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Octogenarian Reports of Lifetime Spiritual Experiences: Types of Experience and Early Life Predictors

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Abstract

This study assessed lifetime histories of discrete spiritual experiences recalled by 144 octogenarian men studied since adolescence and 80 spouses. Women were more likely to report discrete spiritual experiences, as were those from higher socioeconomic backgrounds and those judged more open to experience as young adults. Factor analysis revealed four types of experiences related to beauty/nature, negative life events, protection by a sacred other, and traditional religious settings. Men from better childhood environments more commonly reported spiritual experiences concerning negative life events. Those with serious childhood illnesses were less likely to report experiences of feeling protected by a sacred other.

Keywords

Spiritual experiences; aging; early life predictors

BACKGROUND AND INTRODUCTION

Spirituality is an integral part of many people's lives (Powell, Shahabi, & Thoresen, 2003). A 1998 survey revealed that 82% of Americans expressed interest in spiritual growth (Myers, 2000), and a comprehensive study of religion and spirituality using samples drawn from diverse religious and secular groups found that 93% of participants rated themselves as spiritual. Although research on spirituality and religion is plentiful (Weaver, Pargament, Flannelly, & Oppenheimer, 2006), there are no accepted standard definitions of either of these constructs, and many studies fail to distinguish between the two (Eire, 1990; Moberg, 2002). Moreover, despite the fact that many adults speak of having had discrete spiritual experiences at particular points in their lives (Hood, Spilka, Hunsberger, & Gorsuch, 1996; Johnson & Friedman, 2008), the existing research literature deals almost exclusively with spirituality as an ongoing quality of life, and there has been little or no study of discrete spiritual experiences.

In addition, most studies assess spirituality using measures that are based on a priori theoretical understandings of this concept. There has been little research examining the types

of spiritual experiences that people report when not prompted with definitions. In the present study, we asked a group of octogenarians to look back on their lives and tell us whether they had had any significant spiritual experiences and if so, to describe those experiences. We used a grounded theory approach to analyze narratives of spiritual experiences to characterize types of spirituality that emerged from these reports. The men in this sample have been part of a 70-year longitudinal study of adult life. We used prospectively collected data from childhood and young adulthood to examine predictors of who reported histories of spiritual experiences in late life, and to examine predictors of which types of experiences they were most likely to report.

A Priori Definitions and Blurred Boundaries

A great deal of research has focused on attempting to define spirituality and to distinguish it from religiousness (e.g., Zinnbauer et al., 1997). As noted above, most studies have used instruments based on theoretically derived, pre-defined notions of what constitutes religion and spirituality (e.g., Hodge, 2003). This was underscored in the recent paper by Glicksman (2009), who reviewed seven of the most widely used measures of religiousness and spirituality. He noted that all were based on implicit definitions that were deeply rooted in the Evangelical Protestant tradition, including emphasis on forgiveness, a personal relationship with God, a desire for a return to a state of grace, suffering as a test of faith, and private study or prayer. The multiple definitions of spirituality that shape such instruments make comparisons across studies difficult.

Blurring occurs in the literature between *being* spiritual as an attribute of one's personality and *having* spiritual experiences. Most research has focused on ongoing rather than episodic experience. For example, Underwood and Teresi (2002) characterized daily spiritual experience by conducting focus groups and in-depth interviews with individuals from multiple religious perspectives to develop the 16-item Daily Spiritual Experience Scale. The aim of this work was to elucidate spiritual experiences that were present in an ongoing way in daily life, such as general feelings of closeness with God, feeling comfort and joy from religion, feeling touched by the beauty of creation, and feeling guided by God. Even in a study that asked participants to define spirituality and did content analysis of the resulting narratives (MacDonald, 2000), the resulting five content dimensions—cognitive orientation toward spirituality; experiential/phenomenological dimension of spirituality; existential well-being; paranormal beliefs; and religiousness—did not describe the nature of spiritual experiences themselves.

When spiritual experiences as events have been studied, it has generally been in the context of mysticism (e.g., Hood et al., 2001) or religious conversion (Lee, 2008; Ryan, Miller, & West, 2000). Yet individuals often report experiences that they characterize as spiritual, which happen at specific times, and which punctuate rather than pervade their lives (Atchley, 2009; Gilbert, Morgan, Laungani, & Palmer, 2009; Johnson & Friedman, 2008). Our goal was to understand whether older adults, in looking back on their lives, recalled discrete experiences that they would label as spiritual, and to determine whether there were particular subtypes of such experiences commonly reported. To our knowledge, no research on the content of spiritual experiences has been conducted that asks individuals in late life to reflect on an entire lifetime of experiences.

