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Coping With Retirement: Well-Being, Health, and Religion

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ABSTRACT. The number of elderly people is increasing, and the authors aimed to identify variables associated with older adults' ability to cope with their retirement years. In this study, 133 community-dwelling men and women (*M* age = 72 years, *SD* age = 7.6 years) completed a battery of self-report measures. A path analysis showed that internal locus of control (LOC) and good self-rated health were direct predictors of the criterion variable of life coping. However, whereas health remained a standalone variable, faith in nature and humanity (positive correlation) and the use of coping religion (negative correlation) predicted LOC. Thus, LOC may play a mediatory role between the latter 2 variables and life coping. In turn, spirituality was a predictor of both the faith in nature and humanity variable and the coping religion variable. Additional findings include a positive correlation between self-rated health and seniority of preretirement occupation, a higher health rating for house dwellers compared with bungalow dwellers, and a negative correlation between age and self-rated health. The authors offer some explanations for the outcomes and suggest that the findings will be valuable to those who are responsible for the social welfare of retired people.

Keywords: coping, elderly, health, locus of control, satisfaction

THIS STUDY ON COPING MECHANISMS used by retired, community-dwelling adults is a part of an ongoing, cross-disciplinary research program on older adults being conducted at the University of Northampton. Among others, it draws on two earlier research projects: one concerning the role of religion in mediating the transition to residential care (Lowis et al., 2005) and the other concerning supplementary analyses of data on engagement in productivity occupations that Knight et al. (2007) previously assembled.

Demographic trends confirmed the rapid increases in older age groups, at least in developed countries. The U.K. Office for National Statistics (ONS) stated, "The U.K. has an aging population—the result of declines in the mortality

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rate and in past fertility rates" (published on August 22, 2007, drawing on mid-2006 estimates). The ONS added that the largest growth is among the 85 years and older age group (currently 2.05% of the population) and that the number of pensioners (currently 60 years and older for women and 65 years and older for men) now comprise 18.72% of the whole population, and this percentage is projected to increase to 19.41% by the year 2010. On the basis of 2005 figures, the ONS reported that 56% of the U.K. population 60 years of age and older are women and that 38% of pensioners live alone. Also, the ONS reported that on average, men 65 years of age can expect 16.6 years of retirement, and women can expect 19.4 years. The majority of older adults remain community domiciled, with only 5% of those 65 years of age residing in care homes, this percentage rising to 29% for the 85 years and older age group (Wanklyn, 1996).

To enjoy retirement, it is important for older adults to be able to cope with adversity in the face of the decline in physical and mental faculties that occur with age. Such effective coping should not only help to maintain a positive outlook and a meaningful level of life satisfaction for the individuals themselves, but also to reduce the need for interventions by health and welfare professionals and thus limit the drain on resources and finances. This has led some researchers (e.g., Rowe & Kahn, 1987) to refer to *successful aging*, in reaction to the notion that the aging population was more homogeneous than it actually is, and not all elderly people experience age-related health problems. However, Strawbridge, Wallhagen, and Cohen (2002) argued that the term *successful aging* makes growing older sound too competitive, with the negative implication that anyone who reaches old age and suffers from health deficits has somehow failed the ascribed tasks of aging. Aldwin and Gilmer (2004) proposed the term *optimal aging* as a more suitable description of effective coping with senescence.

A range of variables has been cited as contributing to life satisfaction, well-being, and coping in later life. Following a detailed review of existing measures, as well as the addition of some new ones, Salamon and Conte (1984) identified eight variables that they claimed were the largest domain of items that have been empirically proven to make up the construct of life satisfaction. These can be assessed by the Life Satisfaction in the Elderly Scale (LSES) and comprise daily activities, meaning in life, life goals, mood tone, self-concept, perceived health, financial status, and social contacts.

Good health is often mentioned as the most important criterion of life satisfaction. For example, Kremer (1985) found a positive correlation between state of health and satisfaction with retirement, whereas Okun and Stock (1987) reported that self-rated health was directly related to (positive) affective state in elderly subjects. Koenig, Siegler, Meador, and George (1990) found a significant correlation between poor self-rated health and psychosomatic symptoms in their sample of 100 men and women between the ages of 55 and 80 years. However, Hellström and Hallberg (2001) found that whereas the number of health complaints reported by an individual had an effect on quality of life, the effect

depended on the condition. Hellström and Hallberg categorized health impairments into two groups: (a) those ranging from musculoskeletal pain to diarrhea (which significantly lowered quality of life) and (b) others such as reduced hearing and skin rashes (which had little effect). Lee (2000) conducted a 6-year longitudinal study on 7,527 community dwellers who were 70 years of age or older and compared the findings from self-assessed health measures with those from functional status assessments by health and social services. Lee concluded that self-assessed global health and external assessments act as significant but independent predictors of functioning and mortality. Similarly, Bath (2003) noted that there was evidence from more than 40 studies that good self-rated health is associated with reduced morbidity in the elderly, although the effect appears to be stronger for men than it is for women (Deeg & Bath, 2003).

Awareness of the importance of daily activities has a long history. More than 35 years ago, Lemon, Bengston, and Peterson (1972) reviewed research on what was becoming known as *activity theory* and noted that no attempt had yet been made to formalize an explicit theory, as had been done earlier for disengagement theory (Cummings & Henry, 1961, as cited in Stuart-Hamilton, 1994). Lemon et al. sought to fill this void by defining activity in three ways: informal, formal, and solitary. Contrary to expectations, they found that the only significant correlation with life satisfaction was participation in informal friendship groups. However, Rowe and Kahn (1997) proposed that successful aging is multidimensional, encompassing, for example, sustained engagement in social and productive activities, whereas Stuart-Hamilton (1994) opined that the applicability of disengagement compared with activity theories may depend on the personality of the individual elderly person. Knight et al. (2007) surveyed 70 older men and women and identified five roles and occupations that participants considered to be work: homemaker, volunteer, carer, paid employee, and student. Knight et al. found that altruism and pleasure were the main motivators for engagement in these activities.

