substance coping as regulators of emotions and meaning making: Different effects on pain and joy. *Journal of Addictions and Offender Counselling*, 30, 24-36.

- Crandall, J. E., & Rasmussen, R. D. (1975). Purpose in life as related to specific values. *Journal of Clinical Psychology*, 31, 483-485.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
- Crumbaugh, J. C. (1968). Cross-validation of Purpose in Life Test based on Frankl's concepts. *Journal of Individual Psychology*, 24, 74-81.
- Crumbaugh, J. C., & Maholick, L. T. (1969). *Manual of instructions for the Purpose in Life*Test (PIL). Munster, Indiana: Psychometric Affiliates.
- Dezutter, J., Soenens, B., & Hutsebaut, D. (2006). Religiosity and mental health: A further exploration of the relative importance of religious behaviours versus religious attitudes. *Personality and Individual Differences*, 40, 807-818.
- Dufton, B. D., & Perlman, D. (1986). The association between religiosity and the Purpose-in-Life Test: Does it reflect purpose or satisfaction? *Journal of Psychology and Theology*, 14, 42-48.
- Dy-Liacco, G. S., Piedmont, R. L., Murray-Swank, N. A., Rodgerson, T. E., & Sherman, M.
 F. (2009). Spirituality and religiosity as cross-cultural aspects of human experience.
 Psychology of Religion and Spirituality, 1, 35-52.
- Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire (adult and junior)*. London: Hodder and Stoughton.
- Eysenck, H. J., & Eysenck, S. B. G. (1976). *Psychoticism as a dimension of personality*. London: Hodder and Stoughton.
- Eysenck, H. J., & Eysenck, S. B. G. (1991). *Manual of the Eysenck Personality Scales*.

 London: Hodder and Stoughton.
- Fearn, M., Lewis, C. A., & Francis, L. J. (2003). Religion and personality among religious studies students: A replication. *Psychological Reports*, *93*, 819-822.

- Finlayson, D. S. (1972). Towards the interpretation of children's lie scale scores. *British Journal of Educational Psychology*, 42, 290-293.
- Francis, L. J. (1997). Personality, prayer, and church attendance among undergraduate students. *International Journal for the Psychology of Religion*, 7, 127-132.
- 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. (2000). The relationship between bible reading and purpose in life among 13-15 year olds. *Mental Health, Religion and Culture, 3,* 27-36.
- Francis, L.J. (2001). The values debate: A voice from the pupils. London: Woburn Press.
- Francis, L. J. (2005). Prayer, personality and purpose in life among churchgoing and non-churchgoing adolescents. In L.J. Francis, M. Robbins, & J. Astley (Eds), *Religion, education and adolescence* (pp.15-38). Cardiff, UK: University of Wales Press.
- Francis, L. J. (2010). Personality and religious orientation: Shifting sands on firm foundations? *Mental Health, Religion and Culture*, *13*, 793-803.
- Francis, L. J., & Bolger, J. (1997). Personality, prayer and church attendance in later life. Social Behaviour and Personality, 25, 335-338.
- Francis, L. J., & Burton, L. (1994). The influence of personal prayer on purpose in life among Catholic adolescents. *Journal of Beliefs and Values*, *15*(2), 6-9.
- 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., & Evans, T. E. (1996). The relationship between personal prayer and purpose in life among churchgoing and non-churchgoing 12-15 year olds in the UK. *Religious*

- Education, 91, 9-21.
- Francis, L. J., Jewell, A., & Robbins, M. (2010). The relationship between religious orientation personality and purpose in life among an older Methodist sample. *Mental Health, Religion and Culture, 13*, 777-791.
- Francis, L. J., & Johnson, P. (1999). Mental health, prayer and church attendance among primary school teachers. *Mental Health, Religion and Culture*, 2, 153-158.
- Francis, L. J., & Kaldor, P. (2001). The relationship between religion and purpose in life in an Australian population survey. *Research in the Social Scientific Study of Religion*, 12, 53-63.
- Francis, L. J., Lewis, J. M., Philipchalk, R., Lester, D., & Brown, L. B. (1995). Reliability and validity of a short scale of attitude toward Christianity among students in the UK, USA, Australia and Canada. *Psychological Reports*, 77, 431-434.
- Francis, L.J., & Pearson, P.R. (1988). The development of a short form of the JEPQ (JEPQ-S): Its use in measuring personality and religion. *Personality and Individual Differences*, 9, 911-916.
- Francis, L. J. & Richter, P. (2007). *Gone for good? Church-leaving and returning in the 21*st century. Peterborough: Epworth,
- 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. (2006). Prayer, purpose in life, personality and social attitudes among non-churchgoing 13- to 15-year-olds in England and Wales. *Research in the Social Scientific Study of Religion*, 17, 123-155.
- Francis, L. J., & Robbins, M. (2009). Prayer, purpose in life, and attitude toward substances:

 A study among 13- to 15-year-olds in England and Wales. *Counselling and Spirituality*, 28(2), 83-104.

