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Unusual but sound minds: Mental health indicators in spiritual individuals

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Previous research has linked certain types of modern spirituality, including New Age and Pagan, with either benign schizotypy or insecure attachment. While the first view emphasizes a positive aspect of spiritual believers' mental health (benign schizotypy), the second view emphasizes a negative aspect, namely the unhealthy emotional compensation associated with an insecure attachment style. This study addresses these two conflicting views by comparing a sample of modern spiritual individuals ($N = 114$) with a contrast group of traditional religious believers ($N = 86$). Measures of schizotypy and attachment style were combined with mental health scales of anxiety and depression. We further assessed death anxiety to determine whether modern spiritual beliefs fulfilled a similar function as traditional religious beliefs in the reduction of existential threat. Our results support a psychological contiguity between traditional and modern spiritual believers and reinforce the need to de-stigmatize spiritual ideas and experiences. Using hierarchical regression, we showed that unusual experiences and ideas are the major predictor of engagement in modern spiritual practices. Anxiety, depression variables, and insecure attachment were not significant predictors of spirituality or correlated with them; on the other hand, the results show that spiritual believers report high social support satisfaction and this variable predicts involvement in modern spirituality. Further, spiritual practices were negatively correlated with and negatively predicted by death anxiety scores. Overall, the results strengthen the association between modern spirituality, good mental health, and general well-being.

Spiritually oriented practices such as meditation, yoga, and energy healing have gained popularity in Western cultures over the past four decades, having steadily evolved towards wider acceptance from their counter-cultural roots in the 1960s (Heelas, 1996). A recent poll sampling 1,002 adults found that 55% of Americans believe in psychic or spiritual healing (Moore, 2005). These modern forms of spirituality, often referred to as alternative, New Age, or Pagan, depart from traditional religiosity by incorporating a more informal structure, the promotion of self-development techniques, an acceptance of magical–paranormal beliefs and experiences, and an emphasis on the individual as a holistic self (Farias & Lalljee, 2008; Hanegraaff, 1996; Woodhead & Heelas, 2000). Other

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psychological and sociological evidence shows that an increasing number of the Western population considers themselves to be 'spiritual but not religious', and is adopting in their everyday lives modern spiritual practices and ideas, which are associated with magical thinking (Heelas & Woodhead, 2005; Saucier & Skrzypinska, 2006).

There are two independent strains of research on spirituality that bear different implications for our understanding of modern spiritual individuals and their mental health. While some studies indicate that modern spiritual believers are characterized by a *benign* (or even positively adaptive) schizotypal disposition associated with unusual experiences, harmless delusional ideation, and magical thinking (Day & Peters, 1999; Farias, Claridge, & Lalljee, 2005; Jackson, 1997), another body of literature presents a more negative picture: modern spiritual believers show an insecure attachment style. Thus, adherence to modern spirituality may be a form of emotional compensation for an insecure attachment (Granqvist, 2002; Granqvist & Hagekull, 1999, 2001; Granqvist & Kirkpatrick, 2004). Although the emotional compensation hypothesis does not apply exclusively to modern spirituality, Granqvist and colleagues suggest that early environmental experiences, which shape an insecure attachment, are a major factor in the adherence to modern spirituality (for a summary, see Farias and Granqvist, 2007).

The way we perceive unusual ideas and experiences has implications for the diagnosis of mental illness. The British Psychological Society (2011) has recently responded to the development of the DSM-5 by stressing the importance of understanding mental distress on a continuum with 'normal' experience, and to be careful not to pathologize 'eccentric' behaviour. In line with this perspective, we suggest that the framework offered by modern spirituality can offer a meaningful, positive, framework for the occurrence of unusual, psychotic-like experiences, often reported by modern spiritual believers.

Our study aimed to address the current dispute on the mental health status of spiritual believers by assessing both schizotypy and attachment style in a single study for the first time, using a sample of spiritual individuals, along with a contrast group of traditional religious believers. We also measured anxiety, depression, and social support satisfaction as mental health indicators; and we included a measure of death anxiety to explore the potential role of modern spirituality in alleviating existential threat.