It seems reasonable to assume that satisfaction, well-being, and coping are linked to internal *locus of control (LOC)*, a term that Nehrke, Belluci, and Gabriel (1978) defined as a "measure of one's perception of the extent to which s/he is an active, causal agent in determining his/her history or in obtaining those reinforcers s/he values" (p. 369). Seligman's (1975) article on learned helplessness argued that elderly people may suffer a reduction of their life satisfaction when they enter residential care because of the loss of LOC. The life goals variable that Salamon and Conte (1984) used in their LSES is similar to LOC, although with an emphasis on looking back on past achievements. In a study on men 65 years of age and older, Flynn (1986) found a positive relation between LOC and both life satisfaction and self-actualization. Lowis and Raubenheimer (1997) conducted a survey on elderly men and found that those with high ego integrity scored significantly higher on (internal) LOC than did those with low ego integrity. Along with social support, perceived (personal) control has been

described as being "perhaps the . . . most important predictor of mortality, morbidity, and well-being in adulthood" (Smith et al., 2000, p. 458). Support for this view would stem from Windser, Anstey, Butterworth, Luscz, and Andrews's (2007) conclusion that various studies had found that maintenance of a sense of control may be associated with increased longevity and successful aging.

For some people, meaning in life is related to their religious faith. However, it is necessary to distinguish *religion*—generally taken to mean adherence to the beliefs, practices, and rituals of a traditional doctrine (Elkins, Hedstrom, Hughes, Leaf, & Saunders, 1988)—from *spirituality*—a way of being and experiencing that comes from awareness of a transcendent dimension. Although often there may be a significant overlap between the two, as McDonald, LeClair, Holland, Alter, and Friedman (1995) pointed out, it is possible to have spiritual faith in a higher power, while not necessarily being aligned with any orthodox religion. Koenig et al. (1990) cited previous findings that religious behaviors and beliefs assisted elders' coping with stressful life changes and that there was a positive association between religion and well-being. Further evidence stems from Hood, Spilka, Hunsberger, and Gorsuch's (1996) suggestion that seniors frequently use religious coping mechanisms and that turning to God in prayer may help to combat loneliness and depression.

In later reports, Koenig (2001, 2002) stated that nearly 90% of medical inpatients older than 60 years of age used religion to help cope by providing them with a form of control over health matters and, regarding the end of life, to put their trust in God's love, wisdom, and unique knowledge about their situations. Brennan and Heiser (2004) reviewed the literature on the effects of religiousness and spirituality as buffers to life stress, and they concluded that the effect on physical and mental health was generally found to be positive. Although data generally suggested a positive link between religious convictions and health, there is some evidence that this link may apply mostly to those people who are more severely ill (McFadden, 2005).

Kass, Friedman, Lesserman, Zuttermeister, and Benson (1991) administered their original INSPIRIT measure to participants between 25 and 72 years of age, and found positive relations between core spiritual experiences and both life satisfaction and a reduction of medical symptoms. Lowis et al.'s (2005) study investigated the role of religion and spirituality in mediating a specific traumatic event, namely, the transition of older adults to residential care. A path analysis revealed that the strongest correlation with life satisfaction (using the LSES) was the more secular variable of faith in nature and humanity. This, in turn, was mediated by the use of religion as a coping strategy, which was itself mediated by spirituality, as assessed by the INSPIRIT scale. It is interesting that they found only one gender-based difference: Women scored significantly higher than did men on a coping religion scale, $t(13.78) = 2.93$, $p = .011$. The present study includes an assessment of these same variables in a sample of community-dwelling retired people.

The present study seeks to confirm two tentative findings from the supplementary analyses of Knight et al.'s (2007) data from 232 men and women. First, self-rating for health was significantly lower for bungalow dwellers (ground floor, single story) than it was for those who lived in houses or cottages (at least two stories and with stairs), $t(207) = 2.89$, $p = .004$. Contrary to expectations, in our sample, the mean ages of those living in each type of dwelling were nearly identical ($p = .466$). Stones and Kozma (1986) surveyed a sample of men and women with an average age of 75 years and found a high correlation between happiness and satisfaction with housing, whereas Krause (1996) noted that the physical environment has a significant effect on elderly persons' evaluations of their well-being and quality of life. Although not confined to elderly participants, Kahlmeier, Schindler, Grize, and Fahrländer's (2001) study of Swiss residents 18–70 years of age showed that perceived environmental quality is an important predictor of well-being.

Second, the previous analysis found a significant and positive correlation between self-rated health and preretirement job category, $N = 232$, $r = .208$, $p = .002$, and, thus, the trend (with some small variations) was that the more senior the job category, the better the health rating. For example, the ratings for managers or senior officials was significantly higher than for sales or customer service occupations, $p < .001$; administrative or secretarial, $p < .001$; technical, $p < .001$; process operatives, $p = .003$; personal services, $p = .002$; and skilled trades, $p = .012$. Professional occupations ranked second, and, breaking the trend, the elementary occupations ranked third. The clear speculation is that those people in the more senior occupations were of higher SES and were able to take better care of their health and, at the same time, avoid the physical wear and tear of the more manual jobs. Borg, Goine, and Söderberg (2006) investigated life satisfaction in relation to social, health, and financial considerations and concluded that people with poor health or financial difficulties were more likely to report low life satisfaction because a poor economy had a significant effect on their ability to pay for the necessary treatment and coping aids.