- Francis, L. J., & Wilcox, C. (1994). Personality, prayer and church attendance among 16- to 18-year-old girls in England. *Journal of Social Psychology*, *134*, 243-246.
- Francis, L. J., & Wilcox, C. (1996). Prayer, church attendance and personality revisited: A study among 16- to 19-year old girls. *Psychological Reports*, 79, 1265-1266.
- Francis, L. J., Williams, E., & Robbins, M. (2009). Christianity, paranormal belief and personality: A study among 13- to 16-year-old pupils in England and Wales. *Archive for the Psychology of Religion*, 31, 337-344.
- Francis, L. J., Williams, E., & Robbins, M. (2010). Personality, conventional Christian belief and unconventional paranormal belief: A study among teenagers. *British Journal of Religious Education* 31, 31-39.
- Frankl, V. E. (1978). *The unheard cry for meaning: Psychotherapy and humanism*. New York: Simon and Schuster.
- French, S., & Joseph, S. (1999). Religiosity and its association with happiness, purpose in life, and self-actualisation. *Mental Health, Religion and Culture*, 2, 117-120.
- Furnham, A. (1986). Response bias, social desirability and dissimulation. *Personality and Individual Differences*, 7, 385-400.
- Gerwood, J. B., LeBlanc, M., & Piazza, N. (1998). The Purpose-in-Life Test and religious denomination: Protestant and Catholic scores in an elderly population. *Journal of Clinical Psychology*, *54*, 49-53.
- Gladding, S. T., Lewis, E. L., & Adkins, L. (1981). Religious beliefs and positive mental health: The G.L.A scale and counselling. *Counselling and Values*, 25, 206-215.
- Halama, P., Martos, T., & Adamovová, L. (2010). Religiosity and well-being in Slovak and Hungarian student samples: The role of personality traits. *Studia Psychologica*, *52*, 101-115.
- Hatch, R. L. Burg, M. A., Naberhaus, D. S. & Hellmich, L. K. (1998). The Spiritual

- Involvement and Beliefs Scale: Development and testing of a new instrument. *Journal of Family Practice*, 46, 476-486.
- Hills, P., & Argyle, M. (2001). Happiness, introversion-extraversion and happy introverts.

 *Personality and Individual Differences, 30, 595-608.
- Jackson, L. E., & Coursey, R. D. (1988). The relationship of God control and internal locus of control to intrinsic religious motivation, coping and purpose in life. *Journal for the Scientific Study of Religion*, 27, 399-410.
- Janssen, F., Bänziger, S., Dezutter, J., & Hutsebaut, D. (2005). Religion and mental health:

 Aspects of the relation between religious measures and positive and negative mental health. *Archive for the Psychology of Religion*, 27, 19-44.
- Kaldor, P., Francis, L. J., & Fisher, J. W. (2002). Personality and spirituality: Christian prayer and Eastern meditation are not the same. *Pastoral Psychology*, *50*, 165-172.
- Lewis, C. A., Lanigan, C., Joseph, S., & de Fockert, J. (1997). Religiosity and happiness: No evidence for an association among undergraduates. *Personality and Individual Differences*, 22, 119-121.
- Lewis, C. A., & Maltby, J. (1996). Personality, prayer, and church attendance in a sample of male college students in the USA. *Psychological Reports*, 78, 976-978.
- Litwinczuk, K. M., & Groh, C. J. (2007). The relationship between spirituality, purpose in life and well-being in HIV-positive persons. *Journal of the Association of Nurses in AIDS Care*, 18, 13-22.
- McCrae, R. R., & Costa, P. T. (1983). Social desirability scales: More substance than style. *Journal of Consulting and Clinical Psychology*, 51, 882-888.
- Maltby, J. (1995). Personality, prayer and church attendance among US female adults. *Journal of Social Psychology, 135*, 529-531.
- Massey, A. (1980). The Eysenck Personality Inventory lie scale: Lack of insight or ...? Irish

