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# Modelling the effect of worship attendance and personal prayer on spiritual wellbeing among 9- to 11-year-old students attending Anglican church schools in Wales

This study employs a modified form of the Fisher 16-item *Feeling Good, Living Life* measure of spiritual wellbeing (assessing quality of relationships across four domains: self, family, nature, and God) among a sample of 1,328 students drawn from year five and year six classes within Church in Wales primary schools, alongside measures of frequency of worship attendance and frequency of personal prayer. The data demonstrate frequency of personal prayer is a much stronger predictor than frequency of worship attendance in respect of spiritual wellbeing. This finding is consistent with the view that personal prayer is a key factor in the formation of individual spirituality.

Keywords: spiritual wellbeing, prayer, church attendance, psychometric analysis

#### Introduction

This study was established for two purposes. The first purpose was to test the psychometric properties of a modified form of the Fisher 16-item instrument, *Feeling Good, Living Life*, designed to measure spiritual wellbeing among 9- to 11-year-old students attending Church in Wales primary schools. The second purpose was to explore the role worship attendance and personal prayer in predicting individual differences in spiritual wellbeing. The conceptual basis for this study is set in three steps. The first step examines spirituality as an ambiguous and contested construct in order to clarify the basis for discussing spiritual wellbeing. The second step examines the Fisher model of spiritual wellbeing in order to clarify what is being measured by this instrument. The third step examines the scientific concern with the empirical observable correlates of prayer in order to frame the hypothesis concerning the connection between personal prayer and spiritual wellbeing.

## The notion of spirituality

Spirituality remains an ambiguous and contested construct from both conceptual and empirical perspectives. Conceptually and empirically the problem concerns whether the notion of spirituality should embrace or exclude religiosity. Recently, the relevant conceptual and empirical literatures have been reviewed by Francis, Laycock, and Penny (2016). One empirical strand of research concerned with lay assessment of the notion of spirituality clearly differentiates among four groups of people: those who describe themselves as religious and spiritual, those who describe themselves as spiritual but not religious, those who describe themselves as religious but not spiritual, and those who describe themselves as neither religious nor spiritual. For example, in their survey of 2,728 young people between the ages of 13 and 15 years, Francis, Laycock, and Penny (2016) reported that 41% described themselves as neither religious nor spiritual, 8% described themselves as religious and spiritual, 8% described themselves as religious but not spiritual, while the remaining 40% demonstrated that they were unsure about how to apply these four categories to themselves.

The ambiguous and contested nature of the notion of spirituality is also clearly reflected in the conceptualisation and measurement of constructs like spiritual wellbeing and spiritual health. The core problem is whether measures of spiritual wellbeing and spiritual health should integrate notions of explicit religion and God, or whether such notions should be excluded. On the one hand, measures of spiritual health and spiritual wellbeing that exclude explicit reference to religion and to God clearly disadvantage participants who view their spirituality as including the religious dimension of their lives. On the other hand, measures of spiritual health and spiritual wellbeing that include explicit references to religion and God clearly disadvantage participants who view their lives as satisfactory and complete without reference to explicit religion and God. This debate is well illustrated by an analysis of the items selected to contribute different measures of spiritual health or spiritual wellbeing. For example, the Spiritual Assessment Inventory (Hall & Edwards, 1996) and the Spiritual History Scale in Four Dimensions (Hays, Meador, Branch & George, 2001) mainly comprise questions on transcendental issues and religion. Ellison's Spiritual Well-Being Survey presents ten items for each of two factors, labelled Existential Well-Being and Religious Well-Being (Ellison 1983) and the Search Institute Inventory of Youth Spiritual Development has 156 items related to self, to others, to the environment, to the transcendent and to religion (Center for Spiritual Development, 2007). Daaleman's Spirituality Index of Well-Being contains 12 items solely relating with self (Daaleman & Frey, 2004).

# The Fisher model of spiritual wellbeing

One clear conceptualisation of spiritual wellbeing has been advanced by John W. Fisher (1998, 2011). According to Fisher, spiritual wellbeing is reflected in the quality of relationships that each person has in four domains, namely: with the self (the personal domain, assessed in terms of meaning, purpose and values); with other people (the communal domain, assessed in terms of morality, culture and religion); with the environment (the environmental domain, assessed in terms of connectedness beyond care, nurture and stewardship); and with a (personal or impersonal) Transcendent Other (the transcendental domain, assessed in relation to something or someone beyond the human and natural world). In this way, from a conceptual perspective, Fisher includes the transcendental domain, but attempts to inclusivise this domain to embrace the transcendental concerns of those who neither espouse explicit religion nor believe in God.

