This study examined the effects of religious attendance on three dimensions of psychological well-being using panel data from a three-generations study of Mexican Americans from Texas (N = 624). Well-being dimensions included life satisfaction (the 13-item LSIA), and respective seven- and four-item depressed and positive affect subscales of the CES-D. Two-wave path analyses revealed a cross-sectional association between religious attendance and life satisfaction in the two oldest generations, and a salutary longitudinal effect of religious attendance on subsequent depressed affect in the youngest generation. Findings for life satisfaction and depressed affect withstood controlling for health and five sociodemographic correlates of religious attendance and well-being.

Key Words: Religious attendance, Psychological well-being, Mexican Americans, Panel analysis, Intergenerational research

Religious Attendance and Psychological Well-Being in Mexican Americans: A Panel Analysis of Three-Generations Data

Jeffrey S. Levin, PhD, MPH, Kyriakos S. Markides, PhD, and Laura A. Ray, MPA

Recently, there has been considerable growth in gerontological research on the impact of religious involvement on mental health and psychological well-being. Although religion has never been a mainstream topic in gerontology, gerontologists have shown longstanding if sporadic and unsystematic interest in its influence on well-being (see Levin, 1989). From the 1950s through the early 1970s, the establishment and growth of research in this area was principally due to the pioneering work of Moberg (e.g., 1953, 1965, 1971). The further emergence of religion and aging as a field of study is documented in the first edition of The Encyclopedia of Aging (Markides, 1987). The years since have seen the publication of key literature reviews (Levin, 1989; Moberg, 1990; Witter, Stock, Okun, & Haring, 1985) and books (e.g., Koenig, 1994a, 1995; Koenig, Smiley, & Gonzales, 1988; Thomas & Eisenhandler, 1994), inclusion of a chapter on religion in the fourth edition of the Handbook of the Psychology of Aging (McFadden, 1996), and publication of Aging, Spirituality, and Religion: A Handbook (Kimble, McFadden, Ellor, & Seeber, 1995), which includes a chapter reviewing and critiquing research, methods, and theory linking religion and well-being (Levin & Tobin, 1995).

Despite these recent developments, research on religion, aging, and well-being has been largely unfocused, and efforts at synthesis and at developing programmatic emphases have been few. With the notable exception of several widely cited articles (e.g., Blazer & Palmore, 1976; Koenig, Moberg, & Kvale, 1988; Krause & Tran, 1989; Markides, Levin, & Ray, 1987; Mindel & Vaughan, 1978), gerontological research published in this area is largely isolated from conceptual work on both religion and well-being and from theoretical and methodological developments in religion and aging. This has led some to ask, “Is religion taboo in gerontology?” (Sherrill, Larson, & Greenwold, 1993) and has created incentive for systematic efforts to identify limitations of prior studies in order to redirect research (Levin, 1989, 1995a, 1995b; Levin & Tobin, 1995). Identified needs include more precise conceptualization and measurement of both religious involvement and psychological well-being, and a greater emphasis on studies that are longitudinal, focus on ethnic minority populations, and are theory- or hypothesis-driven.

First, researchers must meaningfully account for the different ways of being religious and practicing religion. Gerontologists have begun to differentiate among types of religious involvement and to validate multidimensional measures (e.g., Ainlay & Smith, 1984; Chatters, Levin, & Taylor, 1992; Krause, 1993; Krause & Tran, 1989; Levin, Taylor, & Chatters, 1995). This work was stimulated by Mindel and Vaughan (1978), who distinguished between formal, institutional, public ("organizational") forms of religious involvement (e.g., religious attendance, church or...
synagogue membership) and more informal, noninstitutional, private ("nonorganizational") forms of involvement (e.g., bible study, private prayer, watching religious television). Subsequent research has confirmed the importance of this distinction, as different religious dimensions exhibit different effects on various psychosocial and health-related outcomes (e.g., Koenig, Moberg, & Kvale, 1988; Levin, Chatters, & Taylor, 1995). Research questions and study hypotheses thus ought to be based more closely on the particular religious construct(s) under consideration in order to avoid the common misperception that all measures containing variations of the word "religion" are interchangeable and equally valid indicators of an imaginary "singular something called religiosity" (Levin & Tobin, 1995, p. 38).