Schizotypy, existential anxiety, and evidence for 'positive' mental health

Initial work establishing a link between schizotypal personality and spiritual experiences found a high incidence of psychotic characteristics in the normal population, including belief in the paranormal (Thalbourne, Dunbar, & Delin, 1995) and reports of out-of-body experiences (McCreery & Claridge, 1995). Correspondingly, studies focusing on modern believers in particular found that they scored higher on measures of delusional ideation and unusual perceptual experiences when compared to traditional religious believers and atheists (Day & Peters, 1999; Peters, Day, McKenna, & Orbach, 1999; Smith, Riley, & Peters, 2009). Despite the higher frequency of unusual experiences reported by modern believers—similar to those reported by psychotic patients in content and level of conviction—they seem to be in good mental health (Brett *et al.*, 2007; Peters *et al.*, 1999). Hence, these data support the dimensional model of psychosis, which argues that mental illness, such as psychosis or schizotypal personality, is on a continuum with 'normal' experience, and for which there is now considerable experimental evidence (e.g., Bentall, 2003; Claridge, 1994; van Os, Hanssen, Bijl, & Ravelli, 2000).

Positive mental health and well-being in modern believers has been previously documented (e.g., Richardson, 1995), but few studies have done so in the context

of psychosis-proneness. One study of members of New Religious Movements (Day & Peters, 1999) measured schizotypal personality using the Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE, Mason, Claridge, & Jackson, 1995). Interestingly in these studies, while participants were found to be well within the normal range for both anxiety and depression, both anxiety and depression correlated positively with the four subscales of the O-LIFE. This suggests that positive schizotypal characteristics contribute to affect dysregulation, but that modern spiritual believers do not display any significant dysregulation of affect despite a high incidence of positive schizotypal characteristics.

In a study that compared delusions in modern believers with those in psychotic patients, Peters *et al.* (1999) suggested that the principal difference between clinical and non-clinical populations was the level of distress and preoccupation associated with their delusions. Hence, in this context, the crucial element in the development of mental illness probably lies not in the particular content of an individual's beliefs and experiences, but in how these beliefs and experiences are appraised. Another study found that the way in which anomalous experiences were appraised determined whether or not they lead to clinically relevant psychotic symptoms (Brett *et al.*, 2007). Non-clinical participants were generally characterized by more positive appraisals and a more positive emotional response, with a large number of experiences being interpreted in a spiritual context. It is possible that the acceptance of magical and paranormal beliefs within modern spirituality contributes to a positive appraisal of unusual ideation and perceptual experiences that might otherwise be distressing. Consistent with this idea, work by Farias *et al.* (2005) has suggested that modern belief systems may provide meaning and structure for magical ideation and unusual experiences.

An additional benefit of involvement with modern spirituality may be a reduction in existential anxiety. Death anxiety forms part of a key theory in existential psychology – terror management theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991). TMT aims to explain how it could be the case that, as self-aware beings capable of thinking of our own mortality at any given time, we do not continuously fear the inevitability of death. While death anxiety has yet to be measured in modern spiritual believers, cross-cultural evidence indicates that traditional religious believers have a low fear of death (Cohen *et al.*, 2005; Harding, Flannelly, Weaver, & Costa, 2005; Long & Elghanemi, 1987; Templer, 1972; Wu, Tang, & Kwok, 2002). An explanation for this finding is that holding life-structuring beliefs that give meaning to death may help to buffer the deleterious effects of death anxiety (Cohen *et al.*, 2005; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989; Solomon *et al.*, 1991). It is likely that the life-structuring beliefs promoted by modern spirituality function in this way, so that as involvement with its practices and beliefs increases, death anxiety would be further reduced.

Insecure attachment and evidence for 'negative' mental health

While the evidence presented so far indicates that modern believers are characterized by ideas and experiences that largely fall under the description of benign positive schizotypy (e.g., Jackson, 1997), Granqvist and colleagues have suggested that individuals may be drawn to spirituality as a form of emotional compensation for an insecure attachment style (Granqvist, 2002; Granqvist & Hagekull, 1999, 2001; Granqvist & Kirkpatrick, 2004). They propose two main pathways for the development of religiosity. Individuals with secure attachment experiences are more likely to adopt socially based religiosity as introduced by their parents, as one's positive parental relationships may shape a corresponding positive attachment to God. However, those with a history of insecure

attachments channel their unresolved and disorganized thoughts and feelings towards spirituality as a compensatory attachment strategy. In a study using the Adult Attachment Interview, Granqvist, Ivarsson, Broberg, and Hagekull (2007) showed that higher spirituality scores were linked to disorganized and potentially traumatic states. Granqvist has further claimed that maladaptive strategies for coping with insecure attachment experiences are actively incorporated into the modern spiritual philosophy, so that the pursuit of modern spirituality not only fails to provide a functional compensation for an insecure attachment, but rather encourages unhealthy patterns (e.g., preoccupying anger, self-absorption; Farias & Granqvist, 2007).