Personality

In some studies, specific qualities of personality have been found to distinguish those who describe themselves as spiritual from those who do not. As noted above, MacDonald (2000) examined concurrent links between dimensions of spirituality and personality traits as defined by the Five-Factor Model of personality: Agreeableness, Conscientiousness,

Extraversion, Openness, and Neuroticism (McCrae & John, 1992). Cognitive orientation toward spirituality was related most notably with Agreeableness, Conscientiousness, and Extraversion, and also to a lesser degree with Openness. None of these personality factors was linked with religiousness. The experiential/phenomenological dimension of spirituality was correlated with Openness and Extraversion, whereas existential well-being was strongly inversely correlated with Neuroticism. Paranormal beliefs were also most strongly correlated with Openness (MacDonald, 2000). In a meta-analysis of studies of religion/spirituality and the Five Factor Model of personality, Saroglou (2002) found that open, mature religiosity and spirituality were correlated significantly with Agreeableness, Conscientiousness, and Extraversion. The studies used in this meta-analysis did not generally distinguish between religiousness and spirituality, nor did they deal with spiritual experiences (as opposed to traits).

Spirituality in late adulthood has been linked with several adolescent Big Five personality traits (McCrae & John, 1992). In a rare 60-year longitudinal study, Wink, Ciciolla, Dillon, & Tracy (2007) found that adolescent Conscientiousness was correlated with religiousness in late adulthood. For women, there was also a positive correlation between Agreeableness in adolescence and late-life religiousness. In addition they found that spiritual seeking in late life was predicted by adolescent Openness (Wink et al., 2007). Using a different longitudinal cohort from that studied by Wink and colleagues, we have the opportunity to review 70 years of prospective data of predictors to reporting spiritual experiences in late life. In the present study we used an index of Neuroticism and Openness, based on personality ratings in young adulthood, as a predictor of reporting spiritual experiences in late life.

Emotional Functioning

Links between spirituality and emotional well-being have been found in some studies but not others. In a study of older adults, Wink and Dillon (2007) found that elderly individuals who said they were religious (that is, who endorsed the importance of institutional, tradition-centered religious beliefs and practices) reported more positive relations with others, more community involvement, and greater generativity. Endorsement of greater spirituality (noninstitutionalized religion and nontradition-centered practices and beliefs) among older adults was positively correlated with personal growth, wisdom, and involvement in creative tasks. Spirituality and religiousness were not associated with narcissism (Wink & Dillon, 2003). Using data from the inner city cohort of our 70-year longitudinal study of adult development, Koenig and Vaillant (2009) found that increased church attendance earlier in adulthood predicted better subjective ratings of well-being in late life. However, in a second study from our group, which focused on the college cohort of the longitudinal study, Vaillant and colleagues found no associations between religious involvement and concurrent or subsequent well-being, but observed that men with depression or multiple negative life events were twice as likely as men with the least stress to be religiously involved (Vaillant, Templeton, Ardel, & Meyer, 2008). To our knowledge, no studies to date have examined associations between a history of discrete spiritual experiences and emotional well-being.

In exploring the territory of discrete spiritual experiences, the present study begins with no theoretical orientation, aiming to characterize spiritual experiences recalled by older adults using a grounded theory approach (Charmaz, 2003). Grounded theory is a technique for systematic analysis of qualitative data that allows extraction of common themes from narratives. This method was chosen with the aim of allowing components of spirituality to emerge from participants' descriptions of what they classify as spiritual experiences.

The study addresses the following four questions:

1. When octogenarians look back on their lives, how commonly do they endorse a history of spiritual experiences?
2. Do those who endorse spiritual experiences differ from those who do not with respect to intellectual or emotional functioning?
3. Among those who endorse spiritual experiences, what types of experiences do they report?
4. Are there specific developmental antecedents of reporting spiritual experiences in late life?

METHOD

Participants

The sample for this study consisted of 144 men and 80 women. The men were original participants in the Study of Adult Development, a 70-year prospective longitudinal study of adult development. In recent years, spouses of Study members have been invited to participate in all assessments, and the 80 women in the current sample were spouses of original Study participants.