In the present study, we explored many hypotheses. First, we sought supporting evidence for the main findings of Lowis et al.'s (2005) survey, namely, that there will be significant and positive correlations between scores on a measure of coping and well-being and those on faith in nature and humanity, use of religion as a coping strategy, and spirituality. Second, we further investigated two findings from the supplementary analyses of Knight et al.'s (2007) study, namely, that house dwellers rate their health significantly higher than do bungalow dwellers, and that there are significant differences between self-assessed health and preretirement job category. In addition, we suggested significant and positive correlations between life coping and internality of LOC and self-rated health and a significant and negative correlation between self-rated health and age. Last, as we tested the hypotheses, we looked for differences between people who lived alone and those who resided with others. We also

looked for differences between men and women, with particular reference to the finding of Deeg and Bath (2003) that the association between good self-rated health and reduced morbidity is strongest for men.

Method

Design

The study was nonexperimental, comprising a quantitative survey with data being collected through self-administered questionnaires with forced-choice response options. Statistical analyses largely comprised correlational computations of covariables, embracing multivariate and path analyses. In addition, we used analyses of variance (ANOVAs) to assess differences of mean scores between different variables. Where applicable, a measure of coping (well-being) comprised the dependent variable (criterion variable for path analysis), with factors such as gender, occupation, and dwelling as the independent variables.

Participants

The criterion for participants was that they should be at least 60 years of age, living in the community (not in a care home), and retired from full-time work. We recruited them from a combination of convenience sampling through personal contacts or at events organized for retired people, along with some snowballing, where those who were present took extra copies of questionnaires to distribute to their own contacts. Although we made no specific attempts to ensure systematic representation of a larger population, we tried to avoid substantial bias by circulating the questionnaires in a variety of social gatherings. However, we distributed approximately 30 (18%) of the questionnaires through a Women's Institute branch and a men's supper club, both of which had links to local churches (see the Procedure section for details).

The final participant sample comprised 72 women and 61 men (N = 133) between the ages of 60 and 93 years (M = 72.20, SD = 7.63). The ethnic mix is unknown; however, from knowledge of the questionnaire distribution, it is likely that the majority were White. We gleaned indications of participants' socioeconomic levels from their stated main preretirement job, which we classified according to the nine categories of the U.K. Standard Occupational Classification 2000 (ONS, 2008). We found that 58 (43.6%) fit in the combined managerial and professional categories, 32 (24.1%) fit in administrative and secretarial, 13 fit (9.8%) in skilled trades, and the remaining 23 (17.3%) were divided among technical, personal service, sales, elementary, and homemakers (7 were not stated). Thus, the sample underrepresented the lower occupational levels of the classification. From the U.K. regional codes included on the questionnaires, 64.7% of the returns were from the West Midlands regions of the United Kingdom, 12.0% were from the East Midlands, 10.5% were from the Southeast, and the remaining 10.5% were from

four other regions in England (3 were not stated). Approximately 30% of the U.K. population who were 60 years of age and older lived in the areas from which we recruited the majority of returns (ONS, 2008, based on 2005 data).

Materials

CASP-19 Well-Being Questionnaire for Older People (dependent variable). Of the many available measures to assess life satisfaction and related variables in the elderly, we selected the CASP-19 (Hyde, Wiggins, Higgs, & Blane, 2003). CASP represents the domains of control, autonomy, self-realization, and pleasure, and the *19* indicates the total number of items. Hyde et al. based their scale on a needs satisfaction model comprising the four domains, which we found to have Cronbach's alphas between .6 and .8; the correlations between them ranged from .4 to .7. A second-order factor analysis revealed a single latent quality-of-life factor. Hyde et al. reported a concurrent validity for the CASP-19 with the Life Satisfaction Index (well-being) of $r = .6$.

Other resarchers have used the measure—including the U.K. Department for Work and Pensions (DWP)—which measures responses to each question on a 4-point Likert-type scale ranging from 1 (*never*) to 4 (*often*) and resulting in a range of 19–76 for the whole scale. Some examples of questions are "I feel free to plan for the future" (control), "I can do the things I want to do" (autonomy), "I feel that life is full of opportunities" (self-realization), and "I enjoy being in the company of others" (pleasure). To limit response bias, we phrased five questions in the negative and scored in the reverse direction. The DWP reported that the mean scores that they obtained from their 2004–2005 survey of samples from England were 43 for participants between the ages of 65 and 79 years and 39 for participants of the ages of 80 years and older.

LOC. To avoid creating a final questionnaire of unacceptable length for our participants, we chose the six-item life control subscale from Recker and Peacock's (1981) Life Attitude Profile. We modified this subscale by reversing two of the questions and adopted a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). We scored it in the internal direction, which resulted in a range of 6–24 for the full scale. Reker and Peacock reported an alpha reliability of .78 for the subscale (for individual item totals, range = .54–.77) and a validity correlation of .47 with the Reid-Ware I-E Locus of Control Scale (Reid & Ware, 1974). An sample question was "I determine what happens in my life." Using this scale on 100 male participants, Lowis and Raubenheimer (1997) found that those with high ego integrity scored significantly higher on this measure than did those with low ego integrity ($p = .02$).

Nature and humanity. To assess people who do not regard themselves as affiliated with traditional organized religion, Elkins et al. (1988) developed a measure

of spirituality based on the humanistic model. The full measure comprised 85 items incorporating nine subscales with alpha reliabilities ranging from .75 to .95. We abstracted five items that were concerned with nature and humanity and that we considered to have good face validity. An example of this was "I believe the human spirit is powerful and will win in the end." To maintain scoring consistency, the response options were the same as for LOC (see LOC section), resulting in a total range of 5–20. Lowis et al. (2005) obtained an alpha reliability of .63 for this short measure (for individual item totals, range = .19–.61), and a mean score of 20.52 (using five response options yielding a maximum score of 25), when administered to 50 men and women living in care homes.