Second, religious gerontologists must recognize that psychological well-being is also best characterized as multidimensional. Within gerontology and geriatrics, numerous measurement instruments have been developed to assess the various dimensions or domains of well-being, such as life satisfaction, depressed affect, positive affect, congruence, and symptomatology (see Levin & Tobin, 1995). In religious research, however, single items or unidimensional indices are too often used, and results are generalized to "well-being" or "mental health" as a whole. It is important for research questions and hypotheses to be framed explicitly in terms of the particular aspect(s) of well-being under study, certain of which (especially depression and affect or mood disorder) have been the subject of considerable clinical research among geriatricians (Koenig & Blazer, 1992).

Third, according to Koenig and associates (Koenig, Smiley, & Gonzales, 1988), there is "a dire need for longitudinal studies that follow middle-aged persons ... over time into late old age" (p. 162), especially in the area of religion and well-being. Relatively few studies in this area have explored religious effects on well-being longitudinally (e.g., Anson, Antonovsky, & Sagy, 1990; Idler & Kasl, 1993; Koenig et al., 1992; Markides, 1983; Markides, Levin, & Ray, 1987; Williams, Larson, Buckler, Heckmann, & Pyle, 1991), but the presence of at least some positive findings suggests the need to pursue this more carefully. Evidence of both cohort and aging effects in religious involvement (e.g., Guy, 1982; Haganars, 1980), as well as the often-noted presence of confounding between behavioral measures of religious involvement and functional or somatic measures of health and well-being in cross-sectional analyses of older-adult samples (see Levin, 1989), points to the value of longitudinal research.

Fourth, unlike other areas within gerontology, considerable research has focused on patterns and outcomes of religious involvement within particular racial and ethnic minority groups — notably the work of Taylor and associates on African Americans (summarized in Chatters & Taylor, 1994) and of Markides and associates on Mexican Americans (e.g., Levin & Markides, 1986, 1988; Markides, Levin, & Ray, 1987). Additional work has drawn on samples of African-American respondents (e.g., Brown & Gary, 1987, 1988; Brown, Ndubushi, & Gary, 1990; Ellison & Gay, 1990; Krause & Tran, 1989; Levin, Chatters, & Taylor, 1995) and has examined black-white differences in dimensions of well-being (e.g., St. George & McNamar, 1984). Nonetheless, nearly all of these studies are cross-sectional, empirical research on U.S. Hispanics has declined over the past decade, and particular analyses tend to focus on a respective single dimension of well-being.

Finally, as in much of social gerontology, empirical research has been mostly atheoretical, the justification being that little is known and thus purely "exploratory" research is required. On the contrary, since 1980 alone, over 100 empirical studies reporting the effects of religious variables have been published in the aging literature (Levin, 1995a), many focusing on mental health and well-being outcomes. Further, within this area over the past 25 years, half a dozen competing mid-range theoretical perspectives can be identified (Levin, 1989), although they are often more implicit than explicit. Several gerontologists interested in religion and well-being recently have begun more explicitly to evaluate alternative theoretical perspectives (Krause & Tran, 1989), test well-specified multifactorial structural models (Krause, 1992; Krause & Tran, 1989; Levin, Chatters, & Taylor, 1995), and develop comprehensive theoretical frameworks for examining religious effects on well-being outcomes such as depression (Ellison, 1994). Research on religion, aging, and well-being is well enough along that theory- or hypothesis-driven designs and analyses are a reasonable minimum expectation for current and future studies in this area.