- Journal of Psychology, 4, 172-174.
- Moomal, Z. (1999). The relationship between meaning in life and mental well-being. *South African Journal of Psychology*, 29, 36-41.
- O'Donovan, D. (1969). An historical review of the lie scale: With particular reference to the Maudsley Personality Inventory. *Papers in Psychology*, *3*, 13-19.
- Paloutzian, R. F. (1981). Purpose in life and value changes following conversion. *Journal of Personality and Social Psychology*, 41, 1153-1160.
- Paloutzian, R. F., & Ellison, C. W. (1982). Loneliness, spiritual well-being, and the quality of life. In L. A. Peplau & D. Perlman (Eds), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 224-237). New York: Wiley-Interscience.
- Paloutzian, R. F., Jackson, S. L., & Crandall, J. E. (1978). Conversion experience, belief systems and personal ethical attitudes. *Journal of Psychology and Theology*, *6*, 266-275.
- Pearson, P. R., & Sheffield, B. (1974). Purpose-in-life and the Eysenck Personality Inventory. *Journal of Clinical Psychology*, *30*, 562-564.
- Pearson, P. R., & Sheffield, B. (1975). Purpose in life and social attitudes in psychiatric patients. *Journal of Clinical Psychology*, *31*, 330-332.
- Pearson, P. R., & Sheffield, B. F. (1989). Psychoticism and purpose in life. *Personality and Individual Differences*, 10, 1321-1322.
- Piedmont, R. L. (2007). Cross-cultural generalizability of the Spiritual Transcendence Scale to the Philippines: Spirituality as a human universal. *Mental Health, Religion and Culture*, 10, 89-107.
- Piedmont, R. L., Ciarrocchi, J. W., Dy-Liacco, G. S., & Williams, E. G. (2009). The empirical and conceptual value of the Spiritual Transcendence and Religious

- Involvment Scales for Personality Research. *Psychology of Religion and Spirituality*, 3, 162-179.
- Piedmont, R. L., & Leech, M. M. (2002). Cross-cultural generalizability of the Spiritual Transcendence Scale in India. *American Behavioural Scientist*, 45(2), 1888-1901.
- Richards, D. G. (1991). The phenomenology and psychological correlates of verbal prayer. *Journal of Psychology and Theology*, 19, 354-363.
- Robbins, M., & Francis, L. J. (2000). Religion, personality and wellbeing: The relationship between church attendance and purpose in life among undergraduates attending an Anglican College in Wales. *Journal of Research in Christian Education*, 9, 223-238.
- Robbins, M., & Francis, L. J. (2005). Purpose in life and prayer among Catholic and Protestant adolescents in Northern Ireland. *Journal of Research in Christian Education*, 14, 73-93.
- Robbins, M., Francis, L. J., & Edwards, B. (2010). Happiness as stable extraversion: Internal consistency reliability and construct validity of the Oxford Happiness Questionnaire among undergraduate students. *Current Psychology*, 29, 89-94.
- Robbins, M., Francis, L. J., & Williams, E. (2010). Conventional Christian belief and unconventional paranormal belief among teenagers in Northern Ireland: A personality and individual differences approach. *Irish Journal of Psychology*, *31*, 87-94.
- Sherman, A. C., Plante, T. G., Simonton, S., Adams, D. C., Harbison, C., & Buris, S. K. (2000). A multidimensional measure of religious involvement for cancer patients: The Duke Religious Index. *Supportive Care in Cancer*, 8, 102-109.
- Smith, D. L. (1996). Private prayer, public worship and personality among 11-15 year old adolescents. *Personality and Individual Differences*, 21, 1063-1065.
- Soderstrom, D., & Wright, E. W. (1977). Religious orientation and meaning in life. *Journal of Clinical Psychology*, *33*, 65-68.

- Stewart, M. E, Ebmeier, K. P., & Deavy, I. J. (2005). Personality correlates of happiness and sadness: EPQ-R and TPQ compared. *Personality and Individual Differences*, *38*, 1085-1096.
- Stones, C. R. (1981). Personal religious orientation and meaning in life. *Journal of Clinical Psychology*, *33*, 65-68.
- Stones, C. R., & Philbrick, J. L. (1980). Purpose in life in South Africa: A comparison of American and South African beliefs. *Psychological Reports*, 47, 739-742.
- Tillich, P. (1952). The courage to be. New Haven, Connecticut: Yale University Press.
- Walker, D., Francis, L. J., & Robbins, M. (2010). You don't have to go to church to be a good Christian: The implicit religion of rural Anglican churchgoers celebrating harvest. *Implicit Religion*, 13, 319-325.
- Weinstein, L., & Cleanthous, C. C. (1996). A comparison of Protestant ministers and parishioners on expressed purpose in life and intrinsic religious motivation.

 *Psychology: A journal of human behaviour, 33, 26-29.
- Williams, E., Robbins, M., & Francis, L J. (2005). When introverts ceased to be more religious: A study among 12- to 16-year-old pupils. *Journal of Beliefs and Values*, 26, 77-79.
- Williams, E., Robbins M., & Francis, L. J. (2006). Personality and religion among adolescents in Wales. *The Psychologist in Wales*, 19, 21-22.