Coping religion. We used a short scale of four items to assess the degree to which people use religion as a coping measure. We adapted the first item from one of Mindel and Vaughan's (1978) questions on nonorganized religious activities that concerned the degree to which religious ideas helped in the understanding of one's life. The remaining three items, with only slight modification, comprised the religious coping measure of Krause (1998), which is part of a large battery of tests that he administered to older adults. An example of this measure is "Prayer helps me cope with difficulties and stress in my life." We used the same responses and scoring as for LOC, yielding a score range of 4–16. Kraus reported a reliability estimate of .94 for his three questions. Lowis et al. (2005) obtained an alpha reliability of .95 for the four-item measure (for individual item totals, range = .82–.93) and a mean score of 16.51 (using five response options yielding a maximum score of 20) when administering the measure to the 50 care-home participants.

Spirituality. We chose the seven-item INSPIRIT measure of Kass et al. (1991), which is free from bias toward any particular religious creed or denomination. Kass et al. developed the INSPIRIT measure on the premise that there are two characteristic elements of core spiritual experiences. The first is a distinct event and cognitive appraisal of it that results in a personal conviction of God's existence, assessed by questions such as "How often have you felt as though you were close to a powerful spiritual force that seemed to lift you outside of yourself?" (a question that Greeley, 1974, originally posed). The second is a highly internalized relation between God and the person, using a checklist of 12 types of spiritual experience (e.g., "an experience of angels or guiding spirits"), that is scored only once in terms of how much the experience convinced the individual of God's existence. The response options varied for each question, but we adjusted the scoring to provide a consistent 1–4 response option, resulting in a range of 7–28 for the whole scale. Kass et al. reported an alpha reliability of .90 and a validity correlation of .69 with the intrinsic scale of Allport and Ross's (1967) Religious Orientation Inventory. Lowis et al.'s (2005) study obtained an alpha reliability for the INSPIRIT of .86 (for individual item totals, range = .54–.72).

Biographical and single-question measures. We asked the participants the following before presenting them with the items in the scale: their gender; their year of birth (to compute age); whether they lived alone, with a spouse or partner, with another relative, or with a friend; whether their residence was a bungalow (single story), house or cottage (at least two stories), or an apartment; the first two letters of their postal or zip code; their main occupation before retirement (to code into one of the nine categories according to the U.K. Standard Occupational Classification 2000 (ONS, 2008); and self-rated average health on a scale ranging from 1 (*poor*) to 10 (*excellent*). Using a single-analogue scale to measure health is not unique; for example, Koenig et al. (1990) used a 9-point scale ranging from 1 (*serious illness*) to 9 (*perfect health*). We followed the closed questions with the statement "Feel free to make any comments you wish in this space." Thus, participants had the opportunity to state any concerns about the questionnaire and expand on any point. Although we did not use these comments in the analyses, the comments informed us of the reaction to the questionnaire.

Procedure

The University of Northampton Ethics Panel approved the research proposal, and, at all times, we adhered to the ethical principles of the British Psychological Society. The questions were contained in a six-sided, stapled size A4 document titled "Coping With Life in Retirement." A preface informed the participants that most of the questions had a tick-box response format, and the whole measure should take only approximately 10 min to complete. We did not require any names from the participants, and we assured them that their participation was voluntary. Also, we allowed the participants to decline answering any questions. On the last page, we included a statement of gratitude for participation.

The research team distributed 165 questionnaires and SASEs. Of these, we gave out 34 at a meeting of a retirement association, 23 to a men's supper club, 20 to a retired persons' interest group, 16 to a women's book club, and 6 to a Women's Institute. The three researchers distributed the remaining 66 to relatives, friends, and neighbors; sometimes, these individuals, in turn, passed further copies to their own contacts (e.g., 6 to members of a sports club). We received 133 usable forms by the deadline and excluded 6: 1 in which the participant was younger than 60 years of age, 2 in which we suspected response bias (responses to all questions were the maximum favorable), and 3 that we received after the deadline. The 139 total returned forms accounted for 84.2% of the number distributed, which exceeds the 60% that Palmer (1979) cited as the minimum acceptable for sociological surveys.

We coded the responses for statistical analyses. In the case of preretirement occupation, the coding was conducted with the consensus of two of the researchers because we needed some interpretation to match the descriptions the participants gave to the comprehensive—but not completely exhaustive—Standard Occupation

Classification list. Some participants had taken advantage of the statement in the preface and failed to respond to one or more questions. If a participant omitted a maximum of two questions in the CASP-19 scale or only one question from the other scales, we computed the subscale totals from the mean of the completed items. In a few cases, participants omitted more than two questions, and, thus, we excluded these complete subscales from our statistical analyses. Therefore, results from the affected variables reflected lower-than-maximum participant totals.