Research Issues and Hypotheses

This particular study addresses each of these limitations, while also revisiting and updating a program of research on Mexican Americans conducted from the late 1970s through the middle 1980s. In a series of reports based on three samples from Texas — a small interview study of low-income and mostly Mexican-American elderly respondents, a panel study of older Mexican Americans and Anglos, and a three-generations study of Mexican Americans — Markides and associates examined the impact of religious attendance on measures of health and well-being. Cross-sectional path analysis findings revealed a positive effect on life satisfaction of an index of activity, including a measure of religious attendance, net of the effects of health (Markides & Martin, 1979). This finding for religious attendance and life satisfaction was replicated in two-wave panel data on both Mexican Americans and Anglos (Markides, 1983; Markides, Levin, & Ray, 1987). A third wave of data showed a similar but nonsignificant trend, with interpretation complicated by health-related sample attrition and the confounding of religious attendance and health status in older respondents (Markides, Levin, & Ray, 1987). Similar cross-sectional findings for religious attendance were also obtained with respect to subjective health in older Mexican Americans (Markides & Martin, 1983). Three-generations
data also revealed consistent cross-sectional effects for religious attendance: positive effects on subjective health in the oldest generation and protective effects against physical symptoms in the youngest generation (Levin & Markides, 1985); positive effects on subjective health in older and younger women, net of the effects of social support and social class (Levin & Markides, 1986); and positive effects on life satisfaction in older men and older and middle-aged women, the latter two findings net of the effects of subjective and functional health (Levin & Markides, 1988). In sum, this body of work suggests that the frequency of religious attendance is a cross-sectional correlate of life satisfaction in older Mexican Americans, and that this effect withstands controlling for the effects of subjective health, long believed to be the principal correlate of well-being in older adults (George & Landerman, 1984).

This study seeks to extend this earlier work on the effects of religious attendance on psychological well-being among Mexican Americans in several ways. First, a second wave of data is now available on the three-generations study respondents, so this association can be examined in the context of both intergenerational differences and temporal change simultaneously. Second, additional dimensions of well-being will be examined, in order to better specify how and understand why religious attendance influences well-being in this population. These dimensions include life satisfaction, depressed affect, and positive affect. Third, path analysis will be used to examine across two waves of data the associations between religious attendance and each well-being outcome in respective multifactorial models. Effects will be estimated separately by generational cohort, and analyses will also be rerun controlling for the effects of subjective health, age, and other known sociodemographic correlates or predictors of religious attendance and well-being. These two-wave panel models will enable the estimation of longitudinal effects of religious attendance (at Time 1) on psychological well-being (at Time 2), adjusting for Time 1 well-being and Time 2 attendance (see Figure 1).

Based on earlier findings, several study hypotheses can be posed. Each hypothesis pertains to a particular dimension of psychological well-being.

Hypothesis 1. — It is hypothesized that religious attendance will be cross-sectionally associated with life satisfaction at Time 2, as it was at Time 1 (Levin & Markides, 1988). This finding is expected primarily among older respondents, reflecting the role of formal, institutional religious involvement in establishing continuity across life-course stages, emphasizing the intrinsic and enduring meaning of life, fostering a sense of feeling blessed by God, and providing both personal and community resources that enhance coping with age-associated losses (Tobin, 1991). Patterns of religious attendance at a given time thus should be related to feelings of life satisfaction, which, more than depressed or positive affect, appear to embody reflection about one's current life situation in general (George, 1981).

Hypothesis 2. — It is hypothesized that religious attendance will exert an epidemiologically protective effect on depressed affect. This expectation is based on longitudinal findings that suggest a salutary impact of religious attendance on subsequent depression (Idler & Kasl, 1992), perhaps due to buffering the deleterious cumulative effects of life stress on mental health (Williams et al., 1991). Prior findings from a sample of respondents drawn from the full adult age range indicate that this effect may not be limited just to older adults (see Williams et al., 1991).

Hypothesis 3. — It is hypothesized that religious attendance will have a significant positive relationship with positive affect, although whether this manifests cross-sectionally or longitudinally is uncertain. Prior gerontological studies of religion and well-being have emphasized measures of either life satisfaction or depressed affect and related "negative" mental health outcomes. Relatively little of this research since 1980 has investigated the effects of religious attendance on "positively" defined mood-related constructs (see Levin, 1995a), and findings are mixed. Religious attendance has been found to be associated cross-sectionally with measures of happiness (Heisel & Faulkner, 1982; Steinitz, 1980) and morale (Lee & Ishi-Kuntz, 1987), but nonsignificant findings have been reported as well (Ellison, 1991). In addition, this research has not been limited to the older-adult age range, so there is no pressing reason to expect a salutary effect to appear solely among the oldest cohort. Prior findings also do not indicate whether a relationship, if it emerges, would withstand controlling for the effects of known sociodemographic correlates of religious attendance and positive affect.