The Study comprises two cohorts of men, the College cohort and the Inner City Cohort. Eighty-five men from the original College cohort and 46 of their spouses participated in this study. The College cohort consisted initially of 268 Harvard College sophomores who were recruited between 1939 and 1942 for a study of healthy adult development, to “make a systematic inquiry into the kinds of people who are well and do well” (Heath, 1945 as cited in Vaillant, 2000). Men were predominantly Caucasian and were originally selected for the Study by their college deans who predicted that these students would become models of healthy adult development. A majority of men in this cohort (64%) obtained graduate degrees and most went on to hold prestigious white-collar jobs.

Fifty-nine men from the original Inner City cohort and 34 of their spouses participated in this study. The Inner City cohort initially comprised 456 adolescents, chosen as the nondelinquent control group for a longitudinal study of juvenile delinquency (Vaillant, 2002). Participants were matched with members of the delinquent group with respect to IQ ($M = 95$), economic disadvantage, and residence in high-crime neighborhoods (Glueck & Glueck, 1968). All were Caucasian and were primarily of Irish-American and Italian-American heritage. Men in this cohort typically went on to hold blue-collar jobs but 5% attended college.

In 2003, all living Study members from both cohorts and their intimate partners (if they had them) were invited to participate in daily telephone interviews on eight consecutive days. The aim of these interviews was to obtain repeated measures of daily functioning in this elderly sample. To be eligible for participation, individuals had to score above 25 (indicating minimal or no cognitive impairment) on the Telephone Interview for Cognitive Status (TICS) (Brandt, Spencer, & Folstein, 1988) and be in sufficiently good physical health to participate in the telephone interviews. Ten of the College cohort and eight of the Inner City cohort were unable to participate due to cognitive impairment and/or ill health. Twenty-seven of the College cohort members and 31 of the Inner City members completed only part of the assessments. There were 16 members and spouses in the College cohort and 20 members and spouses in the Inner City cohort who decided not to participate. Primary reasons for declining to participate were that participants were too busy and unwilling to commit to daily interviews, not interested, disliked telephone contacts, or had hearing problems.

The mean age of participating men in the College cohort was 82.9 ($SD = 1.7$, range 80–88) and 78.8 for women ($SD = 6.16$, range 62–87). Among the Inner City cohort, the mean age was 77 ($SD = 1.6$, range 73–81) for men and 72.4 ($SD = 5.4$, range 56–82) for women. Fifty-six of the participating College cohort members had intimate partners and 29 were single. Among the Inner City cohort, 41 had intimate partners, and 18 were single. The mean length of relationship for the College cohort couples was 41.5 years ($SD = 19$, range 1–62) and 49.5 ($SD = 9.8$, range 9–59) for Inner City couples.

The men who participated did not differ significantly from men who did not on a number of demographic variables. T-tests demonstrated that the 85 College cohort men who did participate in the study did not differ significantly from the 53 men who did not participate with respect to age, number of years of education, objectively rated health at age 70 (for details, see Vaillant, 1979, 1998), number of previous divorces and marital satisfaction at ages 75 and 80. Similarly, t-tests demonstrated that the 59 Inner City men who participated in the study did not differ significantly from the 71 men who did not participate with respect to age, number of years of education, objectively rated health at age 70, and marital satisfaction at age 70.

Information on the religious affiliation of participants' families of origin was available on all men but not for their spouses. Fifty-six percent of men were from Protestant families, 28% were Catholic, 7.5% were Jewish, 5% were Unitarian, 2% were Orthodox Christian, and 1.5% listed no religious affiliation. College men were from predominantly Protestant backgrounds (72%), 11% were Jewish, 8% were Unitarian, and 6% were Catholic. By contrast, 59% of Inner City men were from Catholic families and 32% were from Protestant families.

The Human Research Committee affiliated with Brigham and Women's Hospital has approved the study annually for the past 15 years, and written informed consent was obtained from all participants for all procedures.