Other studies have confirmed the link between an interest in modern spiritual literature and an anxious adult attachment style (Saroglou, Kempeneers, & Seynhaeve, 2003), and have found the personality trait of absorption – a propensity to enter dissociative states of mind – to mediate the relationship between insecure attachment and modern spirituality (Granqvist, Fransson, & Hagekull, 2009).

While it is possible that a belief system may be associated with both positive and negative mental health factors, the link between modern spirituality and insecure attachment renders problematic the assertion that such individuals are characterized by well-being, as insecure attachment has been found to contribute to anxious and depressive tendencies (Bifulco *et al.*, 2006; Bifulco, Moran, Ball, & Bernazzani, 2002; Engels, Finkenauer, Meeus, & Dekovic, 2001). In addition, insecure attachment can have a significant ill-effect on the felt quality of social support that an individual receives (Bowlby, 1980; Ognibene & Collins, 1998). Research suggests that both anxious and avoidant attachment styles are negatively associated with perceived social support (Mallinckrodt & Wei, 2005). While traditional religious believers often report a high level of satisfaction regarding the social support they receive (Ellison & George, 1994), little research has been conducted with modern believers looking at social support satisfaction (Latkin, Hagan, Littman, & Sundberg, 1987).

Study aims

The aim of this study was to investigate the mental health of modern spiritual believers. Firstly, we wanted to know if they were simply benign schizotypes or also insecurely attached – as well as, in association with attachment, if they had low levels of social support satisfaction. Secondly, we were interested in assessing anxiety and depression as other types of mental health indicators. Finally, given the widely reported effect of religious beliefs in buffering fear of one's mortality (Vail *et al.*, 2010), we wondered if these could be extended to modern spiritual beliefs. If yes, it would show a functional similarity between these two belief systems in alleviating fear of death.

Method

Participants and procedure

We used a between subjects design contrasting a population of spiritual believers with members of traditional religious groups on a number of mental health and personality measures. We recruited 114 spiritual believers and 86 traditional believers via online social networking websites dedicated to modern spirituality or traditional religion. The IP address of each participant was recorded in order to ensure that no person completed the questionnaire more than once. All questionnaire measures were administered using *Qualtrics*, an online data collection software programme. There are many advantages to

collecting data online, such as reduced response time and lack of experimenter effects (Granello & Wheaton, 2004). In addition, recruiting participants online can lead to a more heterogeneous sample than other recruitment strategies such as university or other local schemes (Birnbaum, 2004).

In order to control for levels of fluency, as well as understanding of the questionnaire items and instructions, we only included participants whose first language was English. The breakdown of nationalities within the Modern Spiritual group was as follows: British (46.5%), American (38.4%), Canadian (6%), Australian (4%), Irish (3.5%), and South African (1.7%).

The age of participants ranged from 15 to 73. There was a significant difference between groups for Age ($F(1, 198) = 5.79$, $p < .05$), with the Spiritual group having a slightly higher mean age (37.37, *SD*: 13.46) than the Traditional group (32.40, *SD*: 15.70).

The Spiritual group was comprised of 84 women (73.7%) and 30 men (26.3%). The Traditional group had 64 women (74.4%) and 22 men (25.6%). There was no significant difference in the distribution of gender between groups ($\chi 2 = .00$, $df = 1$, $p = .95$).

There was a heterogeneous affiliation for the Spiritual group. The largest proportion of the group considered themselves Pagan (Wicca/other, 38.5%), followed by those professing to be Spiritual but not Religious (30.8%), Druids (11.1%), or Shamanists (11.1%). The remaining Others (8.5%) either identified with spiritual denominations that were not included on the list but that are nonetheless recognized modern spiritual belief systems (e.g., Thelema), or identified with a mixture of common spiritual belief systems (e.g., Druidry and Shamanism). These are generally inspired by pre-Christian mythology, incorporating multiple deities, a love of nature, and rituals that promote self-development (Harvey, 2007; Heelas, 1996). The Traditional group consisted of Christians (93.2%), Muslims (3.4%), and Jews (3.4%).

Materials

The short version of the O-LIFE

The short version of the O-LIFE contains 43 items (Mason, Linney, & Claridge, 2005). The O-LIFE is based on the Combined Schizotypal Traits Questionnaire (Bentall, Claridge, & Slade, 1989), and reduces 16 schizotypy questionnaires down to four factors, derived from large factor analyses (Claridge *et al.*, 1996). Its four factors are as follows: Unusual Experiences, Introvertive Anhedonia, Cognitive Disorganization, and Impulsive Nonconformity.

