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Running head: religious orientation, personality and purpose in life

The relationship between religious orientation, personality and purpose in life
among an older Methodist sample

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Abstract

The construct of purpose in life is a key notion discussed both by psychologists and by theologians. There are good theoretical reasons for linking the two constructs and arguing that religiosity could enhance the sense of purpose in life. The empirical evidence for the relationship is, however, not unambiguous. A major difficulty with earlier research concerns the problematic nature of defining both purpose in life and religiosity. The present study attempts to clarify the problem by employing new recently developed measures of both constructs. The Purpose in Life Scale (PILS) developed by Robbins and Francis (2000) provides a clear and unambiguous measure. The New Indices of Religious Orientation (NIRO) developed by Francis (2007) re-operationalise the three constructs of intrinsic, extrinsic and quest religiosity as three different ways of being religious. Both instruments were completed together with the Short-form Eysenck Personality Questionnaire Revised (EPQR-S) by 407 older Methodists in England. The data demonstrate that, after controlling for individual differences in personality, intrinsic religiosity is associated with a better sense of purpose in life, and both quest religiosity and extrinsic religiosity are unrelated to a sense of purpose in life.

The relationship between religious orientation, personality and purpose in life
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Purpose in life and psychological enquiry

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.

Early empirical research concerned with the psychological correlates of purpose in life, as reviewed by Yalom (1980), focused largely on the relation between purpose in life and psychopathology. Some more recent studies have maintained this focus. For example, Newcomb (1986) found a negative relationship between purpose in life and fear and anxiety concerning the possibilities of nuclear war and nuclear accidents. Newcomb and Harlow (1986) found, in two different samples, that perceived loss of control and meaninglessness in life mediated the relation between uncontrollable stress and substance use. Harlow, Newcomb, and Bentler (1986) found meaninglessness to mediate between depression and self-derogation and subsequent drug use for women and suicidal ideation for men. Coleman, Kaplan, and Downing (1986) reported that drug addicts were less likely than non-addicts to have a well-defined meaning in life. Schlesinger, Susman, and Koenigsberg (1990) found lower purpose in life scores among alcoholic men and alcoholic women than among non-alcoholics. Bechtel (1994) and Lyon and Younger (2001) found lower purpose in life scores among persons living with HIV disease. Lester and Badro (1992) and Edwards and Holden (2001) found lower purpose in life scores to be associated with higher levels of suicidal ideation. Rappaport, Fossler, Bross, and Gilden (1993) found lower purpose in life scores to

be associated with greater death anxiety. Bigler, Neimeyer, and Brown (2001) found lower purpose in life scores to be associated with higher levels of general anxiety and depression.

However, another set of recent studies has focused much more on the perspective of positive psychology to identify the positive correlates of purpose in life. For example, Zika and Chamberlain (1987) found purpose in life to be a strong consistent predictor of psychological well-being. Chamberlain and Zika (1988) found purpose in life to be associated with positive affect and life satisfaction. Zika and Chamberlain (1992) found purpose in life to relate consistently more strongly to the positive dimensions of well-being than to the negative dimensions. Carroll (1993) and Waisberg and Porter (1994) found purpose in life to be positively associated with recovery from alcoholism. Shek (1992) found purpose in life to be associated with positive self-image. Coward (1996) found purpose in life to be associated with self-esteem, balanced affect, cognitive well-being, and better health. Lewis, Lanigan, Joseph, and de Fockert (1997) found purpose in life to be associated with greater happiness. Bigler, Neimeyer, and Brown (2001) found higher purpose in life scores to be associated with better self-esteem and better psychological well-being. Whitty (2003) found purpose in life to be associated with more mature defence mechanisms and more mature coping strategies. In a factor analytic study, Compton (2001) found that purpose in life was associated with measures of life satisfaction, happiness, positive affectivity, self-acceptance, existential well-being, self-esteem, and environmental mastery. There is also a long history of demonstrating the direct relationship between purpose in life and social attitudes (Pearson & Sheffield, 1975; Shek, Ma, & Cheung, 1994; Francis & Robbins, 2006).