Results

CASP-19 Reliability

Although Hyde et al. (2003) found that each of the four domains of the CASP-19 had alpha reliabilities in the range of .6–.8, we obtained an estimate of only .47 for autonomy, although those for control, self-reliance, and pleasure were each in the ranges previously reported. However, for reasons detailed in the Descriptive Statistics section, we decided to delete the five items of the pleasure domain, leaving a reduced scale that we designated as *CAS-14*. The alpha estimate for this modified scale was a satisfactory .83, with individual item total correlations ranging from .12 to .65. Although one item had an estimate close to the lower acceptable limit of .1 that Nunnally (1978) advocated, we decided to preserve the integrity of the measure and did not delete this question. The revised instrument—which constituted the dependent variable, covariable, or criterion variable, depending on statistical procedure used (comprising the domains of control, autonomy, and self-reliance)—had a theoretical score ranging from 14 to 56; we were then able to deem it to be a measure of life coping rather than

TABLE 1. Cronbach's Alpha Scale Reliabilities for CASP-19 and Its Subscales (*N* = 131)

		Item total	
Measure	Full scale	Minimum	Maximum
CASP-19 well-being	.8614	.1422	.6638
CAS-14 coping	.8330	.1237	.6531
Control domain	.6723	.3360	.5516
Autonomy domain	.4791	.1802	.4289
Self-reliance domain	.6768	.2563	.6190
Pleasure domain	.8194	.4757	.7507

Note. CASP = control, autonomy, self-realization, pleasure; CAS = control, autonomy, self-realization. 19 and 14 indicate the total number of items, respectively.

well-being. Table 1 shows the Cronbach's alpha reliability estimates for the CASP-19, CAS-14, and domains.

Descriptive Statistics

The demographic items revealed that 100 (75.2%) of participants lived with their spouse or partner, 30 (22.6%) lived alone, 2 (1.5%) lived with relatives, and 1 lived (0.75%) with a friend. In addition, 88 (66.2%) lived in a house, 32 (24.1%) lived in a bungalow, 12 (9.0%) lived in an apartment, and 1 did not report type of residence. Table 2 shows summary statistics for each of the scales used, including the health self-assessment measure.

Scores on all full-scale measures except the INSPIRIT exhibited a degree of negative skewness, although none exceeded the 2.58 degree that Clark-Carter (1997) advocated as the upper limit for normality for both skewness and kurtosis. However, the pleasure subscale of the CASP-19, in addition to having the most marked skewness, also had a kurtosis above the recommended limit. The mean scores on most measures indicated a general tendency of participants to rate themselves favorably on many questions, and this was particularly marked with the pleasure subscale (M = 18.92 [of a theoretical maximum of 20], SD = 1.64). Because this measure had little obvious ability to discriminate between participants, we deleted the five pertinent items from the CASP-19 instrument. The histograms of the score distributions generally reflected the skewness and kurtosis statistics, but with both the INSPIRIT and coping religion scales indicating slight tendencies toward bimodal distributions.

TABLE 2. Summary Statistics for Measures

Measure	*M*	*SD*	Range	Skewness	Kurtosis
CASP-19 well-being	63.58	6.77	40–74	–1.14	1.17
CAS-14 coping	44.36	5.73	26–54	–0.75	0.22
Locus of control	19.50	3.51	9–24	–0.59	–0.08
Nature and humanity	16.73	2.60	7–20	–0.99	1.48
Coping religion	10.45	4.67	4–16	–0.15	–1.55
INSPIRIT	15.68	6.70	7–28	0.40	–1.28
Control domain	12.25	2.20	6–16	–0.46	–0.11
Autonomy domain	16.12	2.09	11–20	–0.42	–0.48
Self-reliance domain	16.30	2.54	8–20	–0.91	0.65
Pleasure domain	18.92	1.53	14–20	–1.74	2.61
Health index	7.73	1.52	3–10	–0.70	0.19

Note. CASP = control, autonomy, self-realization, pleasure; CAS = control, autonomy, self-realization. 19 and 14 indicate the total number of items, respectively.

The obtained mean score of 63.58 for the CASP-19 measure is markedly higher than are the scores of 43 (for the 65–79-year-old participants) and 39 (for the participants who were 80 years and older) that the DWP previously obtained, confirming the bias among the participants to rate themselves favorably. It may be that how we recruited our participants resulted in a sample that was above average in activity level and involvement in community events; the mean self-rated health of 7.73 (i.e., 77.3% of maximum) could be further evidence of a skewed sample in this regard. The mean score of 19.50 for LOC is only slightly higher than the one of 19.07 that Lowis and Raubenheimer (1997) obtained for their high ego integrity male participants, but the INSPIRIT mean of 16.58 was below the one of 19.80 that Lowis et al. (2005) obtained for residents of care homes. This reduced religious involvement was also reflected in the current mean score for coping religion at around the 65% of maximum, compared with 82% for the care-home residents (direct comparison of mean scores was not possible because of scoring differences). However, a comparison of current and previous scores for the nature and humanity scale revealed similar proportions of approximately 82–83% of theoretical maximum.

After considering the relevant psychometric properties of the scales that we used, we concluded that the scores complied well with the requirements for parametricity to justify the use of parametric statistics for subsequent analyses.

Hypothesis Testing

A *t* test yielded no significant gender-based differences on any of the variables we assessed, although there was a trend for women to score higher than men on the measure for coping religion ($p = .062$, two-tailed). Therefore, we conducted all of the subsequent analyses using combined scores from all of the participants.

Table 3 shows zero-order correlations (Pearson) for all the scales. The probability levels shown for these and all subsequent findings that we reported are two-tailed. We found predicted positive and significant relations between scores from the CAS-14 measure and those from internality of LOC, nature and humanity, and self-rated health, but did not find positive significant relations between LOC and coping religion or INSPIRIT. These two nonsignificant findings contrast with what we predicted on the basis of Lowis et al.'s (2005) study with care-home residents, although they used a somewhat different measure to assess well-being and coping in that study. We also obtained positive and significant interrelations between scores on the nature and humanity, coping religion, and INSPIRIT measures, as in the earlier study.

