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The relationship between psychological health and attitude toward theistic faith: An empirical enquiry among 13- to 15-year-old students

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The relationship between psychological health and attitude toward theistic faith: An empirical enquiry among 13- to 15-year-old students

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Abstract

This study explores the relationship between psychological health and attitude toward theistic faith among 2,067 13- to 15-year-old students attending secondary schools across Wales, building upon existing empirical research which examines the association between Eysenck's dimensional model of personality (a measure of psychological health), and the Francis Scale of Attitude toward Christianity (a measure of affective religiosity). The participants completed the Astley-Francis Scale of Attitude toward Theistic Faith together with the abbreviated Revised Junior Eysenck Personality Questionnaire (JEPQR-A). The data indicated that a positive attitude toward theistic faith was associated with neither higher nor lower neuroticism scores, but was associated with lower psychoticism scores. There is no evidence, therefore, to link a positive view of theistic faith with poorer levels of psychological health (in terms of higher neuroticism or higher psychoticism) among young people in Wales, and some evidence to associate a positive view of theistic faith with better levels of psychological health (in terms of lower psychoticism).

Key words: adolescents, Eysenck, psychology, religion

1. Introduction

Empirical research concerned with the relationship between religion and psychological health provides a complex picture (Koenig, McCullough, & Larson, 2001; Koenig, King, & Carson, 2012) since findings tend to vary according to the populations studied and according to the definitions of religiosity and psychological health employed. A series of five studies concerned with the relationship between religion and psychological health, conducted in Hong Kong (Francis, Lewis, & Ng, 2003), England (Francis & Burton, 2007; Francis, Robbins, Santosh, & Bhanot, 2008), Northern Ireland (Francis, Robbins, ap Siôn, Lewis, & Barnes, 2007), and the Netherlands (Francis & Hermans, 2009) proposed an interesting solution to the problem of operationalising the assessment both of psychological health and of individual differences in affective religiosity. The present

study builds on this series of studies by utilising the same theoretical framework to examine the relationship between psychological health and religiosity among 13- to 15-year-old students in Wales.

1.1. Eysenck's dimensional model of personality

These five studies proposed adopting Eysenck's dimensional model of personality (Eysenck & Eysenck, 1985) as providing an economical and elegant indicator of psychological health. This dimensional model of personality, as operationalized through the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck, & Barrett, 1985), and the Eysenck Personality Scales (Eysenck & Eysenck, 1991), maintains that abnormal personality (poor functional psychological health) is not discrete from, but continuous with, normal personality (good functional psychological health). Accordingly, neurotic disorders lie at one extreme of a dimension of normal personality, ranging from emotional stability, through emotional lability, to neurotic disorder. Similarly, psychotic disorders lie at one extreme of another dimension of normal personality, ranging from tendermindedness, through toughmindedness, to psychotic disorder. Eysenck's model also maintains that the two dimensions of neuroticism and psychoticism are orthogonal and independent of each other. Alongside the measures of neuroticism and psychoticism, Eysenck's model adds a third dimension of personality which is not itself concerned with psychological health. This third dimension ranges from introversion, through ambiversion, to extraversion. Eysenck's questionnaires, designed to measure these three dimensions of personality, also routinely include a Lie Scale.

For the purposes of the present study, the key interest in Eysenck's dimensional model of personality concerns the Neuroticism Scale (assessing the characteristics of normal personality functioning as precursors of neurotic disorder) and the Psychoticism Scale (assessing the characteristics of normal personality functioning as precursors to psychotic disorder). Eysenck and Eysenck (1975) defined high scorers on the Neuroticism Scale as being anxious, worrying, moody, and frequently depressed individuals who are likely to sleep badly and to suffer from various psychosomatic disorders. They are seen as overly emotional, reacting too strongly to all sorts of stimuli, and finding it difficult to get back on an even keel after emotionally arousing experiences. Strong reactions interfere with their proper adjustment, making them react in irrational, sometimes rigid ways. Highly neurotic individuals are worriers whose main characteristic is a constant preoccupation with things that might go wrong, and a strong anxiety reaction to these thoughts.