Religion and purpose in life

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 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 and by Dezutter, Soenens and Hutsebaut (2006) among 472 adults. 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; and Piedmont and Leach (2002) using their Spiritual Transcendence Scale among 369 students in India. 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.

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. 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 religiosity (personal prayer, belief in God and church attendance) among 1,021 adults participating in an Australian population survey.

Religious orientation

Recognition that different ways of conceptualising and measuring religiosity generated different relationships with a range of socio-psychological variables led Allport and Ross (1967) to distinguish between two different religious orientations which were eventually characterised as intrinsic religiosity and extrinsic religiosity. Developing Allport and Ross' pioneering work, Batson and Ventis (1982) proposed a third orientation which they characterised as quest religiosity.

The extended definitions of extrinsic religiosity and intrinsic religiosity advanced by Allport and Ross (1967:434) are worth citing in full. Here is their description of the extrinsic orientation.

Persons with this orientation are disposed to use religion for their own ends. The term is borrowed from axiology, to designate an interest that is held because it serves other, more ultimate interests. Extrinsic values are always instrumental and utilitarian.

Persons with this orientation may find religion useful in a variety of ways - to provide security and solace, sociability and distraction, status and self-justification. The embraced creed is lightly held or else selectively shaped to fit more primary needs. In theological terms the extrinsic type turns to God, but without turning away from self.

Here is their description of the intrinsic orientation.

Persons with this orientation find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought into harmony with the religious beliefs and prescriptions. Having

embraced a creed the individual endeavours to internalize it and follow it fully. It is in this sense that he *lives* his religion.

Allport and Ross (1967) proposed two scales to measure their dimensions of intrinsic and extrinsic orientation. The intrinsic measure contained nine items, the first two of which were: 'It is important for me to spend periods of time in private religious thought and meditation'; 'If not prevented by unavoidable circumstances, I attend church'. The extrinsic measure contained eleven items, the first two of which were: 'Although I believe in my religion, I feel there are many more important things in my life'; 'It doesn't matter so much what I believe so long as I lead a moral life'.

The quest orientation gave recognition to a form of religiosity which embraces characteristics of complexity, doubt, tentativeness, and honesty in facing existential questions. Batson and Ventis (1982:150) provided the following description of the quest orientation.

An individual who approaches religion in this way recognises that he or she does not know, and probably never will know, the final truth about such matters. But still the questions are deemed important, and however tentative and subject to change, answers are sought. There may not be a clear belief in a transcendent reality, but there is a transcendent, religious dimension to the individual's life.

Batson and Ventis (1982:145) also provided a six-item instrument to measure the quest orientation, which they originally identified by the name 'interactional scale'. Two items were: 'It might be said that I value my religious doubts and uncertainties'; 'Questions are far more central to my religious experience than are answers'. Subsequently Batson and Schoenrade (1991a, 1991b) developed a longer twelve-item quest scale, which dropped one item from the original six-item scale (My religious development has emerged out of my growing sense of personal identity) and introduced a further seven new items.

The notion and measurement of religious orientation, distinguishing between intrinsic religiosity, extrinsic religiosity and quest religiosity has given rise both to a strong research tradition within the psychology of religion and to considerable controversy. In many ways the jury may still be out assessing the question raised by Kirkpatrick and Hood (1990) whether the notion and measurement of religious orientation is, on balance, 'the boon or bane of contemporary psychology of religion'. Reviewing the debate Francis (2007) concluded that research in this field could be improved by the development of a new set of instruments designed to operationalise the underlying constructs. The New Indices of Religious Orientation proposed by Francis (2007) displayed good properties of construct validity and of internal homogeneity reliability.

Religion, purpose in life and 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), students (Maltby, 1995; Lewis & Maltby, 1996; Francis, 1997), school teachers (Francis & Johnson, 1999), senior citizens (Francis & Bolger, 1997), and the general adult population (Kaldor, Francis, & Fisher, 2002). Another set of recent 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) and with purpose in life in particular (Pearson & Sheffield, 1974, 1989; Addad, 1987; Moomal, 1999; Francis, 2000; Robbins & Francis, 2000;

Francis & Kaldor, 2001).