Procedure

Daily telephone interviews—Men and women were interviewed separately by telephone on eight consecutive evenings. Telephone interviewers varied across the eight days and were different from those who collected data during home visits. Telephone interviewers were unaware of all prior data on participants, including responses on previous days of telephone interviewing. Interviews were conducted separately with men and women and by different interviewers. Participants were assured that their responses would remain confidential (including from intimate partners), and participants were asked to be in a location during telephone interviews where their responses could not be overheard by others. Interviews lasted 15–20 minutes and focused on the participants' activities during the previous 24 hours. Most interviews were conducted around the dinner hour each day. The mean number of interviews completed by participants was 7.6 ($SD = 0.73$). On day four, participants were asked an open-ended question inquiring about spiritual experiences (see below).

Neuropsychological testing—Two to three years following these telephone interviews, participants were again contacted and asked to participate in in-home neuropsychological testing. Among the measures administered were the American National Adult Reading Test (AMNART), a measure designed to estimate premorbid intelligence in adults with and without mild cognitive impairment (Ryan & Paolo, 1992), and the Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988), a self-report measure of positive and negative emotions experienced in the previous week.

Measures

Spiritual experiences—On the fourth day of the daily telephone interviews, participants were asked the following open-ended question, “Looking back on your life, have you had any significant spiritual experiences? If so, what?” Interviewers recorded answers verbatim.

Intelligence—Intelligence was measured during home visits using the American National Adult Reading Test (AMNART), an interviewer-administered test that indexes estimated premorbid intelligence in individuals with and without mild cognitive decline (Ryan & Paolo, 1992). The AMNART consists of 50 words which participants are asked to read aloud while a trained examiner listens for correct pronunciation. Participants’ scores are calculated by subtracting mispronounced words from the total score. Scores on the AMNART have been found to correlate with established quotients of intelligence such as Verbal IQ (VIQ), Performance IQ (PIQ), and Full-Scale IQ (FSIQ) (.83, .40, .75 all $p < .001$). Internal consistency (coefficient alpha = .94) and inter-rater reliability ($r = .99$, $p < .001$) have also been found to be strong with the AMNART (Blair & Spreen, 1989).

Positive and negative affect—Positive and negative affect experienced during the previous week was measured during home visits using the Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988), a 20-item self-administered questionnaire that measures emotional experience. On each item, participants are asked to select an answer on a five-point Likert-type scale indicating the degree, if any, to which they felt that emotion in the preceding week. Each item on the questionnaire is coded as either a positive (PA) or negative emotion (NA), with a total of 10 items on each subscale. Scores on each subscale range from 10 to 50. The alpha reliabilities for the PA and NA subscales are .88 and .85 respectively, with an intercorrelation of $-.22$. Test-retest reliability was found to increase over time with the PANAS, and the NA scale has also been shown to correlate with similar measures of negative affect (Watson, Clark, L.A., Tellegen, A., 1988).

Childhood environment (male participants)—To arrive at measures of the quality of male participants’ childhood environments, two independent raters reviewed intake data collected when participants first joined the Study. No two variables were rated by the same person, and raters were blind to outcome data. The available information on which ratings were based included a psychiatrist’s and family worker’s notes on the participant’s reports of his home life; family worker’s interviews with parents; and a developmental history obtained from parents by the family worker. The following four variables were examined in the present inquiry: Childhood Health, Home Atmosphere, Mother-Child Relationship, and Father-Child Relationship. Each scale was rated from 0 to 2 with the healthiest rating receiving the highest score. The raters’ scores were then added together and increased by one in order to create a 1 to 5 scale (Waldinger, Vaillant, & Orav, 2007).

Personality functioning in early adulthood (male participants)—Openness to Experience and Neuroticism were indexed using ratings of 25 personality traits made by study staff (including a study psychiatrist and psychologist) when participants were young adults (Soldz & Vaillant, 1999). These 25 personality traits were later scored by independent coders for their degree of correspondence to each of the Big Five personality factors—Neuroticism, Extraversion, Agreeableness, Conscientiousness and Openness to Experience (McCrae & John, 1992)—in order to construct scales that approximated these overarching factors. Principal components analysis yielded five orthogonal factors that were correlated highly with the original scales with which they were identified; these correlations ranged from .82 for Agreeableness to .95 for Openness to Experience. Openness is thought to capture the dimension of personality that concerns eagerness and interest in exploring novel experiences and ideas without anxiety and with enjoyment. Neuroticism is thought to

capture the dimension of personality that taps individual differences in the inclination to construct, perceive, and feel reality as problematic, threatening, and difficult; and to feel negative emotions such as fear, shame, and anger (Rolland, McCrae, & Allik, 2002). Neuroticism and Openness scores based on early adult personality ratings were significantly correlated with Neuroticism and Openness as measured by the NEO-PI when College cohort participants were age 60 (Soldz & Vaillant, 1999), supporting the validity of these early adult factor scores.