Eysenck and Eysenck (1976) define high scorers on the Psychoticism Scale as being cold, impersonal, hostile, lacking in sympathy, unfriendly, untrustful, odd, unemotional, unhelpful, lacking in insight, and strange, with paranoid ideas that people are against them. Eysenck and Eysenck (1976) also use the following descriptors: egocentric, self-centered, impersonal, lacking in empathy, solitary, troublesome, cruel, glacial, inhumane, insensitive, sensation-seeking, aggressive, foolhardy, making fools of others, and liking odd and unusual things. Eysenck and Eysenck (1975) maintained that emotions such

as empathy and guilt are characteristically absent in people who score high on measures of psychoticism.

1.2. The affective dimension of religion

Four of the five studies, reported by Francis, Lewis, and Ng (2003), Francis and Burton (2007), Francis, Robbins, ap Siôn, Lewis, and Barnes (2007), and Francis and Hermans (2009), proposed adopting the Francis Scale of Attitude toward Christianity (Francis, 1989; Francis, Lewis, Philipchalk, Brown, & Lester, 1995) as providing an economical and elegant indicator of attachment to the Christian tradition. The fifth study, reported by Francis, Robbins, Santosh, and Bhanot (2008), employed a related instrument, the Santosh-Francis Scale of Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008). According to Francis's theory underpinning the development of these measures (Kay & Francis, 1996), the attitudinal dimension of religion (concerned with religious affect) gets closer to the heart of the individual's religion than either the cognitive dimension (concerned with religious beliefs) or the behavioral dimension (concerned with religious practices). The affective dimension is less likely than the behavioral dimension (for example, church attendance) to be subject to social constraints. Some young people may attend church as a consequence of parental pressure, while other young people may refrain from attending church as a consequence of peer pressure. The affective dimension is less likely than the cognitive dimension (for example, beliefs about the virgin birth of Jesus or beliefs about the immaculate conception of Mary) to be conditioned by social learning and by denominational teaching. The assessment of the deep-seated affective or attitudinal dimension provides a relatively more stable assessment of Christian commitment which transcends denominational differences.

The Francis Scale of Attitude toward Christianity measures an individual's affective response to the Christian tradition. The scale consists of 24 Likert-type items which include positively and negatively phrased items. The items relate to five visible features of Christianity which transcend denominational differences and gain equal recognition among children, young people and adults. The five features are identified as: God, Jesus, the Bible, prayer, and Church. Each item is assessed on a five-point scale (agree strongly, agree, not certain, disagree, disagree strongly), producing a range of scores from 24 to 120. A series of studies have confirmed the reliability and validity of the Francis Scale of Attitude toward Christianity among school-aged students in England (Francis, 1987, 1989), Kenya (Fulljames & Francis, 1987), Nigeria (Francis & McCarron, 1989), Northern Ireland (Francis & Greer, 1990; Greer & Francis, 1991), and Scotland (Gibson, 1989; Gibson & Francis, 1989). Reliability and validity of the scale has been confirmed by a further series of studies among students and adults in Australia and Canada (Francis, Lewis, Philipchalk, Brown, & Lester, 1995), the Republic of Ireland (Maltby, 1994), Northern Ireland (Lewis & Maltby, 1997), and the United States of America (Lewis & Maltby, 1995a).