The *Unusual Experiences scale* contains 12 items designed to capture perceptual aberrations, magical ideation, and hallucinations. Examples of items are 'When in the dark, do you often see shapes and forms even though there is nothing there?' and 'Do you think that you could learn to read other's minds if you wanted to?'.

The *Cognitive Disorganization scale* has 11 items and measures aspects of poor skills in attention and concentration, poor decision making, and social anxiety. Examples of items are 'Are you easily confused if too much happens at the same time?' and 'Do you dread going into a room by yourself where other people have already gathered and are talking?'

The *Introvertive Anhedonia scale* contains 10 items that measure a lack of enjoyment from social and physical sources of pleasure, and an avoidance of intimacy (e.g., 'Do you prefer watching television to going out with people?').

The *Impulsive Nonconformity scale* contains 10 items describing impulsive, antisocial, and eccentric forms of behaviour that relate to a lack of self-control (e.g., 'Do you at times have an urge to do something harmful or shocking?').

The Experiences in Close Relationships (ECR) scale

The ECR (Brennan, Clark, & Shaver, 1998) contains 36 items and is one of the most frequently used scales for measuring attachment style in adults, having good internal and external validity (Conradi, Gerisma, van Duijn, & de Jong, 2006). The scale measures both anxious and avoidant attachment styles using statements that the respondent has to rate on a 7-point Likert scale. The anxious attachment items include 'I worry about being abandoned' and 'I need a lot of reassurance that I am loved by my partner'. The avoidant attachment items include 'I prefer not to show a partner how I feel deep down' and 'I try to avoid getting too close to my partner'.

The Social Support Questionnaire Short Form (SSQSR)

The SSQSR (Sarason, Sarason, Shearin, & Pierce, 1987) contains 12 items. Six items ask respondents to list the initials of up to nine individuals whom they feel could provide social support in a particular situation, followed by a satisfaction rating for the support they currently have for that situation. An example of an item is 'Whom can you really count on to be dependable when you need help?'

The Hospital Anxiety and Depression scale (HADS)

The HADS (Zigmond & Snaith, 1983) was originally designed to measure anxiety and depression in patients but has since been validated in non-clinical groups (Abiodun, 1994). It contains 14 items, seven measuring anxiety, and the other seven depression.

The Revised Collet-Lester Fear of Death scale

A subscale of *The Revised Collett-Lester Fear of Death scale* (Lester, 1990) relating to 'Your Own Death' was used, and features eight items. The Collett-Lester scale, originally devised in 1969 and revised in 1990 was designed to measure conscious fear and anxiety relating to death. Participants were asked to rate how anxious they felt about statements related to their death on a 6-point Likert scale, ranging from 'not anxious' to 'very anxious'. An example of a statement is 'The total isolation of death'.

Religious and Spiritual Behavioural measures

We also assessed the frequency of religious and spiritual practices. The *Religious Practices scale* contains three items that ask for the frequency of prayer, attendance of religious services, and reading of religious scriptures. Responses are on a 7-point Likert scale, ranging from 'never' to 'several times a day'.

Spiritual practices were assessed with 12 items used in a related study (Farias et al, 2005). Participants were asked 'Which of the following activities have you already practised or are you practising at present?' Activities included 'Yoga or Tai-chi'; 'Meditation'; 'Reiki'; 'Psychic or spiritual healing'; 'Past-life regression therapy';

'Divination with Tarot, I-Ching, or Runes'; 'Dream interpretation or dream-work'; 'Massage techniques like Shiatsu'; 'Consulting a medium or a psychic'; 'Alternative medicine (e.g., homeopathy)'; 'Consulting an astrologer or interpreting your astrological chart'; 'Attending talks or workshops on topics of spiritual development'. Participants responded using a 5-point Likert scale, ranging from 'practicing regularly' to 'never practiced', which was subsequently reverse-scored.

Results

Preliminary analyses

Table 1 shows the means and standard deviations of all the variables for both groups. All the variables were normally distributed apart from Death Anxiety, which was positively skewed. A logarithmic transformation was applied in order to normalize the distribution.

Bivariate correlations were computed for all the variables in each group (see Tables 2 and 3). Within the Spiritual group, Spiritual Practices correlated positively with Unusual Experiences, but with none of the other subscales of the O-LIFE. Spiritual Practices also correlated positively with Social Support Satisfaction, and negatively with Death Anxiety. There were no significant correlations between Spiritual Practices and either depression or anxiety. However, both anxiety and depression measures were weakly or moderately correlated with every schizotypy subscale, anxious and avoidant attachment, and death anxiety.