Data Analysis

Data from verbatim transcriptions of participants' answers to the question about spiritual experiences were systematically analyzed employing grounded theory, a standard methodology for qualitative research. In contrast to typical quantitative research, the aim of grounded theory is not to test a hypothesis, but "to discover the theory implicit in the data" (Glaser, 1978). The method outlines a series of steps and guiding principles to standardize the process of inductively generating theory. The goal of the research is to understand the data theoretically as well as to generate new hypotheses for further empirical testing (Strauss & Corbin, 1990). One of the authors (NRH) trained Study staff members who were naïve to the research literature on spirituality to employ grounded theory methodology to analyze the responses to the spirituality question asked during the telephone interviews. The processes of coding and sorting allowed for identification of emergent categories for further analysis. In the first stage of coding, three raters independently reviewed participants' responses, making notes of key words and classifications. In the second stage, the raters met together to review each subject's responses, as well as the keywords and preliminary classifications. As they identified connections and patterns in both responses and categories, they were able to collapse overlapping and related categories, yielding a list of distinct codes. For example, if a participant said, "The only time I might have come close to a spiritual experience would be at an unusual movie," coders might have initially coded the response with the word "movie" and later agreed that this could fit into the category of "arts and entertainment." The raters then independently re-coded the data employing the new categories. In two final meetings, they reviewed the new coding and discussed any differences to arrive at a consensus.

The resulting data were then used to conduct statistical analyses to investigate the research questions posed in this study. Chi-square analyses were conducted to investigate whether there were gender or cohort differences in the frequency of endorsing spiritual experiences. T-tests were used to compare those who reported spiritual experiences with those who did not with respect to intellectual ability, recent emotional experience, young adult personality characteristics, and childhood experiences. To identify meaningful clusters reflecting types of spiritual experiences, principal components analysis was conducted. Finally, t-tests and Pearson correlations were conducted to examine whether childhood environment and young adult personality functioning predicted the endorsement of particular types of spiritual experience in late life.

RESULTS

1. When octogenarians look back on their lives, how commonly do they endorse a history of spiritual experiences?

Of the 224 individuals interviewed, 127 (57%) responded that they had significant spiritual experiences at some point in their lives, and 97 (43%) said they had not. Women were significantly more likely to endorse spiritual experiences than were men: 53 of 80 women (66%) and 74 of 144 men (51%) responded positively to this question ($\chi^2 = 4.6, p < .05$). College men and their spouses were significantly more likely to endorse spiritual experiences than were men and women from the Inner City cohort: 87 of 131 in the College

sample (66%) and 40 of the 93 in the Inner City sample (43%) responded positively to this question ($\chi^2 = 12.1, p < .001$).

2. Do those who endorse spiritual experiences differ from those who do not with respect to intellectual and emotional functioning?

As shown in Table 1, men and women who endorsed a history of spiritual experiences scored higher on intellectual functioning as measured by the AMNART. Consistent with the socioeconomic status differences noted above, both men and women who endorsed spiritual experiences had more years of formal education than those who did not. However, the mean difference in years of education was more pronounced (three years) between women who did and did not endorse spiritual experiences than it was between the two groups of men (one year). Men who endorsed histories of spiritual experiences reported, on average, greater positive emotion over a seven-day period as assessed by the PANAS, but there were no differences between the two groups in reported negative emotion. Women with and without histories of spiritual experiences did not differ in their experience of either positive or negative affect as measured by the PANAS.

3. Among those who endorse spiritual experiences, what types of experiences do they report?

Grounded theory analysis of the verbatim responses to the interview question about spiritual experiences yielded 14 variables listed in Table 2. We conducted a principal components analysis to identify meaningful clusters of the 14 variables. In rating each variable, participants were assigned a value of 1 if their response was rated as containing the particular element, and a value of 0 if it did not. Scores on each of the 14 variables were subjected to principal axis factoring with orthogonal rotation according to varimax criterion. Based on examination of the scree plot and the inclusion criterion of eigenvalues > 1 , four groupings were identified that accounted for 51% of the total variance. Twelve of the 14 items loaded strongly on one of four factors. The lowest factor loading for any variable was .51, all above the “good” loading level identified by Comrey and Lee (1992). The two variables that did not load strongly on any factor were dropped from analyses. Table 2 shows the factor loadings for all 14 variables.