In sum, religious attendance is hypothesized to have (a) a positive cross-sectional association with
life satisfaction, especially among older respondents, (b) a salutary longitudinal effect on depressed affect, and (c) a significant positive relationship of some type with positive affect. Whether religious attendance also exerts longitudinal effects on life satisfaction or is cross-sectionally associated with depressed affect is uncertain. Panel data from older Israeli Jews suggest not (Anson et al., 1990).

Methods

The Study

A three-generations study of Mexican Americans was originally conducted in the San Antonio area during 1981 to 1982. Multi-stage area-probability sampling procedures were employed to select older Mexican Americans (aged 65 to 80) who had children and adult grandchildren (18 years old and over) living within 50 miles of San Antonio, Texas. An eligible grandchild was then selected randomly, a process that also identified the middle-aged parent who was the son or daughter of the oldest-generation respondent. The total sample consisted of 375 such three-generation lineages, amounting to a total of 1,125 respondents.

Respondents were followed up approximately 11 years later. Of the 1,125 original respondents, 624 (56%) were reinterviewed. Dropouts were as follows: 227 were deceased (199 in the oldest generation), 75 refused to be reinterviewed, 24 had moved out of town or were in prison, 37 were too ill to be interviewed, and 138 were lost to follow-up. Of the 624 reinterviewed subjects, 111 were from the oldest generation (24 males, 87 females), 263 were from the middle generation (80 males, 183 females), and 250 were from the youngest generation (81 males, 169 females). The findings reported in this study are based on respondents interviewed at both times.

The sample used in this study has the following sociodemographic characteristics at Time 1, from oldest to youngest generation: respondents have a median age of 72.5, 49.8, and 27.0 years; 81%, 68%, and 67% are female; 47%, 79%, and 79% are married; 8%, 56%, and 69% are employed; and respondents average 3.38, 9.04, and 12.09 years of education. Approximately 84% of respondents are Roman Catholic, with little variation by generation.

Measures

This study includes a single-item measure of religious attendance, three summary scales measuring dimensions of psychological well-being (life satisfaction, depressed affect, and positive affect), and six exogenous constructs, including subjective health. The well-being measures are derived from existing instruments that have been used extensively in studies of Hispanic and ethnic-minority populations, including research conducted by the present investigators.

Frequency of attendance at religious services is measured by a single ordinal item, “How often do you attend religious services?” (coded: 4 = once a week or more often, 3 = two or three times a month, 2 = once a month, 1 = less frequently). High scores on this indicator therefore signify more frequent religious attendance.

Life satisfaction is measured by the 13-item version of the Life Satisfaction Index (LSI) originally proposed by Neugarten, Havighurst, and Tobin (1961). The LSI assesses agreement with general statements about life, and subsequent research has identified dimensions of mood tone, zest, and congruence (Liang, 1984). The present study uses the trichotomous scoring system proposed by Wood, Wylie, and Sheafor (1969). This revision, known as the LSI-A, is coded such that a score of 2 = agree, 1 = uncertain, and 0 = disagree. Reliability analysis conducted in SAS software (using the CORR procedure with the ALPHA option) led to the deletion of three LSI items, and the resulting 10-item scale had acceptable α-reliabilities across the three generations and two waves of observation (from oldest to youngest generation, at Time 1: .60, .67, .60; at Time 2: .67, .75, .74). In this study, the overall score (range: 0–2) was calculated by averaging responses across the scale’s 10 items.