In order to aid cross-cultural comparative empirical research the scale has been translated into Arabic (Munayer, 2000), Chinese (Francis, Lewis, & Ng, 2002; Tiliopolous, Francis, & Jiang, 2013), Czech (Francis, Quesnell, & Lewis, 2010), Dutch (Francis & Hermans, 2000; Lewis & Hermans, 2003), French (Lewis & Francis, 2003, 2004), German

(Francis & Kwiran, 1999a; Francis, Ziebertz, & Lewis, 2002), Greek (Youtika, Joseph, & Diduca, 1999), Italian (Crea, Baiocco, Ioverno, Buzzi, & Francis, 2014), Norwegian (Francis & Enger, 2002; Lewis, Francis, & Enger, 2003), Portuguese (Ferreira & Neto, 2002), Romanian (Francis, Ispas, Robbins, Ilie, & Iliescu, 2009), Serbian (Flere, Francis, & Robbins, 2011), Slovenian (Flere, Klanjsek, Francis, & Robbins, 2008), Spanish (Campo-Arias, Oviedo, Dtaz, & Cogollo, 2006), Slovakian (Lewis, Adamovová, & Francis, 2008), Slovenian (Flere, Klanjsek, Francis, & Robbins, 2008), Spanish (Campo-Arias, Oviedo, Dtaz, & Cogollo, 2006), Swedish (Eek, 2001), and Welsh (Evans & Francis, 1996; Lewis & Francis, 2002; Francis & Thomas, 2003). Taking the Francis Scale of Attitude toward Christianity as a parent instrument, a number of international studies have continued to develop the affective dimension as an empirical measure of religiosity within the traditions of Islam, Judaism and Hinduism through the design and implementation of the Sahin-Francis Scale of Attitude toward Islam (Sahin & Francis, 2002), the Katz-Francis Scale of Attitude toward Judaism (Francis & Katz, 2007), the Santosh-Francis Scale of Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008), and the Athwal-Francis Scale of Attitude toward Sikhism (Francis, Athwal, & McKenna, in press).

The Astley-Francis Scale of Attitude toward Theistic Faith (Astley, Francis, & Robbins, 2012) represents the contribution to this family of attitude scales that was designed to be more widely inclusive of theistic traditions than the other scales in the group which focus on an affective response to particular faith traditions. This was achieved by adapting items from the short-form Francis Scale of Attitude toward Christianity (Francis, Lewis, Philipchalk, Lester, & Brown, 1995) to focus less on key features of the Christian faith, such as rephrasing items to speak of God rather than Jesus, and modifying items concerned with church to speak of places of worship in general. A series of recent studies has explored the psychometric properties of the Astley-Francis Scale of Attitude toward Theistic Faith, including work reported by Francis, Brockett, & Village (2013), Francis and Lewis (2016), and Francis and Crea (in press).

1.3. Five studies

Five studies have explicitly drawn on Eysenck's theory linking abnormal personality (poor functional psychological health) with normal personality (good functional psychological health) to explore the association between psychological health and religiosity using Eysenck's personality scales and the Francis Scale of Attitude toward Christianity or the Santosh-Francis Scale of Attitude toward Hinduism. A first study, reported by Francis, Lewis, and Ng (2003), administered the short-form Revised Eysenck Personality Questionnaire alongside the Francis Scale of Attitude toward Christianity among a sample of 598 Chinese-speaking students attending secondary schools across Hong Kong. Results of the study demonstrated that a positive attitude toward Christianity is associated with lower psychoticism scores, and unrelated to neuroticism scores. This finding supports the view that among young people in Hong Kong higher levels of psychological health (in terms of lower psychoticism scores) are associated with higher religiosity, and that there is no evidence to suggest a connection between poorer levels of psychological health (in terms of either neuroticism scores or psychoticism scores)

and higher religiosity.

This finding has been confirmed by two further studies conducted within the context of the Christian-faith tradition. The first study, reported by Francis, Robbins, ap Sion, Lewis, and Barnes (2007), administered the abbreviated Revised Eysenck Personality Questionnaire (Francis, Brown, & Philipchalk, 1992) alongside the Francis Scale of Attitude toward Christianity among two samples of secondary school students in Northern Ireland: 1,093 attending Protestant schools and 1,266 attending Catholic schools. The second study, reported by Francis and Hermans (2009), administered the short-form Revised Eysenck Personality Questionnaire alongside the Dutch translation of the Francis Scale of Attitude toward Christianity (Francis & Hermans, 2000) to 980 students attending Catholic secondary schools in the Netherlands.