Factor 1, which we labeled Experiences of Awe/Nature, included the mention of spiritual experiences related to the following: aesthetics, arts, awe, and nature. An example of a response that typifies this category is: “I consider, for me, being in nature to be a spiritual episode. The more beautiful and unusual, the greater the sense of spirituality.”

Factor 2, labeled Traditional Religion/Institutions, included mention of experiences that occurred in a traditional religious setting, often related to God or a religious observance. A response typical of this factor was: “The only way I can relate to that or what I think you’re looking for is that occasionally you have an experience—it’s usually music for me. Like if I’m sitting in church and I hear the choir, and you have an experience that lifts you out of yourself.”

Factor 3 included mention of the death of an important other person, or another negative life event; this factor was labeled Death/Negative Life Event. A response that exemplifies this factor is: “I think the most stressful thing that happened helped me focus on spiritual things—it was the suicide of my son. It was a terrible jolt for all of us ... it helped us think of life and where we were and what our values were and how to accommodate such a traumatic experience.”

Factor 4 included mention of times when respondents had a sense that there was a higher power watching over them—including mention of a guardian or sacred other, sometimes in situations of danger—and was labeled Sacred Other/Survival. The following description of a wartime experience was typical of responses in this category:

The next thing I knew, all of the shells near us blew up ... If I had given the compass point a little off, it would have landed on us. I like to think that the Lord had a hand in keeping us safe that day.

Analyses used individual scale scores for each factor for each participant, derived by taking the mean of all items on that factor (Tabachnick & Fidell, 1996). Independent samples *t*-tests revealed that men and women did not differ significantly in the frequency with which they reported particular types of spiritual experiences. Compared with those in the Inner City cohort, men and women in the College cohort had significantly higher scores on the Awe/Nature factor ($M_{College}$ [$n = 87$] = .18, $SD = .30$; $M_{Inner\ City}$ [$n=40$] = .03, $SD = .13$; $t = -3.8$; $df = 125$; $p < .001$), but the two groups did not differ on the other three factor scores.

4. Are there specific developmental antecedents of reporting spiritual experiences in late life?

Childhood environment. We examined whether men who reported spiritual experiences differed from those who did not with respect to the quality of their early home lives and relationships with parents in childhood. (Early childhood data were not available on the spouses in this sample.) There were no differences between those who reported spiritual experiences and those who did not with respect to quality of home life or quality of relationships with their mothers. However, at the trend level, men who endorsed a history of spiritual experiences had better relationships with their fathers in childhood than those who did not (Reported spiritual experiences, M [73] = 3.2, $SD = 1.6$; Reported no spiritual experiences, M [70] = 2.8, $SD = 1.4$; $t = 1.9$; $df = 141$; $p = .06$).

Among those men who endorsed spiritual experiences, better childhood home environments predicted the frequency with which octogenarians reported a history of spiritual experiences concerning losses or other negative life events (r [74] = .40, $p < .001$). (Better relationships with parents in childhood were also correlated with greater frequency of endorsing spiritual experiences regarding negative life events, but when childhood home environment, relationship with mother, and relationship with father were considered together in a linear regression equation, only childhood home environment remained a significant predictor.) In addition, men who had poorer health in childhood (e.g., a serious childhood illness) reported fewer spiritual experiences involving a guardian or sacred other watching over them than men who had better childhood health (r [74] = $-.36$, $p < .01$).

Early adult personality functioning. Male participants who had higher scores on the Openness to Experience scale were more likely to endorse spiritual experiences as octogenarians (see Table 1). By contrast, participants' degree of Neuroticism in early adulthood did not predict whether they would report spiritual experiences later in life, nor did it predict the particular types of experiences endorsed as octogenarians. However, those who scored higher on the Openness subscale were more likely to endorse spiritual experiences related to aesthetics and nature in late life (r [46] = .37, $p = .01$).