Depressed affect and positive affect are measured by the respective seven-item depressed affect and four-item positive affect subscales (Liang, Tran, Krause, & Markides, 1989) of the 20-item Center for Epidemiologic Studies Depression (CES-D) scale (Radloff, 1977). The CES-D measures the frequency of particular feelings within the past week (coded: 0 = rarely or none of the time [less than one day], 1 = some or a little of the time [1–2 days], 2 = occasionally or a moderate amount of time [3–4 days], 3 = most or all of the time [5–7 days]). Reliabilities for depressed affect (range: 0–21) were very high at both Time 1 (.87, .87, .81) and Time 2 (.87, .88, .89) and were stable across waves. Reliabilities for positive affect (range: 0–12) were somewhat lower but still quite acceptable at both waves of observation (Time 1: .77, .76, .63; Time 2: .69, .69, .80).

Exogenous constructs used in these analyses consist of five sociodemographic variables and a single-item self-rating of health status. These include age (at Time 1), gender (1 = female, 0 = male), education (years of school completed), marital status (1 = married, 0 = not married), employment status (1 = yes, 0 = no), and subjective health (4 = excellent, 3 = good, 2 = fair, 1 = poor). In this study, from oldest to youngest generation, respondents’ mean ratings of subjective health at Time 1 are 2.39, 1.96, and 1.62, and at Time 2 are 2.78, 2.37, and 2.03.

Data Analysis

This study has two objectives: (a) to identify generational differences and temporal changes in religious attendance and three dimensions of psychological well-being, and (b) to examine multifactorial panel models of the effects of religious attendance on these dimensions of psychological well-being and test respective hypotheses. Each study objective has a respective data analysis strategy.
To address the first objective, generational differences and temporal changes in each of the four study constructs are examined through two-way analyses of variance (ANOVAs) using a factorial design that tests for main effects of generation and time and for their multiplicative interaction. In these analyses, the "Type III" solution is presented, whereby both main effects and the interaction term are estimated simultaneously (Freund & Littell, 1981). This type of analysis has been used successfully in prior gerontological research on religion (Levin & Taylor, 1993; Levin, Taylor, & Chatters, 1994).

To address the second objective, two-wave path models are tested separately by generation and dimension of psychological well-being. These models are fully recursive, with constructs "causally" ordered, as in Figure 1, from Time 1 religious attendance to Time 1 psychological well-being to Time 2 religious attendance to Time 2 psychological well-being. The models are estimated twice: first, specifying the endogenous constructs only (Model I); second, controlling for the effects of the six exogenous constructs — age, gender, education, marital status, employment status, and subjective health (Model II). Separate path models are estimated for each generation for each of the three identified dimensions of psychological well-being.

All analyses were conducted using the REG and GLM procedures in PC versions 6.08 and 6.10 of SAS.

### Results

#### Descriptive Results

As shown in Table 1, there are statistically significant generational differences and/or temporal changes in all three of the psychological well-being measures and in religious attendance. First, life satisfaction is lowest among the oldest generation and increases from Time 1 to Time 2. Although these differences and changes are statistically significant, they are not substantively large. Second, depressed affect is highest among the oldest generation at both times, and this generational difference is relatively pronounced. In terms of the hypothetical range of this subscale (0–21), however, this cohort, on average, is largely unafflicted with depressed affect at both Time 1 and Time 2. Third, positive affect increases from Time 1 to Time 2, and there is a visible but nonsignificant trend toward less positive affect in the oldest generation at both times. In light of the hypothetical range of this subscale (0–12), these respondents, on average, show moderately high levels of positive affect at both Time 1 and Time 2.