In his foundation study, Fisher (1998) develops his understanding of these four domains of spiritual wellbeing in the following ways. The personal domain concerns the ways in which individuals relate to and evaluate their inner selves. It is concerned with meaning, purpose and values in life. In the personal domain, the human spirit creates self-awareness, relating to self-worth and identity. The communal domain concerns the quality and depth of inter-personal relationships, between self and others, relating to morality and culture. In the communal domain, the human spirit generates love, justice, hope, and faith in humanity. The environmental domain concerns not only care and nurture for the physical and biological aspects of the world around us, but also a sense of awe and wonder. In the environmental domain, the human spirit nurtures, at least for some, the experience of unity or connectedness with the environment. The transcendental domain concerns the relationship of the self with something or someone beyond the human level, with a transcendent other, whether this be known as ultimate concern, cosmic force, transcendent reality, or God. In the transcendent domain, the human spirit nurtures a sense of trust and faith in, and a sense of adoration and worship for, the source of mystery at the heart of the universe.

Fisher's conceptualisation of spiritual wellbeing has been operationalised through several instruments: the Spiritual Health in Four Domains Index (SH4DI: Fisher, Francis & Johnson, 2000), the Spiritual Health And Life-Orientation Measure (SHALOM: Fisher, 1999, 2010), and Feeling Good, Living Life (Fisher, 2004). Gomez & Fisher (2003) demonstrated that SHALOM showed good reliability (Cronbach's alpha, composite reliability and variance extracted), and validity (construct, concurrent, discriminant, predictive and factorial independence from personality). Subsequent studies have examined the psychometric properties of SHALOM from

a range of perspectives, including studies reported by Gomez and Fisher (2005a, 2005b) and by Hall, Reise, and Haviland (2007).

Fisher's measures of spiritual wellbeing have been used in studies among adult populations to explore the associations between spiritual wellbeing and ethical decision-making (Fernando & Chaudhury, 2010); domestic violence (Vogt, 2007); personality (Becker, 2002; Fisher, Francis, & Johnson, 2002; Streukens 2009); and psychological type (Francis, Fisher & Annis, 2015); among college and university students to explore the association between spiritual wellbeing and other measures of subjective wellbeing (Stott, 2002), and quality of life and general wellbeing (Hall, 2005); and among school students to explore levels of spiritual wellbeing within different types of school (Fisher, 2001), the associations between spiritual wellbeing and religious activity, in ten public schools in South Africa (van Rooyen, 2007), seeking spiritual support for coping (Moodley, 2008), personal happiness (Holder, Coleman & Wallace, 2010), strength of relationships (Fisher, 2012), and personality (Francis & Fisher, 2015).

# Promoting spiritual wellbeing with church schools

The Christian Churches played an important part in establishing a network of schools in England and Wales well before the state created its own mechanism for building schools through the Education Act 1870 (Rich, 1970). During the second decade of the nineteenth century the impetus to build church schools was stimulated by the foundation of the National Society in 1811 and the British and Foreign School Society in 1814 (see Cruickshank, 1963; Murphy, 1971; Chadwick, 1997). The role of church schools within the state-maintained sector of education was further clarified and in some ways strengthened by the Education Act 1944 (Dent, 1947). As a consequence, the Roman Catholic Church and the Anglican Church have retained a considerable stake in that sector. For example, the Church in Wales at the beginning of the second decade of the twenty-first century continued to maintain 168 primary schools within the state-maintained system across its six dioceses (Lankshear, 2009).

Church schools may have a particular and legitimate concern with a form of spiritual wellbeing that consciously embraces an explicitly religious dimension. Variants of the Fisher *Living Life, Feeling Good* measure Fisher (2004) make this dimension explicit. Building on recent research that has documented the beneficial personal and social correlates of prayer, the present study was designed to explore the correlation between personal prayer and spiritual wellbeing among students attending Church in Wales' primary schools.

# Prayer and psychological enquiry

Scientific concern with the empirically observable correlates of prayer predated the development of the psychology of religion with the statistical enquiries published by Galton (1869, 1872, 1883) and were of central concern to some of the early commentators in the psychology of religion, including James (1902), Coe (1916), and Hodge (1931). After a considerable period of neglect, as noted by Finney and Malony (1985), empirical research in the psychology of prayer re-emerged during the 1990s as noted by Brown (1994) and Francis and Astley (2001). Recent overviews of this renaissance have been provided by Ap Siôn and Francis (2009) and Spilka and Ladd (2013).