Scores on the self-rated health measure yielded a positive and significant relationship with LOC, suggesting that those people who take responsibility for their lives also regard themselves as relatively healthy. However, the link between health and age was significant but negative, confirming the finding from

TABLE 3. Pearson Correlations Between Measures

Measure	1.	2.	3.	4.	5.	6.	7.
1. CAS-14	—	.674**	.320**	–.119	–.025	.580**	–.229***
2. Locus of control		—	.357**	–.045	.016	.303**	–.124
3. Nature and humanity			—	.525**	.554**	.092	.058
4. Coping religion				—	.903**	–.077	–.194†
5. INSPIRIT					—	–.098	.097
6. Health						—	–.326
7. Age							—

Note. CAS = control, autonomy, self-realization. 14 indicates the total number of items.
†$p = .036$. **$p < .01$. ***$p < .001$.

Knight et al.'s (2007) study and indicating a perception of physical decline with age (see Figure 1).

The effect sizes of all the aforementioned significant correlations would be classified as either large or medium (Cohen, 1988) even when corrected for multiple analysis. Also, there were two other modest relations in the levels of probability usually adopted in the social sciences: a positive one between age and coping religion and a negative one between age and CAS-14; although, if corrected, these would reduce to nonsignificance.

As predicted, and confirming Knight et al.'s (2007) result, we obtained significantly higher self-rated health scores for house residents (M = 8.06, SD = 1.28) than for bungalow residents (M = 7.28, SD = 1.67), $t(116) = 2.693$, p = .008. However, unlike the earlier study, the mean age for bungalow residents (M = 74.78 years, SD = 7.98 years) was now significantly higher than that for house residents (M = 70.21 years, SD = 6.68 years), $t(111) = 3.071$, p = .003, suggesting that increasing age and deteriorating health motivate a move to dwellings with easier accessibility.

Also, we obtained confirmation of the earlier findings concerning differences in self-assessed health ratings between preretirement job classes. The job categories were arranged in an approximate hierarchy from senior managers to

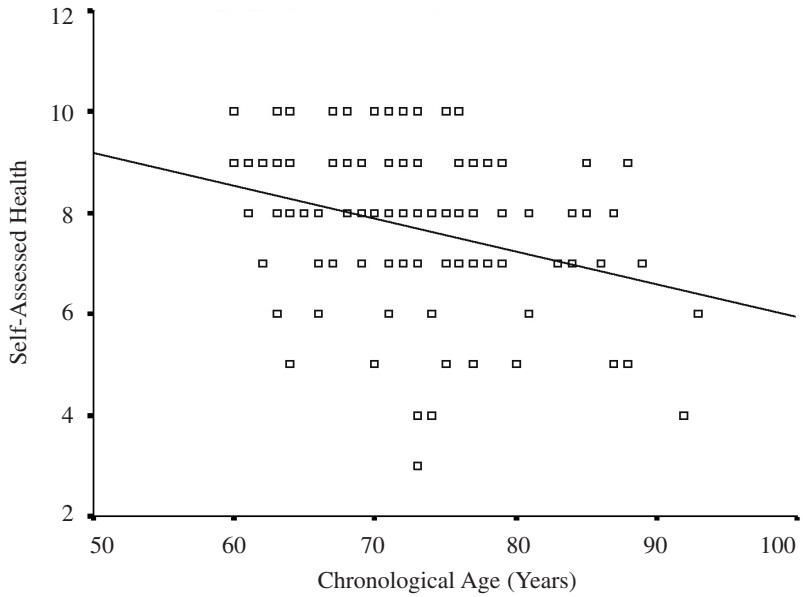

FIGURE 1. Correlation between self-assessed health and chronological age. For self-assessed health, 10 = excellent.

basic operatives. The Pearson correlation between the two variables was significant, $r = –.248$, $p = .006$, suggesting that perceived health reduces as job seniority decreases. A one-way ANOVA yielded a significant effect, $F(6) = 2.375$, $p = .034$, and post hoc t tests revealed that senior managers rated their health significantly higher than did both sales and customer service workers, $t(17) = 2.293$, $p = .035$; and skilled trades workers, $t(26) = 2.459$, $p = .021$ (for a graphical indication of this outcome, see Figure 2).

Small trends were obtained for higher health ratings and CAS-14 scores in favor of those who lived with a spouse or partner compared with those who lived alone, but these were below the two-tailed significance levels normally adopted in the social sciences.

Path Analysis

The correlations in Table 3 indicate that LOC, nature and humanity, and self-rated health are strongly correlated with the criterion measure of life coping. Although the measures of INSPIRIT and coping religion have no such direct relations with the CAS-14 scores, they are positively correlated with some of the other variables, suggesting the possibility of mediated effect. To explore this suggestion,