For religious attendance, there are statistically significant generational differences and temporal changes, as well as a significant interaction. At Time 1, there is a gradient such that religious attendance is less frequent in successively younger generational

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time</th>
<th>Oldest</th>
<th>Middle</th>
<th>Youngest</th>
<th>Generation</th>
<th>Effects</th>
<th>Gen. x Time</th>
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<td>2.93</td>
<td>2.43</td>
<td>21.46***</td>
<td>8.03**</td>
<td>11.88***</td>
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<td></td>
<td></td>
<td>(1.10)c</td>
<td>(1.20)</td>
<td>(1.30)</td>
<td></td>
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<tr>
<td></td>
<td>2</td>
<td>2.38</td>
<td>3.03</td>
<td>2.50</td>
<td>11.78***</td>
<td>6.46*</td>
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<td></td>
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<td>(1.21)</td>
<td>(1.33)</td>
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<td>Life satisfaction</td>
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<td>1.39</td>
<td>1.41</td>
<td>6.17**</td>
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<td>2.56</td>
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<td>(3.65)</td>
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<td>(2.58)</td>
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<td>(3.01)</td>
<td>(2.37)</td>
<td>(2.63)</td>
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</table>

*Ns for these analyses: oldest generation = 108; middle generation = 260; youngest generation = 249.

*F*-scores.

*Means (and standard deviations).

*p < .05 (2-tailed); **p < .01; ***p < .001.
cohnets. From Time 1 to Time 2, there is only a slight increase in attendance in the middle and youngest generations, but a considerable decline in attendance in the oldest generation. At Time 1, the oldest generation attends religious services, on average, between two or three times a month and weekly or more (mean = 3.21), the highest level of any of the six generation-time combinations. At Time 2, the oldest generation attends religious services, on average, about once a month (mean = 2.38), the lowest level of any of the generation-time combinations. This decline in religious attendance over time among the oldest generation is the most dramatic finding in Table 1.

Panel Analysis Results

Tables 2 through 4 present results of panel analysis for each of the three respective well-being outcomes: life satisfaction, depressed affect, and positive affect. In each table, Model I findings represent gross effects estimated in analyses that specify structural parameters among endogenous constructs only, while Model II findings represent net effects derived from rerunning the same analyses controlling for exogenous effects.

Model I findings reveal that (a) religious attendance exerts statistically significant effects on psychological well-being, (b) these effects are different for different dimensions of well-being, and (c) these effects vary by generation. Most notable of these findings are cross-sectional associations between religious attendance and life satisfaction, as hypothesized, and longitudinal effects of religious attendance on depressed and positive affect, also as hypothesized. Specifically, Time 1 religious attendance is associated with Time 1 life satisfaction in the two oldest generations, and respective Time 2 measures are also associated in the two oldest generations (see Table 2). This confirms Hypothesis 1, which anticipated cross-sectional effects. In addition, there are no longitudinal effects of Time 1 religious attendance on Time 2 life satisfaction, but none were necessarily expected. For measures of affect, findings are just the opposite. Time 1 religious attendance is associated with less depressed affect at Time 2 within the youngest generation (see Table 3). This longitudinal effect confirms Hypothesis 2. Time 1 religious attendance is also associated with greater positive affect at Time 2 in the youngest generation (see Table 4). This confirms the more uncertain expectations contained in Hypothesis 3. Finally, religious attendance and both affect measures are unassociated cross-sectionally, at both waves, but cross-sectional associations, at least for depressed affect, were not specifically hypothesized. It should be kept in mind that estimation of these longitudinal effects on Time 2 affect controls for the effects of Time 1 scores on these respective indices.

Model II findings present net effects for religious attendance on each of the three well-being dimensions. These results represent the Model I analyses rerun controlling for the structural effects of the six exogenous constructs (age, gender, education, marital status, employment status, and subjective health). In these analyses, the principal findings from the Model I analyses remain: (a) a cross-sectional association between religious attendance and life satisfaction in the two oldest generations, although only at Time 1, and (b) a longitudinal effect of Time 1 religious attendance on Time 2 depressed and positive affect in the youngest generation. All of these effects are notable in that they are independent of both Time 1 affect scores and the effects of health, age, and other known sociodemographic correlates or predictors of both religious attendance and well-being.