Exploring the association between psychological health and religiosity within the context of the Hindu-faith tradition, Francis, Robbins, Santosh, and Bhanot (2008) administered the abbreviated form of the Revised Eysenck Personality Questionnaire (Francis, Brown, & Philipchalk, 1992) alongside the Santosh-Francis Scale of Attitude toward Hinduism to 330 young people attending the Hindu Youth Festival in London. Results of this study indicated that positive attitude toward Hinduism is associated with higher levels of psychological health (in terms of low psychoticism scores), and that among young people within the Hindu community there is no evidence to suggest a connection between poorer levels of psychological health (in terms of either neuroticism scores or psychoticism scores) and higher religiosity.

However, a study reported by Francis and Burton (2007) which administered the short-form Revised Junior Eysenck Personality Questionnaire (Francis, 1996) alongside the Francis Scale of Attitude toward Christianity among 5,808 students attending secondary schools in England reported a different pattern of results. Data from this study supported the association between higher levels of psychological health (in terms of lower psychoticism scores) and higher religiosity, but also demonstrated evidence to suggest a connection between poorer levels of psychological health (in terms of higher neuroticism scores) and higher religiosity.

Overall, the findings of these studies tend to suggest that higher levels of religiosity are associated with lower psychoticism scores (an indicator of higher levels of psychological health), but unrelated to neuroticism scores. This general pattern of results is consistent with the findings of other empirical studies from a wider body of international research exploring the relationship between Eysenck's dimensional model of personality and attitude toward Christianity. For example, the inverse association between psychoticism and attitude toward Christianity, and the lack of association between neuroticism and attitude toward Christianity has been reported by studies conducted in Australia and Canada (Francis, Lewis, Brown, Philipchalk, & Lester, 1995), France (Lewis & Francis, 2014), Germany (Francis & Kwiran, 1999b; Francis, Ziebertz, & Lewis, 2003), Greece (Youtika, Joseph, & Diduca, 1999), Northern Ireland (Lewis & Joseph, 1994), Norway (Francis & Enger, 2005), Republic of Ireland (Maltby, 1997), South Africa (Francis & Kerr, 2003), United States of America (Lewis & Maltby, 1995b), and the United Kingdom (Francis, 1991, 1992, 1993, 1999; Bourke, Francis, & Robbins, 2005). Francis and

Burton's (2007) finding that lower levels of psychological health (in terms of higher neuroticism scores) are associated with higher religiosity, represents a deviation from this general finding and requires further investigation.

1.4. Research question

The aim of the present study is to build on the findings of these five studies by employing Eysenck's dimensional model of personality alongside the Astley-Francis Scale of Attitude toward Theistic Faith to explore the relationship between psychological health and affective religiosity among 13-to 15-year-old students in Wales.

2. Method

2.1. Sample

The survey was completed by a sample of 2,067 secondary-school students attending eleven schools across Wales. The sample included 980 students attending non-denominational community schools (53%) and 1,087 students attending schools with a religious character (47%). The questionnaires were administered according to a standardised procedure, emphasising confidentiality and anonymity and with the assurance that the school staff would not inspect responses. Although given the opportunity not to participate in the project, very few students refrained from participation. Thoroughly completed questionnaires were submitted by 2,067 students. Of the total respondents, 1,005 were male (49%) and 1,062 were female (51%); 987 were in year nine (48%) and 1,080 were in year ten (52%).

2.2. Measures

Affective religiosity was assessed by the Astley-Francis Scale of Attitude toward Theistic Faith (Astley, Francis, & Robbins, 2012). This instrument, adapted from the short-form of the Francis Scale of Attitude toward Christianity (Francis, Lewis, Philipchalk, Brown, & Lester, 1995), comprises seven items concerned with affective responses to God, places of worship, and prayer. Each item is assessed on a five-point Likert scale: agree strongly, agree, not certain, disagree, and disagree strongly. Example items include: 'I find it hard to believe in God', 'Prayer helps me a lot', and 'I think going to a place of worship is a waste of my time'.