Applying this renewed interest in the psychology of prayer to research among children and young people, a series of recent studies has consistently drawn attention to the psychological benefits of prayer, over and above the effect of worship attendance. For example, one strand of research initiated by Francis and colleagues in the early 1990s focused on the connection between prayer and perceived purpose in life. In an initial study, Francis and Burton (1994) explored the relationship 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. Two main conclusions emerged from these data. First, the data demonstrated a significant positive relationship between frequency of personal prayer and perceived purpose in life, even after controlling for individual differences in frequency of

church attendance. Second, personal prayer was shown to be a stronger predictor of perceived purpose in life than church attendance.

Building on this initial study, Francis and Evans (1996) strengthened the research design in two ways. They obtained a larger sample of pupils from across a wider range of schools. Then they ensured that church attendance was not a contaminating variable in explaining the correlation between prayer and purpose in life by conducting two separate analyses on two discrete subsets of their data. One subset comprised 914 males and 726 females who *never* attended church. The other subset comprised 232 males and 437 females who attended church *most weeks*. The data demonstrated a significant positive relationship between frequency of personal prayer and perceived purpose in life both among those pupils who attended church most weeks and among those pupils who never attended church.

Taking this research one step further, 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. According to these data some churchgoers never engaged in personal prayer, while some non-churchgoers engaged frequently in personal prayer. 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. Once again, this finding suggests that personal prayer is correlated with positive psychological benefits for young people growing up outside the churches as well as within the churches.

The basic conclusions advanced by Francis and Burton (1994), Francis and Evans (1996), and Francis (2005) were given further support by Robbins and Francis (2005) among two samples of 13- to 15-year-old students in Northern Ireland (1,206 from Catholic schools and 1,464 from Protestant schools), by Francis and Robbins (2006) among a sample of 12,717 13- to 15-year-old students who never attended church, by Francis and Robbins (2009) among a sample of 2,563 13- to 15-year-old students in England and Wales, and by Francis and Penny (2016) among a sample of 10,792 13- to 15-year-old students from across the four nations of the UK.

Reflecting on the consistent pattern of these findings, Francis and Robbins proposed the following theory linking prayer with higher levels of purpose in life.

The theory suggests that young people who pray are, consciously or unconsciously, acknowledging and relating to a transcendence beyond themselves. Acknowledging such a transcendence and relating to that transcendence through prayer places the whole of life into a wider context of meaning and purpose. The following psychological mechanism proposes a causal model according to which prayer may influence purpose in life. The practice of prayer implies both a cognitive and an affective component. The cognitive component assumes, at least, the possibility of a transcendent power. Such a belief system is likely to support a purposive view of the nature of the universe. The affective component assumes, at least, the possibility of that transcendent power being aware of and taking an interest in the individual engaged in prayer. Such an affective system is likely to support a sense of value for the individual (Francis & Robbins, 2006, p. 131).

## Research aims

Against this background, the purpose of the present study is to address four research aims. The first research aim is to examine the psychometric properties of a modification of Fisher's *Living Life* measure of spiritual wellbeing (Fisher, 2004) adapted specifically for application among 9- to 11-year-old students attending church primary schools in Wales. The second research aim is to examine the levels of spiritual wellbeing recorded by this age group of young people within this specific educational context. The third research aim is to explore the power of personal factors (age and sex) and religious factors (worship attendance and personal prayer) to predict individual differences in levels of spiritual wellbeing. The fourth research aim is to test the hypothesis that frequency of personal prayer is a significant predictor of individual

differences in spiritual wellbeing among these young people, after taking frequency of church attendance into account.

#### Method

#### **Procedure**

A total of 32 Church in Wales' primary schools accepted the invitation to participate in the project by administering a questionnaire among all their year five and year six students (9- to 11-year-olds). Students were assured of confidentiality and anonymity and given the option not to participate in returning the questionnaire at the end of the session.

## **Participants**

From these 32 schools, 660 year five students (333 boys and 327 girls) and 668 year six students (359 boys and 309 girls) submitted thoroughly completed questionnaires.

#### **Instruments**

Worship attendance was operationalised by the question, 'Do you go to a place of worship (e.g. a church or mosque)?' rated on a five-point scale: weekly (5), at least once a month (4), sometimes (3), once or twice a year (2), and never (1).

*Personal prayer* was operationalised by the question, 'Do you pray when you are on your own?' rated on a five-point scale: daily (5), at least once a week (4), sometimes (3), once or twice a year (2), and never (1).