For the Religious group, Religious Practices was negatively correlated with all O-LIFE subscales. Anxiety (HADS) and Death Anxiety were also moderately negatively correlated with Religious Practices.

Age was positively correlated with Religious practices, within the Traditional Religious Group, and Spiritual Practices, within the Spiritual Group, suggesting that frequency of both religious and spiritual activities increases with age.

Table 1. Means, standard deviations, and reliability scores for Spiritual ($N = 114$) and Religious ($N = 86$) group members

	Spiritual			Religious		
Variables	*M*	*SD*	α	*M*	*SD*	α
Spiritual Practices	3.70	1.00	.80	2.01	0.62	.90
Religious Practices	2.80	1.35	.61	4.32	1.47	.85
O-LIFE – Unusual Experiences	6.90	3.10	.78	3.58	3.01	.81
O-LIFE – Cognitive Disorganization	3.98	3.09	.81	4.49	3.18	.81
O-LIFE – Introvertive Anhedonia	3.00	2.09	.63	2.90	1.97	.63
O-LIFE – Impulsive Non-Conformity	3.54	2.20	.68	2.97	2.13	.63
ECR – Anxious	62.46	24.75	.91	65.56	24.43	.91
ECR – Avoidant	51.61	18.52	.92	54.28	18.83	.94
SSQSR – Satisfaction	31.98	5.33	.87	31.58	4.93	.89
HADS – Anxiety	7.34	4.24	.84	7.90	3.81	.82
HADS – Depression	4.01	2.99	.75	4.05	2.38	.63
Death Anxiety	16.91	9.74	.91	20.33	10.61	.90

Table 2. Pearson correlation coefficients between scales, age, and gender, within the Spiritual group ($N = 114$)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Spiritual Practices	–												
2. Religious Practices	.40**	–											
3. Unusual Experiences	.28*	.21*	–										
4. Cognitive Disorganization	−.14	−.14	.35**	–									
5. Introvertive Anhedonia	−.13	−.01	.12	.49**	–								
6. Impulsive Nonconformity	−.04	.05	.31*	.43**	.33**	–							
7. ECR – Anxious	−.05	.03	.28*	.56**	.41**	.43**	–						
8. ECR – Avoidant	−.12	−.08	.14	.36*	.46**	.12	.25*	–					
9. SSQSR – Satisfaction	.22*	.05	−.26*	−.35**	−.39**	−.18	−.34*	−.32**	–				
10. HADS – Anxiety	.03	.17	.46**	.55**	.36**	.41**	.57**	.28*	−.38**	–			
11. HADS – Depression	.01	−.07	.35**	.54**	.46**	.31*	.45**	.42**	−.52**	.62**	–		
12. Death Anxiety	−.28*	−.05	.09	.30*	.23*	.17	.34**	.28*	−.21*	.41**	.28*	–	
13. Age	.19*	.00	−.13*	−.21	−.09	−.23*	−.23*	.07	.07	−.31*	.03	−.22*	–
14. Gender	.08	−.04	.07	.16	.20*	−.11	.20	.10	−.10	−.01	.05	.07	.11

*$p < 0.05$; **$p < 0.001$.

Table 3. Pearson correlation coefficients between scales, age, and gender, within the Religious group ($N = 86$)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Spiritual Practices	–												
2. Religious Practices	.16	–											
3. Unusual Experiences	.37**	−.24*	–										
4. Cognitive Disorganization	−.10	−.28*	.52**	–									
5. Introvertive Anhedonia	−.21*	−.24*	.23*	.49**	–								
6. Impulsive Nonconformity	.08	−.30*	.48**	.65**	.41**	–							
7. ECR – Anxious	.01	−.21	.41**	.56**	.34*	.52**	–						
8. ECR – Avoidant	−.20	−.15	.11	.34*	.48**	.10	.14	–					
9. SSQSR – Satisfaction	.03	.19	−.39**	−.45**	−.32*	−.42**	−.41**	−.26*	–				
10. HADS – Anxiety	.11	−.26*	.48**	.63**	.30*	.51**	.63**	.24*	−.48**	–			
11. HADS – Depression	−.10	−.10	.23*	.48**	.40**	.25*	.27*	.31*	−.40**	.30*	–		
12. Death Anxiety	−.16	−.33*	.22*	.36*	.22*	.35*	.65**	.19	−.47**	.56**	.13	–	
13. Age	.07	.38**	−.25*	−.28*	.02	−.27*	−.19	.04	.16	−.23*	.11	−.19	–
14. Gender	.15	−.05	.15	.02	.05	−.01	−.03	.08	−.01	.21	.13	.00	.12