Psychological health was assessed by the abbreviated Revised Junior Eysenck Personality Questionnaire (JEPQR-A) developed by Francis (1996) which proposes four six-item measures of extraversion, neuroticism, psychoticism, and the Lie Scale. Each item is assessed on a dichotomous scale: 'yes' and 'no'. Example items include 'Are you rather lively?' (extraversion); 'Are your feelings easily hurt?' (neuroticism); 'Would you enjoy playing practical jokes that could sometimes really hurt people?' (psychoticism); and 'Do you always do as you are told at once?' (Lie Scale).

3. Results

Table 1. Reliability coefficients and mean scale scores by sex

	males			females		<i>t</i>	<i>p</i> <
	Alpha	Mean	SD	Mean	SD		
Extraversion	.91	18.06	7.07	19.56	7.24	-4.69	.001
Neuroticism	.67	4.64	1.54	4.78	1.47	-2.10	.05
Psychoticism	.67	2.73	1.72	3.66	1.72	-11.89	.001
Lie scale	.57	1.55	1.39	0.90	1.15	11.15	.001
Sex	.54	2.29	1.47	2.54	1.48	-3.74	.001

Table 1 presents the reliabilities of the four personality scales and the scale of attitude toward theistic faith in terms of the alpha coefficients (Cronbach, 1951), together with the mean scale scores for males and females separately. These data demonstrate that attitude toward theistic faith, the extraversion scale, and the neuroticism scale all function with satisfactory levels of internal consistency reliability above the threshold recommended by De Vellis (2003) of .65. The Psychoticism Scale and the Lie Scale, however, are less satisfactory. Sex differences in the mean scale scores are consistent with previous research findings. Females record higher scores than males in terms of attitude toward theistic faith. This is consistent with the general finding that females score higher than males on the Francis Scale of Attitude toward Christianity (Kay & Francis, 1996), and is supported by the general consensus in the psychology of religion that women tend to score higher on indices of religiosity (Francis, 1997; Francis & Penny, 2014). Females record higher scores than males in terms of extraversion, neuroticism, and the Lie Scale, while males record higher scores than females in terms of psychoticism. This is consistent with the general findings concerning sex differences in the Eysenckian family of measures (Eysenck & Eysenck, 1991).

Table 2. Partial correlations between personality and attitude toward theistic faith controlling for sex

	E	N	P	L
Attitude toward theistic faith	-.10***	.05	-.15***	.15***
Lie Scale	-.19***	-.04	-.34***	
Psychoticism	-.14***	-.01		
Neuroticism	-.19***			

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

Table 2 presents the partial correlation coefficients between extraversion, neuroticism, psychoticism, the Lie Scale, and attitude toward theistic faith, controlling for sex differences. Given the size of the sample, the probability level has been set at one percent

level. These data demonstrate that there is a significant negative correlation between attitude toward Christianity and psychoticism scores, while attitude toward theistic faith is independent of neuroticism scores. These data also demonstrate that there is a significant negative relationship between attitude toward theistic faith and extraversion scores, and a significant positive relationship between attitude toward theistic faith and Lie Scale scores.

4. Discussion and conclusion

The aim of the present study was to examine the relationship between attitude toward theistic faith and psychological health, employing the Eysenckian constructs of psychoticism and neuroticism among 13- to 15-year-old students in Wales. The findings of this study contribute to the growing body of research in this area which explores the relationship between personality and affective religiosity through the family of measures developed from the Francis Scale of Attitude toward Christianity. Four main conclusions emerge from these data.