The present study addresses this third 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 the preceding background concerned both with issues of theory and of measurement, the aim of the present study is to examine the relationship between religious orientation and purpose in life among a sample of older Methodists, after taking into account individual differences in age, sex and personality. The specific hypothesis is that intrinsic religiosity will be related to purpose in life, but that neither extrinsic religiosity nor quest religiosity will be related to purpose in life. This hypothesis reflects the careful distinctions made between these three religious orientations by Allport and Ross (1967) and by Batson and Ventis (1982).

Method

Procedure

A list of names was generated from members aged sixty and over of the Leeds Methodist district in England. A total of 535 people were successfully mailed a sixteen page questionnaire. A total of 407 completed questionnaires were returned representing a response rate of 76%.

Sample

The 407 individuals who returned thoroughly completed questionnaires comprised

34% men and 66% women; 14% were aged between 60 and 64 years, 22% were aged between 65 and 69 years, 21% were aged between 70 and 74 years, 23% were aged between 75 and 79 years, 13% were aged between 80 and 84 years, 4% were aged between 85 and 90 years, and 3% were aged 90 years or over. Two in five (39%) of the participants reported that they lived alone and 61% were married. The majority of the respondents reported that they attended church weekly (88%), with 4% attending at least once a month, 4% attending sometimes, 2% attending once or twice a year, and 2% never attending. Over three-quarters (77%) of the respondents reported that they prayed every day, with 16% praying once a week, less than 1% praying once a month, and 7% praying occasionally.

Measures

Religious orientation was assessed by the New Indices of Religious Orientation developed by Francis (2007). This instrument proposes three 9-item measures of intrinsic religiosity, extrinsic religiosity, and quest religiosity. Each item is assessed on a five-point scale: agree strongly, agree, not certain, disagree and disagree strongly.

Personality was assessed by the short-form Revised Eysenck Personality Questionnaire developed by Eysenck, Eysenck, and Barrett (1985). This instrument proposes three 12-item measures of extraversion, neuroticism and psychoticism, and a 12-item lie scale. Each item is assessed on a two-point scale: yes and no.

Purpose in life was assessed by the Purpose in Life Scale developed by Robbins and Francis (2000). This instrument proposes a 12-item scale to assess a unidimensional construct. Each item is assessed on a five-point scale: agree strongly, agree, not certain, disagree, and disagree strongly.

Data analysis

The data were analysed by the SPSS statistical package using the t-test, reliability, correlation and regression routines.

Results

Table 1 presents the scale properties of the New Indices of Religious Orientation, the

- insert table 1 about here -

Purpose in Life Scale, and the short form of the Revised Eysenck Personality Questionnaire. In terms of the alpha coefficient as an index of internal consistency reliability the measures of intrinsic religiosity, extrinsic religiosity, quest religiosity, purpose in life, extraversion, neuroticism and lie scale all exceed DeVellis' (1991) recommended threshold of .65. The somewhat lower reliability of the psychoticism scale is consistent with the findings of previous studies (Francis, Philipchalk, & Brown, 1991).

Table 2 presents the Pearson correlation coefficients between age, sex, purpose in life, the three dimensions of religious orientation and the four scales of the short form Revised

- insert table 2 about here -

Eysenck Personality Questionnaire. Five main features of this correlation matrix require comment. First, sex is a significant predictor of purpose in life, intrinsic religiosity and psychoticism scores: women record higher scores of intrinsic religiosity, while men record higher psychoticism scores and higher purpose in life scores. Second, age is a significant predictor of purpose in life, extrinsic religiosity and lie scale scores: older subjects record higher scores of extrinsic religiosity and higher lie scale scores, while younger subjects record higher purpose in life scores. Third, the pattern of correlations between personality and religiosity varies across the three religious orientations: quest religiosity is unrelated to all four Eysenckian measures; higher scores on extrinsic religiosity are associated with higher neuroticism scores; higher scores on intrinsic religiosity are associated with lower

neuroticism scores, higher extraversion scores and higher lie scale scores. Fourth, purpose in life scores are significantly associated with personality scores: higher scores on purpose in life are recorded by extraverts and by those who record lower scores on the neuroticism scale. Fifth, the pattern of correlations between religiosity and purpose in life varies between the three religious orientations: high scores on the scale of purpose in life are associated positively (strongly) with intrinsic religiosity, and negatively (mildly) with extrinsic religiosity, but are independent of quest religiosity.