Spiritual wellbeing was assessed by a modified form of the Fisher instrument Feeling Good, Living Life (Fisher, 2004). This instrument comprises four sets of four items each designed to measure ideals and lived experiences across the four domains (personal, communal, environmental, and transcendental). The ideals are identified by the question, 'Do the following make you feel good?' The lived experiences are identified by the question, 'How often do you do these things?' Each item was rated on a five-point Likert scale: agree strongly (5), agree (4), not certain (3), disagree (2), and disagree strongly (1).

## **Analysis**

The present analyses were conducted on the lived experience components of the *Feeling Good, Living Life* measure. The data were analysed by the SPSS statistical package, employing the frequency, reliability, factor, and correlation routines.

## **Results and Discussion**

The first steps in data analysis concerned examining the response to the two questions concerning frequency of worship attendance and frequency of personal prayer. In terms of worship attendance, 39% attended weekly, 17% attended at least once a month, 20% attended less than monthly but more than twice a year, 7% attended once or twice a year, and 18% never attended. In terms of personal prayer, 30% prayed daily, 9% prayed at least once a week, 31% prayed less than weekly but more than once or twice a year, 11% prayed once or twice a year, and 18% never prayed.

#### - insert table 1 about here -

The first research aim concerned examining the scale properties of the Living Life Index of Spiritual Wellbeing. Table 1 presents three core statistics concerning this instrument: the factor loadings on the first factor proposed by principal component analysis, the correlations between the individual items and the sum of the other 15 items, and the item endorsement in terms of the sum of the agree and agree strongly responses. The factor loadings demonstrate that all 16 items loaded on the principle factor with weightings in excess of .4. This principal factor accounted for 36.1% of the variance. The item rest-of-scale correlations all reached at least .4, with an alpha coefficient (Cronbach, 1951) of .87. These statistics confirm the unidimensionality and

homogeneity of the instrument. From a scale range of 16 to 80, the group of 1,328 students recorded a mean score of 63.1, with a standard deviation of 10.4.

The second research aim concerned examining the levels of spiritual wellbeing recorded by this age group of young people within this specific education context. The item endorsements demonstrate a good range of discrimination among the individual items. In terms of the personal domain of spiritual wellbeing (relationship with self), 75% of the students often feel that people like them, 76% say people often tell them they have done well, 87% often enjoy life, and 89% often laugh and smile. In terms of the communal domain of spiritual wellbeing (relationships and family), 87% say they often spend time with their family, 92% often feel their family loves them, 92% often feel love for their family, and 92% often feel that they really belong to a family. In terms of the environmental domain of spiritual wellbeing (relationships with nature), 48% often watch a sunset or sunrise, 56% often go for a walk in a park, 57% often spend time in a garden, and 58% often look at the stars and the moon. In terms of the transcendental domain (relationship with God), 46% often talk with God, 49% often spend time thinking about God, 60% often feel that God is their friend, and 62% often feel that God cares for them.

### - insert table 2 about here -

The third research aim concerns examining the bivariate relationship between spiritual wellbeing and two personal factors (sex and age) and two religious factors (frequency of worship attendance and frequency of personal prayer). Table 2 presents the Pearson correlation coefficients. These data demonstrate that, compared with boys, girls record significantly higher frequency of worship attendance, significantly higher frequency of personal prayer, and significantly higher levels of spiritual wellbeing. Compared with year five students, year six students, record significantly lower levels of spiritual wellbeing, although frequency of worship attendance and frequency of personal prayer are not significantly correlated with age. Frequency of worship attendance and frequency of personal prayer are significantly correlated (r = .40, p < .001). Spiritual wellbeing is significantly correlated with both frequency of church attendance and frequency of personal prayer; the correlation is stronger with personal prayer (r = .44, p < .001) than with worship attendance (r = .25, p < .001).

## - insert table 3 about here -

The fourth research aim concerned testing the hypothesis that frequency of personal prayer is a significant predictor of individual differences in spiritual wellbeing after taking frequency of church attendance into account. Table 3 employs regression analysis to examine the effect of frequency of personal prayer on spiritual wellbeing after controlling for the effects of sex, age, and frequency of church attendance. In the hierarchical model, employing spiritual wellbeing as the dependent variable, the four independent variables were entered in the fixed order of sex, age, frequency of worship attendance, and frequency of personal prayer. The increase in  $r^2$  demonstrate that significant additional variance has been explained by adding frequency of personal prayer to the model, after the other predictor variables have been taken into account. The beta weights demonstrate that frequency of personal prayer is the most powerful among the present set of predictor variables in predicting individual differences in spiritual wellbeing.