The first main conclusion concerns psychoticism scores as an indicator of psychological health. According to this indicator the data demonstrate that secondary-school students in Wales who recorded higher scores on the Astley-Francis Scale of Theistic Faith record significantly lower scores on the Eysenckian Psychoticism Scale. There is, therefore, according to this indicator some evidence to suggest that young people in Wales who display greater affective commitment to theistic faith may be experiencing a better quality of psychological health. This finding supports the general consensus, established by all five of the previous studies designed specifically to explore the relationship between psychological health and the Francis Scale of Attitude toward Christianity (Francis & Burton, 2007; Francis & Hermans, 2009; Francis, Lewis, & Ng, 2003; Francis, Robbins, ap Siôn, Lewis, & Barnes, 2007; Francis, Robbins, Santosh, & Bhanot, 2008), that greater religiosity is negatively related to psychoticism. This finding is also consistent with the body of wider empirical research employing Eysenck's dimensional personality model alongside the Francis Scale of Attitude toward Christianity conducted in England and elsewhere (Francis, 1992; Francis & Pearson, 1985a; Kay, 1981).

The second main conclusion concerns neuroticism scores as an indicator of psychological health. According to this indicator the data demonstrate that secondary-school students in Wales who record a higher score on the Astley-Francis Scale of Attitude toward Theistic Faith record neither higher nor lower scores on the Eysenckian Neuroticism Scale. There is, therefore, according to this indicator no evidence to suggest that young people in Wales who display an affective commitment to theistic faith are more likely to display tendencies toward neurotic disorders, but at the same time there is no evidence to suggest that affective commitment to theistic faith is associated with greater emotional stability. This finding supports the general consensus, established by four of the five previous studies designed specifically to explore the relationship between psychological health and the Francis measures of the affective dimension of religion (Francis & Hermans, 2009; Francis, Lewis, & Ng, 2003; Francis, Robbins, ap Siôn, Lewis, & Barnes, 2007; Francis, Robbins, Santosh, & Bhanot, 2008), that levels

of psychological health (in terms of neuroticism scores) are unrelated to religiosity. This provides no evidence to support the view that a positive attitude toward theistic faith is associated with either lower or higher levels of psychological health. The lack of relationship between neuroticism and religiosity is also consistent with the body of wider empirical research employing Eysenck's dimensional personality model alongside the Francis Scale of Attitude toward Christianity conducted in England and elsewhere (Francis & Pearson, 1991; Francis, Pearson, Carter, & Kay, 1981a; Francis, Pearson, & Kay, 1983a). These data also demonstrate that Francis and Burton's (2007) finding that lower levels of psychological health (in terms of higher neuroticism scores) are associated with higher religiosity, continues to represent a deviation from this general consensus and requires further exploration.

Two further conclusions emerge from these data regarding the wider relationships between attitude toward theistic faith and Eysenck's measures of personality among secondary-school students in Wales. First, the finding that a positive attitude toward theistic faith is associated with higher extraversion scores among secondary-school students in Wales is not consistent with the consensus of wider empirical research employing Eysenck's personality measures alongside the Francis Scale of Attitude toward Christianity. Eysenck originally defined high scorers on the extraversion scale as sociable, outgoing, impulsive, carefree, optimistic. This definition clearly combines the two notions of sociability and impulsivity (Eysenck & Eysenck, 1963). While both of these two components appear to have been well represented in the earlier editions of the Extraversion Scale, the more recent editions have been largely purified of impulsivity, which now relate more closely to psychoticism (Rocklin & Revelle, 1981). Empirical studies which have utilised the earlier operationalisations of extraversion alongside the Francis Scale of Attitude toward Christianity have demonstrated that introverts emerge as holding a more positive attitude toward Christianity (Francis, Pearson, Carter, & Kay 1981b; Francis, Pearson, & Kay, 1983b). However, empirical studies which have utilised the later operationalisations of extraversion alongside the Francis Scale of Attitude toward Christianity have consistently demonstrated no significant relationship between extraversion scores and attitude toward Christianity (Francis & Pearson, 1985b; Williams, Robbins, & Francis, 2005). Moreover, studies have reported similar results, finding no significant association between extraversion and attitude scores, within the context of the Jewish and Hindu faith-traditions by employing Eysenck's personality measures alongside the Katz-Francis Scale of Attitude toward Judaism (Francis, Katz, Yablon, & Robbins, 2004), and the Santosh-Francis Scale of Attitude toward Hinduism (Francis, Robbins, Santosh, & Bhanot, 2008). The finding of the present study, then, that among secondary-school students in Wales, that introverts emerge as holding a more positive attitude toward theistic faith, represents a deviation from this general consensus and requires further investigation.