In view of the complex pattern of relationships between sex, age, personality, religious orientation and purpose in life, table 3 presents the multiple regression model in

- insert table 3 about here -

which purpose in life stands as the dependent variable and in which the predictor variables were entered in this fixed order: sex, age, extraversion, neuroticism, psychoticism, lie scale, intrinsic religiosity, extrinsic religiosity, and quest religiosity. These data demonstrate among the present sample: that men record a higher sense of purpose in life than women; that the sense of purpose in life grows weaker during the age-range included in the survey; that after controlling for sex and age, extraverts enjoy a higher sense of purpose in life than introverts and emotionally stable individuals enjoy a higher sense of purpose in life than emotionally labile individuals; and that, after controlling for sex, age and personality, a higher sense of purpose in life is associated with intrinsic religiosity, but independent of extrinsic religiosity and of quest religiosity.

Discussion

This study set out to examine and to clarify the relationship between religiosity, personality and purpose in life among a sample of older Methodists. Drawing on both psychological theory and theological principles, the study assumed that purpose in life is

central to optimal human functioning throughout life and perhaps in particular among older adults. On this assumption, factors associated with a higher sense of purpose in life may be worth identifying and worth cultivating in order to enhance quality of life during the later years. Five main issues highlighted by the data generated by the present study deserve further consideration.

First, a major difficulty in conceptualising and operationalising research concerned with purpose in life has resulted from the lack of acceptable tools in this field. The main instrument available to assess purpose in life has been the Purpose in Life Test developed by Crumbaugh (1968).

As well as being quite a cumbersome instrument to include alongside other instruments within broadly-based surveys, the Purpose in Life Test has also been criticised on a number of other grounds (Dyck, 1987; Reker & Cousins, 1979). In view of these criticisms of the Purpose in Life Test, the present study has employed the more recent Purpose in Life Scale developed by Robbins and Francis (2000). The data generated by the present study have confirmed the psychometric properties of this newer instrument among a sample of older adults. The Purpose in Life Scale can, therefore, be commended for further use in research among older adults.

Second, the study has confirmed the importance both of sex and age in predicting levels of purpose in life among older adults. According to these data men record a higher score than women on the purpose in life test, and scores on the purpose in life test decline with increasing age among this sample of older adults. The finding that men record a higher sense of purpose in life is consistent with findings from some studies among other age groups including studies among the oldest old (Nygren, Aléx, Jonsén, Gustafson, Norberg, & Lundman, 2005), mid-life adults (Pearson & Sheffield, 1974, 1975) and secondary school pupils (Shek, 1986), although a number of other studies fail to find this same sex difference

(Zika & Chamberlain, 1987; Jackson & Coursey, 1988; Coward, 1996). There are clear implications from these two findings for the design of future research, highlighting the need to control for individual differences in sex and age before examining the correlation between purpose in life and other variables.

Third, the study has confirmed the importance of personality in predicting levels of purpose in life among older adults. The finding that stable extraverts record a greater sense of purpose in life in comparison with individuals who record low scores on the extraversion scale (that is, introverts) and who record high scores on the neuroticism scale (that is, emotional lability) is consistent with findings among other age groups in particular (Pearson & Sheffield, 1974, 1989; Addad, 1987; Moomal, 1999; Francis, 2000; Robbins & Francis, 2000; Francis & Kaldor, 2001). There are clear implications from this finding for the design of future research, highlighting the need to control for individual differences in personality before examining the correlation between purpose in life and other variables.