*$p < 0.05$; **$p < 0.001$

Main analyses

Three separate between subjects (Spiritual versus Religious group as the independent variable) multivariate analyses of variance, with age as covariate, were carried out for the subscales of the O-LIFE, the ECR, and the HADS. For the subscales of the O-LIFE, there was a significant difference between groups (Pillai's Trace = 0.30, F (4, 197) = 20.80, $p < .001$, $\eta_p^2 = .30$), with a medium effect size. Two of the schizotypy scales, *Unusual Experiences* (F (1, 197) = 64.66, $p < .001$, $\eta_p^2 = .25$), and *Impulsive Nonconformity* (F (1, 197) = 6.17, $p < .05$, $\eta_p^2 = .03$), were significantly higher for the spiritual group, although the effect size for the latter scale was small. On the attachment and depression/anxiety scales, there were no significant differences between groups. There were also no significant differences between the groups for anxiety or depression. Further, neither group presented scores that could be considered clinically relevant.

Two separate between subjects (with Spiritual versus Religious group as the independent variable) analyses of variance, with age as covariate, were carried out for the subscales of Social Support Satisfaction and Death Anxiety. Both groups showed high average scores on Social Support Satisfaction. As to Death Anxiety, the Spiritual group had significantly lower scores than the religious group, (F(1, 197) = 4.39, $p < .05$, $\eta_p^2 =$ .02), though the effect size was small.

Confirming the different type of engagement with spiritual or religious activities, the Spiritual group had higher scores on the measure of Spiritual Practices (F(1, 197) = 178.28, $p < .001$, $\eta_p^2 = .48$), and the Religious group scored significantly higher on the measure of Religious Practices (F(1, 197) = 64.59, $p < .001$, $\eta_p^2 = .25$).

Hierarchical regression analysis

In order to further understand the relationship between engagement in modern spirituality and mental health factors, and the psychological differences between engagement with Traditional Religion and Modern Spirituality, we performed two hierarchical regression analyses. First, we conducted a hierarchical regression analysis within the Spiritual Group with Spiritual Practices as the dependent variable. Age was entered as a control variable in the first step, the Schizotypy scales were entered in the second step, type of Attachment (anxious and avoidant) was entered in the third step, the HADS anxiety/depression scores were entered in the fourth step, Social Support Satisfaction was entered in the fifth step, and Death Anxiety was entered in the sixth step (see Table 4). In the first step, age predicted Spiritual Practices positively, $b = 0.19$, $t =$ 2.07, $p < .05$, as did Unusual Experiences in the second step, $b = 0.38$, $t = 3.99$, $p <$ .001. On the other hand, none of the mental health variables inserted in steps three and four were significant predictors of engagement with spirituality. In the fifth step, Social Support Satisfaction positively predicted Spiritual Activities, $b = 0.33$, $t = 3.12$, $p < .05$, whereas Death Anxiety, inserted in the sixth step, predicted Spiritual Activities negatively $b = -0.24$, $t = 2.54$, $p < .05$. Age, Unusual Experiences, and Social Support Satisfaction remained significant predictors in the final six-step model, $R^2_{\text{adj}} = .23$, F (1, 86) = 2.57, $p < .05$.

We carried out the same six-step hierarchical regression analysis for the Religious Group, with Religious Practices scores as the dependent variable (see Table 5). In the first step, Age was a positive predictor of Religious Practices, $b = 0.38$, $t = 3.79$, $p < .001$. None of the variables inserted in steps 2–5 was a significant predictor of the dependent variable. Death Anxiety, inserted in step 6, predicted Religious Practices negatively,

Table 4. A hierarchical regression model predicting spiritual practices within the spiritual group