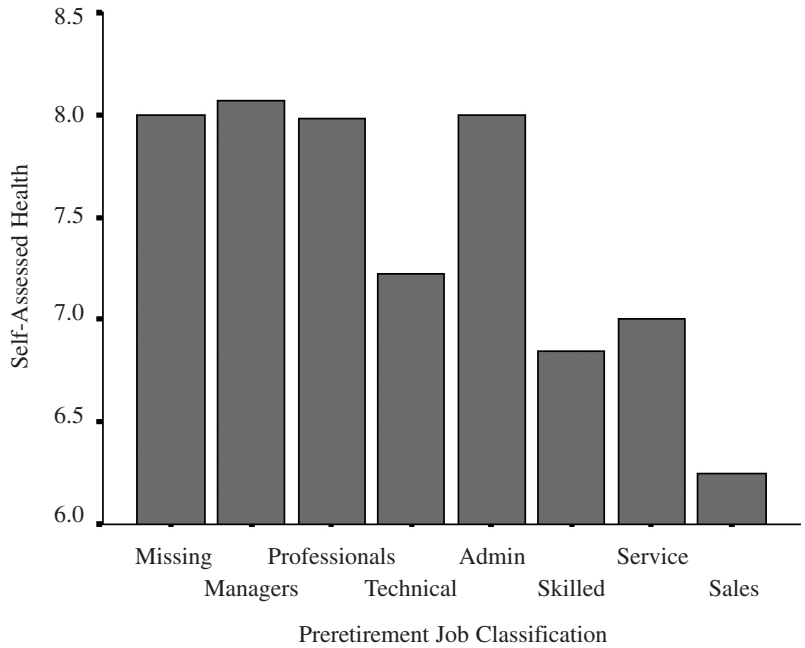

FIGURE 2. Mean self-assessed health rating and preretirement job classification. For self-assessed health, 10 = excellent.

we conducted a path analysis, and Figure 3 shows its outcome. We obtained these results through successive stepwise multiple regression analyses, with CAS-14 scores as the initial criterion and each predictor from the previous analyses as the criterion for the next stage of regression with the remaining variables. The path coefficients represent standardized partial regression coefficients (β weights).

It is evident from the outcome that two factors—internality of LOC and self-rated health—individually and significantly predicted participants' scores on the measure of life coping (CAS-14). However, the tendency to score highly on nature and humanity, and the tendency to score low on the coping religion measure were both individually identified as predictors of LOC when we entered the latter as the criterion. This suggests that the positive relation between nature and humanity and CAS-14 and the inverse relation between coping religion and CAS-14 both may be mediated by LOC. It is interesting that there were no such predictors for self-rated health, indicating that this was an important but stand-alone copredictor of successful life coping for the participant group. We found scores on the INSPIRIT—though not significantly linked with those on the CAS-14 measure—to predict both the nature and humanity scores and those on the coping religion scale (also not significantly linked to CAS-14).

Approximately 10% of respondents made comments in the space provided, with most relating to religion, professing either that God was the most significant factor in their lives or that they were complete nonbelievers.

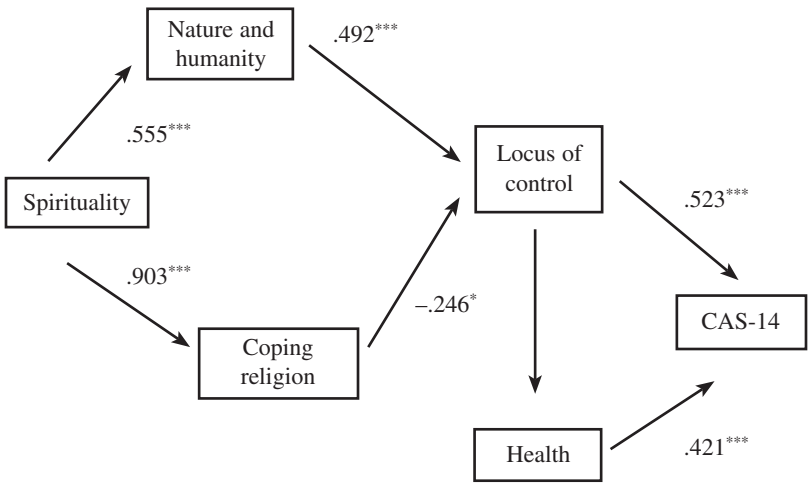

FIGURE 3. Path diagram illustrating the interrelations among scores on the CAS-14 coping scale and measures of control, health, nature and humanity, coping religion, and spirituality. CAS = control, autonomy, self-realization. 14 indicates the number of items.
***p* < .05. ****p* < .001.**

Discussion

The overall aim of the present study was to identify variables that were associated with older adults' ability to cope with their retirement years or, to use Aldwin and Gilmer's (2004) terminology, factors that can lead to optimal aging. In pursuit of our objective, we wished to compile a pathway to show the variables that may be linked directly with life coping and those that may play a mediatory role. We obtained a number of significant outcomes.

Using a combined measure of control, autonomy, and self-reliance as our dependent or criterion variable, we confirmed the hypotheses that internal LOC, faith in nature and humanity, and good self-rated health were all positively and significantly correlated with life coping. Although the use of neither religion nor spirituality as a coping mechanism was directly linked to the dependent variable, they both revealed positive correlations with the variables that were associated with life coping. This is illustrated by the path analysis, which shows that LOC and good self-rated health were predictors of the CAS-14 scores, whereas faith in nature and humanity (positive) and the use of coping religion (negative) were predictors of LOC. In turn, spirituality was the predictor of both nature and humanity and coping religion. Health remained a stand-alone factor; no other variable predicted it. Other analyses supported the predictions of an inverse relation between age and self-rated health, lower health and older mean age for bungalow residents compared with house dwellers, and a positive correlation between self-rated health and approximate seniority of preretirement occupation.

Our identification of internal LOC as a significant covariant of life coping confirmed previous reports such as Lowis and Raubenheimer's (1997) finding of a link between LOC and ego integrity, Smith et al.'s (2000) statement that perceived control is an important predictor of well-being in adulthood, and Windser et al.'s (2007) conclusion that a sense of control may be associated with increased longevity and successful aging. Our participants were community dwellers and had not (yet) entered residential care where a loss of internal control can lead to learned helplessness (Seligman, 1975). The significant correlation between scores on a measure of faith in nature and humanity and those on the dependent variable concurs with the finding Lowis et al. (2005) obtained with residents of care homes. The nature and humanity scale assesses the more secular notion of spirituality and external forces, rather than that associated with conventional religions, although the path analysis suggests that it may still play a mediatory role between spirituality and LOC.