# - insert table 4 about here -

The data presented in table 3 demonstrated that frequency of personal prayer accounts for additional variance in spiritual wellbeing after individual differences in frequency of worship attendance have been taken into account. Table 4 has been designed to clarify that frequency of personal prayer impacts spiritual wellbeing both among those who attend church every week and among those who never attend church, after first taking sex and age differences into account. The  $r^2$  and the beta weight are similar in both models. Frequency of personal prayer is a strong and significant predictor of spiritual wellbeing among both weekly churchgoers and those who never attend church.

#### Conclusion

This study set out to address four research aims. The first research aim was to examine the psychometric properties of a modification of Fisher's *Living Life* measure of spiritual wellbeing

(Fisher, 2004) adapted specifically for application among 9- to 11-year-old students attending church primary schools in Wales. This instrument comprised four items designed to assess each of the four domains of spiritual wellbeing identified by Fisher's model, namely the personal domain (relationship with self), the communal domain (relationship with others), the environmental domain (relationship with nature), and the transcendental domain (relationship with God). These 16 items possessed good face validity and good properties of internal consistency reliability ( $\alpha$  = .87). The new instrument can be commended for further use as an index of spiritual wellbeing among 9- to 11-year-old students attending schools with a church-related foundation. Further work is now needed to assess the psychometric properties of this instrument among other age groups.

The second research aim was to examine the levels of spiritual wellbeing recorded by 9- to 11-year-old students attending Church in Wales' primary schools. From a scale range of 16 (scoring one on each item) to 80 (scoring five on each item) the group of 1,378 students recorded a mean score of 63.1, with a standard deviation of 10.4. This mean score is roughly equivalent to the average student rating each item four on the five-point scale. Overall the level of spiritual wellbeing recorded on the *Living Life* measure among these students is good.

The third research aim was to examine the bivariate relationship between spiritual wellbeing and two personal factors (age and sex) and two religious factors (frequency of worship attendance and frequency of personal prayer). The two personal factors taken into account by the survey both proved to be significant predictors of individual differences in levels of spiritual wellbeing. Within this sample, girls recorded a significantly higher score of spiritual health than boys. This sex difference is consistent with the sex differences reported in other studies (see Francis & Fisher, 2015). Within this sample, year six students (10- to 11-years of age) recorded a significantly lower score of spiritual health than year five students (9- to 10-years of age). This age difference is consistent with the age difference reported in other school-based studies (see Francis & Fisher, 2015). The finding, that may be of particular interest for the church school system in Wales, concerns the declining scores of spiritual wellbeing between year five and year six. The two religious factors taken into account by the survey both predicted individual differences in levels of spiritual wellbeing. What these bivariate correlations are not able to demonstrate, however, is the extent to which the two factors of worship attendance and personal prayer interact in the prediction of spiritual wellbeing.

The fourth research aim was to test the hypothesis that personal prayer functions as a significant predictor of individual differences in spiritual wellbeing among 9- to 11-year-old students attending Church in Wales' primary schools, after taking frequency of church attendance into account. This hypothesis was supported by a multiple regression model that examined the effect of frequency of personal prayer on individual differences in scores of spiritual wellbeing after first taking into account the cumulative effects of sex, age, and frequency of church attendance. While cumulatively sex, age, and frequency of church attendance accounted for 6% of the variance in spiritual wellbeing, frequency of personal prayer accounted for an *additional* 13% of the variance. For those concerned with assessing and developing church schools within the Church in Wales this may be the most crucial practical outcome from the research. Personal prayer may be considered an important aspect within the educational agenda of church schools.

Within church schools prayer may be considered from both a psychological and a theological perspective. The psychological perspective on prayer is not concerned with the theological dimension of prayer (with questions about the existence or nature of God), but rather with the psychological functions of prayer. Considered in this way, prayer, like mindfulness, is regarded as a purely human phenomenon, and the present study shows that prayer, like mindfulness, has psychologically beneficial correlates (see, for example, Ivtzan & Lomas, 2016). Such practices may be considered legitimate within all schools. The theological perspective on prayer is concerned with the religious beliefs and teaching that underpin prayer as a religious practice (see, for example, Hardon, 1979). Such perspectives may well be considered to have a legitimate place within church schools. What the present study has done is

to open up the debate about the place of prayer within schools from a fresh perspective, a perspective that links the practice of prayer with enhanced levels of spiritual wellbeing among the students.