Second, the finding that a positive attitude toward theistic faith is associated with higher Lie Scale scores is consistent with the consensus of wider empirical research employing Eysenck's personality measures alongside the Francis Scale of Attitude toward Christianity. Eysenck originally introduced the Lie Scale into his personality measures in order to detect the faking of questionnaire responses. High scorers on the

lie scale consistently affirm behaviours which are socially desirable but very unlikely, and rejects behaviours which are very likely but socially undesirable. Repeated analyses demonstrate a positive significant relationship between Lie Scale scores and a positive attitude toward Christianity (Francis, Pearson, & Kay, 1983c, 1988; Pearson & Francis, 1989). Theoretical interpretation of this consistent finding, however, has been subject to much debate (Furnham, 1986). Four main theories have emerged which argue that the Lie Scale can be taken as a measure of untruthfulness (O'Donovan, 1969), social conformity (Finlayson, 1972), lack of self-sight (Dicken, 1959; Eysenck, Nias, & Eysenck, 1971), or genuine honesty (Pearson & Francis, 1989). The interpretation attributed to the consistent positive relationship between attitude toward Christianity and Lie Scale scores is the view that individuals who hold a positive attitude toward Christianity are generally more socially conformist. This interpretation is supported by the significant negative relationship between positive attitude toward Christianity and impulsivity and risk-taking (Pearson, Francis, & Lightbrown, 1986).

In addition to the four conclusions which emerge from these data regarding the relationship between attitude toward theistic faith and personality, there is one further feature of the data worthy of comment. Reliability statistics confirm the satisfactory functioning of the Astley-Francis Scale of Attitude toward Theistic Faith which achieved an alpha coefficient of .97. This finding commends the instrument for use in further research. Both the extraversion and neuroticism scales achieved satisfactory alpha coefficients in excess of .65, the level recommended by De Vellis (1965). The Psychoticism Scale performed less well with an alpha coefficient of .57, although this is in line with the known psychometric weakness of the scale (Eysenck, Eysenck, & Barrett, 1985). The Lie Scale achieved a low alpha coefficient of .54. However, this finding is comparable to those of other studies which have employed the scale among students of the same age in Wales (Francis, 1996), and England and Wales (Robbins & Francis, 2009; Francis, Williams, & Robbins, 2009).

In conclusion, the present study, conducted among 2,067 13- to 15-year-old students in Wales has demonstrated that a positive attitude toward theistic faith is associated with neither higher nor lower levels of psychological health as assessed by the Eysenckian index of neuroticism, and with higher levels of psychological health as assessed by the Eysenckian index of psychoticism. This finding confirms the general pattern of results established by five previous studies exploring the relationship between psychological health utilising Eysenck's dimensional personality model and the affective dimension utilising the Francis measures of the affective dimension of religion. This supports the use of this theoretical framework involving the Eysenckian dimensional model of personality, and affective religiosity measures, among young people in Wales to address this research question. A challenge for future empirical research would be to employ measures of particular faith-traditions not yet employed within this series of studies (i.e., the Katz-Francis Scale of Attitude toward Judaism or the Sahin-Francis Scale of Attitude toward Islam) among similar samples of young people to see if this pattern of relationship remains consistent in different research contexts.

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