	Step 1		Step 2		Step 3		Step 4		Step 5		Step 6	
F (1, 114)	4.27*		4.52*		3.38*		2.68*		3.59**		4.02**	
R^2_{adj}	.03		.13		.13		.12		.19		.23	
Predictor variable	β	*t*	β	*t*	β	*t*	β	*t*	β	*t*	β	*t*
Age	0.19	2.07*	0.20	2.18*	0.22	2.32*	0.24	2.38*	0.22	2.27*	0.19	1.98*
O-LIFE – Unusual Experiences			0.38	3.99**	0.39	4.00**	0.36	3.53*	0.40	4.01**	0.37	3.74**
O-LIFE – Cognitive Disorganization			−0.21	−1.86	−0.20	−1.65	−0.21	−1.71	−0.22	−1.84	−0.21	−1.84
O-LIFE – Introvertive Anhedonia			−0.03	−0.33	−0.00	−0.01	0.00	0.00	0.06	0.53	0.04	0.38
O-LIFE – Impulsive Non-Conformity			0.01	0.05	−0.01	−0.12	−0.02	−0.17	−0.03	−0.30	−0.05	−0.47
ECR – Avoidance					−0.11	−1.07	−0.11	−1.09	−0.09	−0.93	−0.05	−0.47
ECR – Anxiety					0.04	0.35	0.01	0.10	0.03	0.23	0.07	0.60
HADS – Anxiety							0.11	0.83	0.11	0.85	0.19	1.40
HADS – Depression							−0.03	−0.21	0.10	0.76	0.09	0.71
SSQSR – Satisfaction									0.33	3.12*	0.31	3.01*
Death Anxiety											−0.24	−2.54*

*$p < 0.05$; **$p < 0.001$.

Table 5. A hierarchical regression model predicting religious practices within the religious group

	Step 1		Step 2		Step 3		Step 4		Step 5		Step 6	
F (1, 86)	14.40**		4.34*		3.12*		2.40*		2.14*		2.57*	
R^2_{adj}	.14		.16		.15		.13		.11		.17	
Predictor variable	β	*t*	β	*t*	β	*t*	β	*t*	β	*t*	β	*t*
Age	0.38	3.79**	0.35	3.27*	0.35	3.27*	0.36	3.20*	0.36	3.20*	0.35	3.14**
O-LIFE – Unusual Experiences			−0.08	−0.63	−0.08	−0.61	−0.06	−0.51	−0.07	−0.53	−0.12	0.96
O-LIFE – Cognitive Disorganization			0.01	0.09	0.04	0.26	0.08	0.47	0.08	0.48	0.05	0.28
O-LIFE – Introvertive Anhedonia			−0.19	−1.64	−0.16	−1.21	−0.15	−1.16	−0.16	−1.16	−0.17	−1.30
O-LIFE – Impulsive Non-Conformity			−0.08	−0.60	−0.10	−0.70	−0.10	−0.69	−0.10	−0.70	−0.11	−0.74
ECR – Avoidance					−0.08	−0.58	−0.07	−0.58	−0.07	−0.59	−0.04	−0.34
ECR – Anxiety					−0.01	−0.08	0.02	0.12	0.02	0.11	0.20	1.26
HADS – Anxiety							−0.07	−0.45	−0.07	−0.47	0.02	0.13
HADS – Depression							−0.05	−0.37	−0.05	−0.40	−0.10	−0.76
SSQSR – Satisfaction									−0.02	−0.17	−0.12	−0.91
Death Anxiety											−0.34	−2.36*

*$p < 0.05$; **$p < 0.001$.

$b = -0.34$, $t = 2.36$, $p < .05$. Only Age and Death Anxiety were significant predictors of Religious Practices in the final model, $R^2_{adj} = .23$, $F(1, 114) = 4.02$, $p < .001$.

Discussion

Using a range of mental health measures, our data lend support to the view that describes Modern Spiritual Individuals as mentally healthy. The main difference between groups, as well as the major predictor of engagement with Spiritual Practices, was Unusual Experiences. Although Impulsive Nonconformity was higher for the Spiritual group, it showed a weak, non-significant correlation with Spiritual Practices. This difference between groups could also be due to contrasting attitudes towards social conformity that are present in these populations. It has been previously shown that Modern Spiritual individuals espouse less conventional values than members of traditional religions (Farias & Lalljee, 2008).

Anxiety and depression scores for the Spiritual group were similar to those of traditional believers, despite the fact that Unusual Experience scores correlated weakly to moderately with these mental health variables (for a similar finding, see Day and Peters, 1999). This suggests that engagement with Spirituality may actually work as a protective factor against distress or depression that might develop as a reaction to unusual experiences and ideation. This is further supported by the results for Death Anxiety. Although this scale was moderately correlated with anxiety and depression scores, it was *negatively* associated with and was a *negative* predictor of engagement with Spiritual Practices. The same is true for engagement with Religious Practices, and it has been found that holding religious ideas about life after death buffers death anxiety (Rosenblatt *et al.*, 1989; Cohen *et al.*, 2005). Our results suggest, for the first time, that this effect may be extended to Modern Spiritual beliefs.