The present study, like the previous studies in the research tradition on which it builds (Francis, 2005; Francis & Burton, 1994; Francis & Evans, 1996; Francis & Penny, 2016; Francis & Robbins, 2006, 2009), was concerned with exploring the correlates of prayer frequency. Another very different research tradition has been concerned with the wellbeing correlates of different styles of prayer. This tradition was pioneered and explored in a series of presentations by Poloma and Gallup (1991) and Poloma and Pendleton (1989, 1991a, 1991b). In order to explore further the dynamics of the connections between prayer and spiritual wellbeing, future studies might be advised to employ appropriate measures of prayer styles alongside the Fisher measures of spiritual wellbeing.

## References

- Ap Siôn, T., & Francis, L.J. (2009). The psychology of prayer: A review of empirical research. In *International handbook of education for spirituality, care and wellbeing*, edited by Marian De Souza, Leslie J. Francis, James O'Higgins-Norman, & Daniel G. Scott, 247-266. Dordrecht: Springer. doi.org/10.1007/978-1-4020-9018-9\_14
- Becker, P.L. (2002). Spirituality in Australian organizations employee attitudes and impact on wellbeing. D Psychol. Thesis, Swinburne University of Technology, Victoria, Australia.
- Brown, L.B. (1994). *The human side of prayer: The psychology of praying*. Birmingham, Alabama: Religious Education Press.
- Center for Spiritual Development. (2007). *Spirituality measures*. Retrieved 29 August, 2008, from: http://www.spiritualdevelopmentcenter.org/CMS/FrontEnd/pop
- Chadwick, P. (1997). Shifting alliances: Church and state in English education. London: Cassell.
- Coe, G.A. (1916). The psychology of religion. Chicago: University of Chicago Press.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16:297-334. doi.org/10.1007/BF02310555
- Cruickshank, M. (1963). Church and state in English education. London: Macmillan.
- Daaleman, T.P., & Frey, B.B. (2004). The Spirituality Index of Well-Being: A new instrument for health-related quality of life research. *Annals of Family Medicine*, 2:499-503. doi.org/10.1370/afm.89
- Dent, H.C. (1947). *The Education Act 1944: Provisions, possibilities and some problems*. 3<sup>rd</sup> ed. London: University of London Press.
- Ellison, C. (1983). Spiritual well-being: conceptualization and measurement. *Journal of Psychology and Theology*, 11: 330-340.
- Fernando, M., & Chowdhury, R.M. (2010). The relationship between spiritual well-being and ethical orientations in decision making: An empirical study with business executives in Australia. *Journal of Business Ethics*, 95: 211-225. doi.org/10.1007/s10551-009-0355-y
- Finney, J.R., & Malony, H.N. (1985). Contemplative prayer and its use in psychotherapy: a theoretical model. *Journal of Psychology and Theology*, 13:172-181.
- Fisher, J.W. (1998). *Spiritual health: its nature, and place in the school curriculum*. PhD thesis, University of Melbourne, Victoria, Australia. https://minerva-access.unimelb.edu.au/handle /11343/39206
- Fisher, J.W. (1999). Developing a Spiritual Health And Life-Orientation Measure for secondary school students. In *Research with a regional/rural focus: Proceedings of the University of Ballarat inaugural annual research conference, 15 October, 1999*, edited by Janette Ryan, Vivienne Wittwer and Peter Baird, 57-63. Ballarat: University of Ballarat, Research and Graduate Studies Office.
- Fisher, J.W. (2001). Comparing levels of spiritual well-being in State, Catholic and Independent schools in Victoria, Australia. *Journal of Beliefs and Values*, 22: 99-105. doi.org/10.1080/1361760120039284