Although upholding Model I results for life satisfaction and depressed affect, and thus reaffirming Hypotheses 1 and 2, Model II findings add some complicated twists with respect to positive affect (see Table 4). The longitudinal effect of Time 1 religious

Table 2. Panel Analysis Results for Effects of Religious Attendance on Life Satisfaction, by Generation

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model I: Endogenous Variables Only</th>
<th>Model II: Controlling for Exogenous Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1 Life Satisfaction</td>
<td>T2 Religious Attendance</td>
</tr>
<tr>
<td>T1</td>
<td>.28**</td>
<td>.25***</td>
</tr>
<tr>
<td>Religious attendance</td>
<td>.17**</td>
<td>.36***</td>
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<tr>
<td>T1</td>
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<td>.26***</td>
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<tr>
<td>Religious attendance</td>
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<tr>
<td>Life satisfaction</td>
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<td>.21***</td>
</tr>
<tr>
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<td>.12*</td>
<td></td>
</tr>
<tr>
<td>Religious attendance</td>
<td>.08</td>
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</tr>
</tbody>
</table>

Note: Numbers are standardized (β) regression coefficients. Findings are ordered from top to bottom: oldest (N = 108), middle (N = 260), and youngest (N = 249) generation.

*p < .05 (2-tailed); **p < .01; ***p < .001.
Table 3. Panel Analysis Results for Effects of Religious Attendance on Depressed Affect, by Generation

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model I: Endogenous Variables Only</th>
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<td>.24***</td>
</tr>
<tr>
<td>Depressed affect</td>
<td>.06</td>
<td>.27***</td>
</tr>
<tr>
<td></td>
<td>-.07</td>
<td>.30***</td>
</tr>
<tr>
<td>T2</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Religious attendance</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.04</td>
<td></td>
</tr>
</tbody>
</table>

Note: Numbers are standardized (β) regression coefficients. Findings are ordered from top to bottom: oldest (N = 108), middle (N = 260), and youngest (N = 249) generation. *p < .05 (2-tailed); **p < .01; ***p < .001.

Another complicated twist in the association between religious attendance and positive affect emerges in the oldest generation. In Model I, Time 2 religious attendance and Time 2 positive affect in this generation are unrelated (β = -.13, n.s.), whereas in Model II they are negatively associated (β = -.26, p < .05). Perhaps contributing to this association is a negative net effect (β = -.20, p < .05) of Time 1 positive affect on Time 2 religious attendance in Model II, a counterintuitive association not present in Model 1 (β = .10, n.s.). In addition, positive affect is the only one of the three well-being dimensions whose Time 1 score does not uniformly predict its

Table 4. Panel Analysis Results for Effects of Religious Attendance on Positive Affect, by Generation

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model I: Endogenous Variables Only</th>
<th>Model II: Controlling for Exogenous Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1 Positive Affect</td>
<td>T2 Religious Attendance</td>
</tr>
<tr>
<td>T1</td>
<td>-.11</td>
<td>.22***</td>
</tr>
<tr>
<td>Religious attendance</td>
<td>-.05</td>
<td>.36***</td>
</tr>
<tr>
<td></td>
<td>.08</td>
<td>.26***</td>
</tr>
<tr>
<td>T1</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>T2</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>Religious attendance</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.04</td>
<td></td>
</tr>
</tbody>
</table>

Note: Numbers are standardized (β) regression coefficients. Findings are ordered from top to bottom: oldest (N = 108), middle (N = 260), and youngest (N = 249) generation. *p < .05 (2-tailed); **p < .01; ***p < .001.
analyses in the oldest generation also confirm that artifact of the well-known confounding that exists confusing situation for positive affect may be an artifact of the well-known confounding that exists among religious attendance, age, and well-being outcomes among elderly adults (Levin, 1989). Alternatively, it may signify that positive affect in general, or this particular measure, is simply not reflective of the many more valid well-being measures typically used in prior gerontological studies, such as use of the LSIA for life satisfaction or the CES-D for depressed affect.

Discussion

In summary, this study of Mexican Americans has found that (a) religious attendance is cross-sectionally associated with life satisfaction among members of the oldest and middle generations, and (b) religious attendance has salutary longitudinal effects on depressed affect among members of the youngest generation. These cross-sectional findings for life satisfaction at Time 1 and these longitudinal findings for depressed affect both withstand controlling for the effects of health, age, and other known sociodemographic correlates or predictors of both religious attendance and psychological well-being. The net findings of a positive cross-sectional association between religious attendance and life satisfaction in older respondents and a salutary longitudinal effect of religious attendance on subsequent depressed affect each confirm hypothesized expectations. The results of this study have important implications for research on (a) Hispanic families, (b) minority aging, and (c) religious factors in mental health and well-being.