Consistent with these findings, but in contrast to previous studies conducted by Granqvist and colleagues (Granqvist *et al.*, 2007; Granqvist & Hagekull, 2001) Modern Spirituality was unrelated to insecure or avoidant adult attachment. This indicates that both groups are generally characterized by a secure attachment style and do not pursue religiosity as a means of emotional compensation. Both groups also had high satisfaction scores concerning perceived social support. As previously mentioned, low social support satisfaction is associated with insecure attachment (Mallinckrodt & Wei, 2005). A caveat concerning this result is that although adult attachment style stems from the early parental relationship (Hazan & Shaver, 1987), there is not always correspondence between measures of parental and adult attachment (Granqvist *et al.*, 2007). While there is a modest relation between insecure adult attachment and modern spirituality (e.g., Granqvist, 2002), other studies have found a stronger association by measuring parental attachment (Granqvist & Hagekull, 2001). However, the crucial difference may lie not in the measure, but in the samples used in previous research. Granqvist and colleagues used Swedish samples recruited at vegetarian cafes and bookshops. By contrast, we had a wider cultural sample, including a variety of modern spiritual affiliations.

These results also highlight the multidimensionality of schizotypy, as well as the role that beliefs and appraisals may play in the development of clinically relevant symptoms. It has been argued that the content of an individual's ideation and experiences is less of a determinant of ill health than their appraisal of that content (Brett *et al.*, 2007; Smith *et al.*, 2009). Meta-cognitive beliefs about oneself, others, and events in the world significantly

impact on the appraisal of anomalous experiences in non-clinical samples with psychotic-like experiences (Brett, Johns, Peters, & McGuire, 2009). The meaning and contextual narrative that Modern Spiritual beliefs provide may help shape adaptive beliefs that individuals use to appraise their unusual experiences, framing them in a positive light. A recent study in which participants engaged in a shamanic ceremony designed to induce anomalous experiences found that those with pre-existing paranormal beliefs made more positive attributions about their experiences (Polito, Langdon, & Brown, 2010).

Given the growing societal interest in spiritual practices and literature, there is an important gap in our knowledge of Modern Spirituality and its psychological implications, which must be addressed in future studies. While our results provide further evidence for the association between benign schizotypal characteristics and modern spirituality, we cannot establish the direction of causality between these two factors. Luhrmann (1992) has previously noted how her fieldwork with British Pagan groups led her to experience unusual visual phenomena and thought processes. It is possible that our natural susceptibility to magical thinking and non-ordinary states of mind may be stimulated by spiritual practices and beliefs, which then lead us to perceive and interpret the world in a less conventional way.

Overall, this study has showed that individuals engaged with modern spirituality, who are often regarded as odd or eccentric because of their unusual perceptions and ideas, are mentally healthy. There is no indication that they possess an insecure or avoidant attachment style, and they are content with their level of social support. Finally, the results for death anxiety suggest a psychological contiguity between the function of traditional religious and modern spiritual beliefs, in that the level of engagement with one's religious or spiritual practices actually decreases one's fear of death.

There are wider implications to be considered. At one level, these results lend support to the largely overlooked claim that there are important personality and cognitive differences between traditional religious and modern spiritual individuals (Farias & Hense, 2008; Saucier & Skrzypinska, 2006). Despite the growing interest in the psychological study of religion and its underlying cognitive processes, there is an overarching generalization that most supernatural belief systems are associated with the same kind of psychological processes, functions, and dispositions. This may very well not be the case; the consistent association between Modern Spirituality and a disposition to Unusual Experiences and Ideation is one example (Farias *et al.*, 2005; Peters *et al.*, 1999).

We should also ponder on the implications of this work from a clinical angle, and how it affects the way clinicians conceive of the role religious *and* spiritual beliefs ought to play in therapy. A study investigating the treatment of patients with psychosis has found that those presenting delusions with religious content had a less severe clinical status than other deluded patients, but also adhered less to psychiatric treatment (Mohr *et al.*, 2010). The societal growth of Modern Spiritual beliefs (Heelas & Woodhead, 2005) will inevitably lead to more and more clinicians being faced with a range of people espousing quasi-magical ideas about reality, and quite possibly about their own illness. Alongside the magical idea, espoused by Modern Spiritual individuals, that 'nothing happens by chance', is the medically unorthodox insight that mental health issues may simply be a 'part of the spiritual process'. We can only hope that clinicians may learn to be more sensitive to the expression of these cultural beliefs and, ultimately, to be able to explore its positive, meaningful, function. It will be interesting to see how the new DSM-5 will address the prevalent perception of spiritually related ideas and experiences as

potentially pathogenic, and whether it takes on board recent criticisms about its likely stigmatization of eccentric people (British Psychological Society, 2011).

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