- Fisher, J.W. (2004). Feeling good, living life: A spiritual health measure for young children. *Journal of Beliefs and Values*, 25:307-315. doi.org/10.1080/1361767042000306121
- Fisher, J.W. (2010). Development and application of a spiritual well-being questionnaire called SHALOM. *Religions*, 1: 105-121. doi.org/10.3390/rel1010105
- Fisher, J.W. (2011). The Four Domains Model: Connecting spirituality, health and well-being. *Religions*, 2: 17-28. doi.org/10.3390/rel2010017
- Fisher, J.W. (2012). Connectedness: At the heart of resiliency and spiritual well-being. In *Handbook on spirituality: Belief systems, societal impact and roles in coping,* edited by Cleveland A. Stark and Dylan C. Bonner, 265-277. New York: Nova Science Publishers Inc.
- Fisher, J.W., Francis, L.J., & Johnson, P. (2000). Assessing spiritual health via four domains of spiritual wellbeing: the SH4DI. *Pastoral Psychology*, 49:133-145. doi.org/10.1023/A:1004609227002
- Fisher, J.W., Francis, L.J. & Johnson, P. (2002). The personal and social correlates of spiritual well-being among primary school teachers. *Pastoral Psychology*, *51*:3-11. doi.org/10.1023/A:1019738223072
- Francis, L.J. (2005). Prayer, personality and purpose in life among churchgoing and non-churchgoing adolescents. In *Religion, education and adolescence: International empirical perspectives*, edited by Leslie J. Francis, Mandy Robbins, and Jeff Astley, 15-38. Cardiff: University of Wales Press.
- Francis, L.J., & Astley, J. (Eds.). (2001). *Psychological perspectives on prayer: A reader.* Leominster: Gracewing.
- Francis, L.J., & Burton, L. (1994). The influence of personal prayer on purpose in life among Catholic adolescents. *Journal of Beliefs and Values*, 15: 6-9. doi.org/10.1080/1361767940150202
- 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. doi.org/10.1080/0034408960910102
- Francis, L.J., & Fisher, J.W. (2015). Locating spiritual wellbeing: A study among secondary school students in the empirical science of religious education. *Religious Education Journal of Australia*, 31(2):30-37.
- Francis, L.J., Fisher, J.W., & Annis, J. (2015). Spiritual wellbeing and psychological type: A study among visitors to a medieval cathedral in Wales. *Mental Health, Religion and Culture*, *18*: 675-692. doi.org/10.1080/13674676.2014.964002
- Francis, L.J., Laycock, P. & Penny, G. (2016). Distinguishing between spirituality and religion: Accessing the worldview correlates of 13- to 15-year-old students. *Research in the Social Scientific Study of Religion*, 27:43-67.
- Francis, L.J., & Penny, G. (2016). Prayer, personality and purpose in life: An empirical enquiry among adolescents in the UK. *Research in the Social Scientific Study of Religion*, 27: 192-209.
- 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.
- Galton, F. (1869). *Hereditary Genius: an inquiry into its laws and consequences*. London: Macmillan and Co. doi.org/10.1037/13474-000
- Galton, F. (1872). Statistical inquiries into the efficacy of prayer. *Fortnightly Review*, 12:125-135.
- Galton, F. (1883). *Inquiries into human faculty and its development*. London: Macmillan. doi.org/10.1037/14178-000