First, these findings confirm earlier work pointing to the importance of regular, formal religious involvement, such as religious attendance, for the well-being of Mexican-American families. Findings from the 1960s (Grebler, Moore, & Guzman, 1970) and 1970s (Greeley, 1979) show that Mexican Americans, who are overwhelmingly Roman Catholic in affiliation, attend religious services less frequently than U.S. Catholics in general. Further, the frequency of religious attendance has been found to decline with successive generations of three-generational Mexican-American families (Markides & Cole, 1984), despite high levels of intergenerational consistency in religious affiliation (Aldous & Hill, 1965; Markides & Cole, 1984). Nevertheless, religious attendance is a significant correlate or predictor of subjective health (Markides & Martin, 1983) and life satisfaction (Markides, Levin, & Ray, 1987) in older Mexican Americans, and, according to the present study, a correlate of life satisfaction in middle-aged Mexican Americans and a protective factor with respect to depressed affect in the youngest generation, as well. Religious attendance serves as a source of connectedness to one's cultural traditions and, thus, for older and middle-aged adults, represents a salient correlate of life satisfaction. For members of the youngest generation, more acculturated than their elders and less regular in their religious participation, religious attendance may not be as direct a source of contemporaneous life satisfaction, but rather may serve a protective function for mood disorders over time, perhaps reflecting the increasing importance of religion for this cohort as it ages into the child-rearing years.

Second, religious involvement is widely held to be a crucial resource in the lives of older adults, a radix of meaning (Post, 1992) that is especially valuable as individuals begin to disengage from other roles and formal institutional involvements due to retirement, declining health, or other reasons. Religious attendance benefits older adults both through providing access to church- and synagogue-based social services of various types and through the "personal satisfactions" enhanced by worship and religiosity (Moberg, 1990). Among these personal benefits of religion are the provision of hope (Koenig, 1994b) and the means of "preserving the self" (Tobin, 1991), as well as the offer of forgiveness and reconciliation with God (Kaplan, Munroe-Blum, & Blazer, 1994). For minority elders, religion and churchgoing provide a sense of continuity and help to maintain ties to the church, a repository of culture and ethics and often the principal autonomous social institution in respective ethnic-minority communities. According to Ellison (1994), formal religious involvement also benefits the well-being of older adults through more tangible means, such as by reducing the risk of chronic and acute stressors, offering cognitive and institutional frameworks that buffer stress and facilitate coping, and providing both internal psychological resources (such as self-efficacy) and concrete social resources. The present study's findings linking religious attendance to satisfaction with life reflect the salutary impact of these themes — meaning, continuity, and control — in the lives of older Mexican Americans.

Finally, these results provide solid evidence of salutary effects for religious involvement on at least two different domains of mental health and psychological well-being. As in recently published work on older African Americans (Levin, Chatters, & Taylor, 1995), religious attendance is positively associated with life satisfaction even after controlling for the effects of health. The present study thus provides replication of this result in a different ethnic population and represents further evidence that the beneficial impact of organizational religious activities on the well-being of older adults is not solely the result of the confounding often found to exist between...
religious attendance and health status (see Ainlay, Singleton, & Swigert, 1992). More importantly, this study provides strong evidence of a salutary longitudinal effect of religious attendance on depressed affect. This is especially noteworthy in that a protective effect on depressed affect persists across the 11 years between waves of data collection and withstands controlling for the effects of both Time 1 affect and Time 2 religious attendance. These findings echo the suggestion (Ellison, 1994; Koenig, Smiley, & Gonzales, 1988; Williams et al., 1991) that infrequent religious involvement deserves further scrutiny as a possible risk factor in psychiatric epidemiology.

References


Received June 29, 1995
Accepted January 26, 1996

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