Fourth, the study has clarified the uncertain evidence resulting from previous research regarding the relationship between religiosity and purpose in life. Drawing on the conceptualisation advanced by Allport and Ross (1967) and by Batson and Ventis (1982), the present study has distinguished between three different ways of being religious, or three different religious orientations characterised as extrinsic religiosity, intrinsic religiosity and quest religiosity. The data generated by the present study have demonstrated a strong significant and positive correlation between intrinsic religiosity and purpose in life, but no significant correlation between purpose in life and either extrinsic religiosity or quest religiosity. This finding is consistent with the definition of intrinsic religiosity advanced by Allport and Ross (1967) that this form of religion is close to the heart of the believer and shapes the believer's whole life. This finding is also consistent with the view that personal prayer may function as an indicator of intrinsic religiosity and with the research evidence that

personal prayer tends to function as a predictor of a higher sense of purpose in life (Richards, 1991; Carroll, 1993; Francis & Burton, 1994; Francis & Evans, 1996; Francis, 2005). There are clear implications from this finding for future research concerned with the relationship between religiosity and purpose in life. Religion is a highly complex phenomenon and needs to be conceptualised and operationalised with considerable care and sophistication. Scales of religious orientation have been developed to assess different ways of being religious among individuals who are religious. Scales of religious orientation have worked well in the present sample because the sample was specifically chosen to represent a group of individuals affiliated with the Methodist Church. In a more religiously heterogeneous sample, it would be advisable to include not only measures of religious orientation but also a recognised measure of attitude toward religion, like the Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987).

Fifth, the present study has employed for the first time the New Indices of Religious Orientation (developed by Francis, 2007) among a sample of older adults. Although originally developed among samples of university students, the present data demonstrate that these three new indices of extrinsic religiosity, intrinsic religiosity and quest religiosity function with good psychometric properties among older adults. The New Indices of Religious Orientation can be commended for future studies conducted among older adults.

Conclusion

The present study has demonstrated that intrinsic religiosity is associated with higher levels of purpose in life among a sample of older Methodists, but that extrinsic religiosity and quest religiosity are not associated with higher levels of purpose in life. This key finding has both theoretical and practical applications within both the psychology of religion and the pastoral care of older adults within the churches. At a theoretical level the data have

demonstrated both that religion can play an important part in enhancing the sense of purpose in life (and hence the quality of life) among older adults and that only certain kinds of religion can fulfil this function. At a practical level the data may provide encouragement for churches working with older adults, confirming the psychological as well as the religious benefits of their ministry. At the same time the data challenge churches working with older adults to distinguish between the more beneficial and the less beneficial expressions of religiosity within individual lives. Churches which stimulate and sustain the development of extrinsic religiosity may be not only selling short their gospel mission but also failing to maximise the benefits which they can bring to individuals during the later years of life.

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Table 1: Scale properties

| scale | alpha | mean | sd |
|-----------------|-------|------|-----|
| intrinsic | 0.80 | 35.7 | 4.4 |
| extrinsic | 0.74 | 24.4 | 5.0 |
| quest | 0.76 | 29.3 | 5.0 |
| extraversion | 0.83 | 2.6 | 2.1 |
| neuroticism | 0.75 | 2.1 | 1.9 |
| psychoticism | 0.57 | 0.2 | 0.5 |
| lie scale | 0.69 | 3.6 | 1.7 |
| purpose in life | 0.92 | 47.5 | 6.6 |

Table 3: Multiple regression model

| predictors | r ² | Increase | | | beta | t | P< |
|--------------|----------------|----------------|------|------|--------|-----|------|
| | | r ² | F | P< | | | |
| sex | 0.016 | 0.016 | 5.2 | .05 | -0.231 | 4.7 | .001 |
| age | 0.053 | 0.037 | 12.2 | .001 | -0.174 | 3.5 | .001 |
| extraversion | 0.122 | 0.068 | 24.2 | .001 | +0.172 | 3.6 | .001 |
| neuroticism | 0.169 | 0.047 | 17.6 | .001 | -0.162 | 3.3 | .001 |
| psychoticism | 0.170 | 0.001 | 0.3 | NS | +0.007 | 0.1 | NS |
| lie scale | 0.170 | 0.000 | 0.1 | NS | -0.037 | 0.7 | NS |
| intrinsic | 0.337 | 0.167 | 77.5 | .001 | +0.434 | 8.7 | .001 |
| extrinsic | 0.337 | 0.000 | 0.0 | NS | +0.000 | 0.0 | NS |
| quest | 0.337 | 0.000 | 0.1 | NS | -0.013 | 0.3 | NS |