DISCUSSION

The primary aim of this study was to understand the nature of discrete spiritual experiences recalled by octogenarians looking back on their lives, to compare the intellectual and emotional functioning of those who report spiritual experiences with those who do not, and

to examine childhood experience and young adult personality style as predictors of reporting spiritual experiences in late life. Spiritual experiences were endorsed by a majority of participants. Of particular note is the fact that only three of the 127 reports of spiritual experiences included explicit mention of religious conversion, and only three characterized their experiences as in some way “mystical.” This suggests that discrete spiritual experiences constitute a domain of spiritual life that is not confined to mysticism and conversion and that is relatively unexplored in the research literature. Our finding that women were more likely to report a history of spiritual experiences than men is consistent with much of the literature on gender and spirituality (Mahalik & Lagan, 2001; Ozorak, 1996; Reich, 1997).

The finding that men who endorsed spiritual experiences also reported more positive affect on the PANAS may reflect a confluence of positive emotion and spiritual meaning-making. Viktor Frankl wrote extensively about meaning-making and spirituality in the context of concentration camp experiences. In his book, *Man's Search for Meaning*, he argues that spiritual life could deepen despite the horrors of concentration camp experiences, stating, “It is this spiritual freedom—which cannot be taken away—that makes life meaningful and purposeful” (Frankl & Lasch, 1992, p. 87). Our findings may indicate that the same disposition that is associated with positive emotional experience may also make one more inclined to find spiritual meaning in life events (e.g., losses, experiences in nature) that are not imbued with significance by those with less positive temperaments. Of note is the fact that there were no differences in positive or negative affect between women who endorsed spiritual experiences and those who did not. This finding may reflect a true gender difference that warrants further investigation, or it may reflect the fact that the smaller number of female participants resulted in reduced statistical power to detect existing differences.

Men and women in the higher SES group (College cohort) were more likely than those in the Inner City group to endorse spiritual experiences. This is consistent with other differences in the composition of these two cohorts—specifically, those who endorsed spiritual experiences had more formal years of education and scored higher on the measure of intelligence administered in late life. Prior work suggests that higher social class is associated with higher levels of self-directed values (Kohn, 1977; Lamont, 1993), and this in turn may entail a greater interest in spirituality. Wink and Dillon (2003) found older individuals from upper class households to be more interested in gaining wisdom, and this too, may be related to the class difference we find in the likelihood of reporting spiritual experiences.

Participants' verbatim descriptions of their experiences were coded using grounded theory methodology by coders who were unfamiliar with the existing research literature on spirituality. In this way we hoped to minimize the influence of existing theories of spirituality on the categories that emerged. The four categories resulting from the principal components analysis were related to categories described in other studies, but the emphasis of this study on discrete experiences tapped aspects of spirituality that emerge less clearly in studies of day-to-day spirituality. So, for example, in the study by Underwood and Teresi (2002) daily experiences included feeling touched by the beauty of nature and feeling guided by God. However, our focus on events made it more likely that individuals would speak specifically about feeling that a higher power or guardian was watching over them. Similarly, respondents in our study identified specific losses and the meaning-making that occurred around those losses as core aspects of spiritual experiences—and these might be less likely to emerge in response to questions about ongoing daily spiritual life.

The finding that participants in the College cohort were more likely than those in the Inner City cohort to identify spiritual experiences related to nature is one that warrants further study, as it is unclear whether this might be a function of differences in educational background, childhood religious upbringing, degree of geographic mobility and exposure to diverse natural phenomena, or other factors that have yet to be elucidated.

For the men in the sample, childhood experience was relatively unimportant in predicting who would endorse a history of spiritual experiences, but it did predict endorsing specific types of spiritual experiences among those who responded in the affirmative. Compared with those who grew up in less warm and more troubled homes, those who had better childhood home environments were more likely to report spiritual experiences surrounding losses and other negative life events. This may be due to the influence of a positive family environment in which coping with adversity included positive meaning-making (that is, “making lemons into lemonade”). Also of note is the finding that men who had serious illnesses in childhood were less likely than their counterparts without such histories to report experiences involving a guardian watching over them. Early ill health might have undermined these children’s sense of being protected in the world. Vaillant (2008) and others have argued that human infants have emotional trust in a parental protector that is hard-wired, and serious illness might disrupt this natural tendency. Moreover, if religious faith stems from such basic trust, serious childhood illness may have implications for spiritual and religious development.