- Gomez, R., & Fisher, J.W. (2003). Domains of spiritual well-being and development and validation of the Spiritual Well-Being Questionnaire. *Personality and Individual Differences*, 35: 1975-1991. doi.org/10.1016/S0191-8869(03)00045-X
- Gomez, R., & Fisher, J.W. (2005a). Item response theory analysis of the spiritual well-being questionnaire. *Personality and Individual Differences*, 38:1107-1121. doi.org/10.1016/j.paid.2004.07.009
- Gomez, R., & Fisher, J.W. (2005b). The Spiritual Well-Being Questionnaire: Testing for model applicability, measurement and structural equivalencies and latent mean differences across gender. *Personality and Individual Differences*, 39:1383-1393. doi.org/10.1016/j.paid.2005.03.023
- Hall, T.W., & Edwards, K.J. (1996). The initial development and factor analysis of the Spiritual Assessment Inventory. *Journal of Psychology and Theology*, 24: 233-246.
- Hall, H. J. (2005). How the domains of spiritual wellbeing predict current quality of life and general wellbeing. Postgraduate Diploma of Psychology Research Report, University of Ballarat., Victoria, Australia.
- Hall, T.W., Reise, S.P. & Haviland, M.G. (2007). An item response theory analysis of the Spiritual Assessment Inventory. *International Journal for the Psychology of Religion*, 17: 157-178. doi.org/10.1080/10508610701244197
- Hardon, J.A. (1979). *Theology of prayer*. Boston, MA: St Paul Editions.
- Hays, J.C., Meador, K.G., Branch, P.S. & George, L.K. (2001). The Spiritual History Scale in Four Dimensions (SHS-4): Validity and reliability. *The Gerontologist*, 41: 239-249. doi.org/10.1093/geront/41.2.239
- Hodge, A.J. (1931). Prayer and its psychology. London: SPCK.
- Holder, M.D., Coleman, B. & Wallace, J.M. (2010). Spirituality, religiousness, and happiness in children aged 8-12 years. *Journal of Happiness Stud*ies, *11*: 131-150. doi.org/10.1007/s10902-008-9126-1
- James, W. (1902). The Varieties of Religious Experience. New York: Longmans Green.
- Ivtzan, I., & Lomas, T. (Eds.). (2016). *Mindfulness in positive psychology: The science of meditation and wellbeing*. London: Routledge.
- Lankshear, D.W. (2009). The Church in Wales education review. Cardiff: Church in Wales.
- Moodley, T. (2008). *The relationship between coping and spiritual well-being during adolescence*. PhD thesis, University of the Free State, Bloemfontein, South Africa.
- Murphy, J. (1971). *Church, state and schools in Britain 1800-1970*. London: Routledge and Kegan Paul.
- Poloma, M.M., & Gallup, G.H. Jr. (1991). *Varieties of prayer: A survey report*. Philadelphia, PA: Trinity Press International.
- Poloma, M.M., & Pendleton, B.F. (1989). Exploring types of prayer and quality of life: A research note. *Review of Religious Research*, *31*:46-53. doi.org/10.2307/3511023
- Poloma, M.M., & Pendleton, B.F. (1991a). The effects of prayer and prayer experiences on general wellbeing. *Journal of Psychology and Theology*, 19:71-83.
- Poloma, M.M., & Pendleton, B.F. (1991b). Exploring neglected dimensions of religion in quality of life research. Lampeter, Wales: Edwin Mellen Press.
- Rich, E.E. (1970). The Education Act 1870. London: Longmans.
- 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. doi.org/10.1080/10656210509484981
- Spilka, B., & Ladd, K.L. (2013). *The psychology of prayer: A scientific approach*. New York: Guilford Press.
- Stott, A. (2002). The relationship of spiritual well-being to other measures of subjective well-being. Post-grad. Dip Psych. dissertation, Department of Psychology, University of Ballarat, Victoria, Australia.
- Streukens, J.P. (2009). *Alcoholism: Spirituality and personality dynamics*. PhD thesis, University of Calgary, Alberta, Canada.

- Van Rooyen, B.M. (2007). Spiritual well-being in a group of South African adolescents. PhD thesis, University of the Free State, Bloemfontein, South Africa.
- Vogt, T. (2007). The impact of an Interim Protection Order (Domestic Violence Act 116 of 1998) on the victims of domestic violence. D Psychol. thesis, University of Stellenbosch, South Africa.

Table 1. Scale properties of the Living Life Index of Spiritual Wellbeing

	f	Yes	
	J	r	%
Relationship with self			
I often feel that people like me	.62	.51	75
People often tell me that I have done well	.59	.50	76
I often enjoy life	.65	.54	87
I often laugh and smile	.59	.48	89
Relationship with family			
I often spend time with my family	.62	.50	87
I often feel that my family love me	.61	.46	92
I often feel love for my family	.65	.53	92
I often feel that I really belong to a family	.64	.50	92
Relationship with nature			
I often watch a sunrise or sunset	.51	.48	48
I often go for a walk in the park	.46	.42	56
I often spend time in a garden	.56	.46	57
I often look at the stars and the moon	.45	.43	58
Relationship with God			
I often talk with God	.66	.62	46
I often spend time thinking about God	.67	.63	49
I often feel that God is my friend	.64	.60	60
I often feel that God cares for me	.70	.65	62

**Table 2. Correlations** 

	sex	age	attendance	prayer
Spiritual wellbeing	.11***	11***	.25***	.44***
Prayer	.10***	03*	.40***	
Attendance	.07**	00		
Age	03			

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

Table 3. Regression on spiritual wellbeing

			Change				
	$r^2$	$r^2$	F	<i>p</i> <	Beta	t	<i>p</i> <
Sex	.01	.01	15.0	.001	.06	2.3	.05
Age	.02	.01	14.2	.001	09	-3.7	.001
Attendance	.08	.06	85.7	.001	.09	3.3	.001
Prayer	.22	.13	226.6	.001	.40	15.1	.001

Table 4. Regression on spiritual wellbeing by worship attendance frequency

	weekly attendance ( $N = 510$ )			never attendance ( $N = 239$ )			
	Beta	t	<i>p</i> <	Beta	t	<i>p</i> <	
Sex	.11	1.7	NS	.02	0.5	NS	
Age	13	-2.2	.05	07	-1.6	NS	
Prayer	.35	5.7	.001	.39	9.6	.001	
$r^2$	.15			.16			