It is perhaps unsurprising that we obtained a positive correlation between self-rated health and life coping, and our findings concurred with those of others such as Okun and Stock (1987), Lee (2000), and Bath (2003). However, the path analysis indicated that it would be premature to state that it was the single most important determinant of life coping among the elderly, as McMullen and Luborsky (2006) suggested, because LOC was identified as a copredictor. The

finding that health and LOC were positively correlated suggests that people need to have a reasonable level of health to retain a sense of control of their life. This would be consistent with previous findings that (internal) LOC is associated with good physical and mental health among the elderly (Heckhausen & Schultz, 1995; Windser et al., 2007). However, the absence of gender-based differences contradicts the finding of Deeg and Bath (2003) that the relation between self-rated health and morbidity appears to be stronger for men than for women.

Neither of the two religious variables (coping religion, spirituality) was directly correlated with the dependent variable of life coping. Although Lowis et al.'s (2005) research revealed positive associations between each of these and life satisfaction, in neither study did the path analyses indicate that these variables were direct predictors of the criterion. In the present study, the picture was further complicated by scores on the coping religion subscale being negatively correlated with those on the LOC measure. However, optional comments on the questionnaire by a few of the participants provided a clue in that those who are strongly religious may regard their destiny to be in God's hands rather than their own. Thus, there was a tendency to respond to the LOC questions as if the individual did not have an internal LOC. Our finding of a significant and positive correlation of coping religion scores with age is consistent with earlier longitudinal data (cited in McFadden, 2005) that suggest that religion, especially nonorganizational religiosity, increased with age among older adults.

The fact that the path analysis located spirituality at the most remote point from the criterion variable is of interest, although the scores predicted those on the coping religion scale, as they did with the earlier study with care-home residents. These findings contradict previous reports; for example, in Kass et al.'s (1991) study, the originators of the INSPIRIT measure obtained a positive correlation between core spiritual experiences and life satisfaction; Hood et al. (1996) suggested that religious coping mechanisms are frequently used by seniors; and Koenig et al. (1990) and Koenig (2002) attested to the benefits of using religion as a coping mechanism.

The explanation for the lack of support for such previous findings could be related to the participants we used in the present study: The community residents were generally still reasonably healthy and active despite being retired. McFadden (2005) stated that there is evidence that the use of religious coping mechanisms applies mostly to those who are more severely ill. Koenig (2002) also referred to religious coping by "medical inpatients" and "health matters . . . near the end of life" (p. 21). It can be speculated that the present cohort had not, on average, reached the stage of religious dependency. Instead, the main predictor was internal LOC (along with health), although LOC itself could play a mediatory role between religious and spiritual factors and life coping.

Regarding the finding of a higher self-rated health rating for those who lived in houses, compared with those who lived in bungalows (single story), unlike the supplementary analyses of Knight et al.'s (2007) data, the present study also

revealed a comparatively low mean age for house residents. Thus, this outcome seems intuitive, suggesting a trend for those who have age-related health deterioration to move into single-story accommodations to facilitate easier physical coping. Although this finding aligned with the findings of Stones and Kozma (1986), Krause (1996), and Kahlmeier et al. (2001), future researchers may include a question on how long the residents have lived at their current home to confirm this hypothesis.

The significant correlation between self-rated health and approximate level of seniority of preretirement occupation confirms the finding from the supplementary analyses of Knight et al.'s (2007) data. We found little previous work on this outcome, although Borg et al. (2006) noted a link between low life satisfaction and poor economy, which has social, health, and financial implications. However, the finding is intuitive, and it can be suggested that better educated individuals attain the more senior occupations and are more knowledgeable and have the financial resources to take adequate care of their health. Researchers may specifically investigate this finding.

Although participant numbers in the present study were high ($N = 133$), the sample underrepresented the lower SES categories. In addition, the credibility of the outcomes will have been influenced by the validity of the scales used (some of which were short) along with any response bias that may have occurred during the completion of these self-report measures. We were careful to use only established scales in our questionnaire battery, and their reliabilities were either available from previous studies or were computed for the present study. However, as is clear from the descriptive statistics (see Table 2), in many cases, the mean score on individual scales was nearer the maximum than the midpoint. So extreme was this in one instance that we omitted a subscale from the original CASP-19 measure. The fact that all of the measures had been successfully used by others for elderly populations leads us to suppose that our participants were, in general, physically and mentally more fit than we had anticipated, and that our data collection may have benefited from the use of at least some measures designed for adults who were not yet at the stage of senescence.

Despite the aforementioned points of criticism, we believe that our study has made a significant contribution to the understanding of some of the variables that can affect older adults' ability to cope with life after they have retired from full-time paid employment. In particular, the importance of good self-rated health and the belief that one is in control of one's life has been highlighted. In addition, our findings on the role of religion and spirituality are of particular interest because they suggest that, for relatively healthy and active retirees, these variables tend to operate as secondary coping mechanisms rather than primary coping mechanisms (assuming that they play a part at all) and that some of the previous reports that emphasize the importance of religious coping may have the most relevance for individuals of more extreme age and fragility. However, it is prudent not to ignore individual differences because it was clear that the present

participant pool included individuals who had strong religious convictions as well those who had none.

It is important that those who are responsible for the social welfare of retired people (e.g., policymakers, carers, service providers) understand how retirees cope with the potentially traumatic event of leaving full-time employment and then help to ensure that this transition to retirement is as painless and satisfying as possible. Assisting individuals in maintaining a sense of control over their lives, even when in residential care, and ensuring availability of medical facilities to treat ailments and provide reassurance, will play a major role in facilitating a sense of life coping among the elderly.

AUTHOR NOTES

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