Men rated higher on Openness to Experience in early adulthood were more likely to endorse a history of spiritual experiences in late life than those with lower scores on this subscale. This is consistent with other studies that have found links between Openness and spirituality. More specifically, higher scores on Openness in our sample predicted reporting histories of spiritual experiences in nature. This may be a reflection of the fact that such experiences typically occur outside the domain of traditional organized religion, and that imbuing experiences in nature with spiritual significance might necessitate a certain flexibility of thinking associated with Openness as a personality trait.

This study has a number of important limitations. The sample consisted entirely of older heterosexual Caucasian men and women, most of whom grew up during the Depression and came of age in the WW II or Korean War era. Further research is needed to determine the extent to which these findings are generalizable to other ethnic groups, to people with different sexual orientations, and to different birth cohorts. Data on childhood experiences and early adult personality functioning were available only for the men, so findings cannot be generalized to women. The question about spiritual experiences was deliberately general and may have been understood differently by different individuals. Memory across a lifetime may be subject to distortion, selection, and “creativity.” Our octogenarians’ recollections of spiritual experiences may have been shaped by a variety of factors including age, cognitive capacities, social desirability, and recency of the event. Prospective longitudinal assessment of spiritual experiences across adulthood could provide more accurate information.

Despite these limitations, the study is one of the few to ask older adults about discrete spiritual experiences and to examine childhood and young adult antecedents of reporting such experiences. This study is, to our knowledge, the first to use a grounded theory approach to coding and categorizing spiritual experiences. This approach led to the emergence of four particular types of spiritual experiences that may warrant further study. Research that focuses on day-to-day spirituality may miss certain unique events that are rare yet salient in the recollections of older adults. It would be useful in future research to look at

the extent to which discrete spiritual experiences shape one's personal identity, sense of self as a spiritual being, and sense of purpose in life.

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TABLE 1

Factors Associated with Endorsement of a History of Spiritual Experiences

Spiritual experiences	Men ^d mean (SD)			Women mean (SD)		
	Yes n = 74	No n = 70	t	Yes n = 53	No n = 27	t
Intelligence (AMNART)	120.5 (10.4) n = 56	115.5 (13.0) n = 57	2.27*	121.9 (6.9) n = 39	114.4 (9.7) n = 19	3.42**
Education (years)	16.6 (3.1) n = 74	15.5 (3.9) n = 70	2.00*	15.6 (2.3) n = 53	13.7 (2.0) n = 27	3.17**
Positive affect (PANAS)	35.5 (6.5) n = 54	31.5 (8.0) n = 55	2.89**	35.1 (6.2) n = 35	33.7 (6.3) n = 18	0.74
Negative affect (PANAS)	16.2 (6.0) n = 54	15.8 (5.2) n = 55	0.36	17.0 (6.9) n = 35	15.5 (6.9) n = 18	0.75
Openness (NEO-PI) age 60	30.0 (5.8) n = 48	25.4 (6.3) n = 40	3.6***			
Neuroticism (NEO-PI) age 60	15.0 (7.5) n = 54	14.3 (5.9) n = 46	0.53			

^a Notes. Ns reflect availability of data on individual measures.

All t-tests are 2-tailed.

* $p < .05$.

** $p < .01$.

*** $p = .001$.

TABLE 2

Principal Axis Factor Analysis of Spiritual Experience Variables

	Factor			
	1	2	3	4
Aesthetic experience	.77	-.13	.16	.13
Arts	.58	--	.19	.12
Awe	.80	--	.21	.10
Experience in Nature	.70	-.18	.17	--
Faith	--	.53	-.25	.20
Institution	.20	.58	--	.17
Religious behavior	.14	.52	-.12	.39
Traditional affiliation	.11	.52	-.33	.18
Death/loss	-.31	.12	.82	.14
Negative life event	-.46	--	.70	.20
Guardian	-.20	-.45	-.14	.51
Sacred Other	--	-.17	-.31	.52
Extra-religious spiritual experience	.40	-.30	--	.23
Survival	-.30	-.54	-.20	.37

Notes. $N = 127$ participants. The extraction method used was principal axis factoring. The rotation method used was varimax with Kaiser normalization. Boldface values represent factor loadings used to make up the factors in each column. Dashes represent factor loadings $< .10$.