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Differences in Life Satisfaction among Older Community-Dwelling Hispanics and non-Hispanic Whites

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Abstract

Objectives—Hispanics are the fastest growing ethnic/racial group of the older adult population in the U.S., yet little is known about positive mental health in this group. We examined differences in life satisfaction between demographically-matched groups of older Hispanics and non- Hispanic Whites, and sought to identify specific factors associated with these differences.

Methods—Participants included 126 community-dwelling English-speaking Hispanics ages 50 and older, and 126 age-, gender-, and education-matched non-Hispanic Whites. Participants completed standardized measures of life satisfaction and postulated correlates, including physical, cognitive, emotional and social functioning, as well as positive psychological traits and religiosity/spirituality.

Results—Hispanics reported greater life satisfaction than non-Hispanic Whites ($p<0.001$). Ethnic groups were comparable on most postulated correlates of life satisfaction, except that Hispanics had lower levels of cognitive performance, and higher levels of daily spiritual experiences, private religious practices and compassion ($ps<0.001$). Among these factors, spiritual experiences, religious practices, and compassion were significantly associated with life satisfaction in the overall sample. Multivariable analyses testing the influence of these three factors on the association between ethnicity and life satisfaction showed that higher spirituality among Hispanics accounted for ethnic differences in life satisfaction.

Conclusion—English-speaking Hispanics ages 50 and older appeared to be more satisfied with their lives than their non-Hispanic White counterparts, and these differences were primarily driven by higher spirituality among Hispanics. Future studies should examine positive mental health among various Hispanic subgroups, including Spanish-speakers, as an important step toward development of culturally-sensitive prevention and intervention programs aimed at promoting positive mental health.

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Keywords

Quality of Life/Well-being; Cultural aspects; Religion/Spirituality; Aging; Latino

Introduction

Hispanics are the fastest growing segment of the older adult population in the United States (U.S.). The number of Hispanics aged 65 years and older living in the U.S. is projected to increase six-fold from 2010 to 2050, in comparison to a doubling of the non-Hispanic population. By 2050, Hispanics will account for 20% of the older U.S. population (Vincent & Velkoff, 2010). Despite the increasing number of older Hispanics, research on mental health outcomes in this population is relatively scarce, particularly when it relates to positive mental health.

Much of the research in the field of psychiatry focuses on mental illness. Recently, however, there has been a surge of interest in studying positive mental health outcomes as being viable and important outcomes in their own right (Seligman & Csikszentmihalyi, 2000), including successful aging (Jeste & Palmer, 2013). In line with this emerging direction in mental health research, Healthy People 2020, a national agenda to guide disease prevention and health promotion activities in the U.S. over the next decade, identified well-being as a key indicator of population health (U.S. Department of Health and Human Services, 2010). Life satisfaction is a distinct dimension of well-being and represents a cognitive and global evaluation of the quality of one's life as a whole (Pavot & Diener, 1993). Higher life satisfaction is strongly associated with better mental health (Headey, Kelley, & Wearing, 1993; Schimmack, Oishi, Furr, & Funder, 2004; Tremblay, Blanchard, Pelletier, & Vallerand, 2006) and has a buffering effect against stressful life events (Suldo & Huebner, 2004; Tremblay et al., 2006), highlighting its important role for mental health.

Population-based studies of life satisfaction in Hispanics living in the U.S. suggest that Hispanics might fare worse than other ethnic/racial groups (Barger, Donoho, & Wayment, 2009; Coverdill, Lopez, & Petrie, 2011). Furthermore, level of life satisfaction appears to be similar across subgroups of Hispanics of varying regions of origin/descent (Coverdill et al., 2011). However, there are conflicting findings regarding whether ethnic disparities in life satisfaction might be "explained" by differences in socioeconomic status (SES) and other potential determinants of life satisfaction that vary across ethnic groups. In a recent analysis of General Social Survey data from 2000 to 2008 (Coverdill et al., 2011), Hispanics showed lower life satisfaction than non-Hispanics, as measured by indices of overall happiness, marital happiness, health status, trust, and financial satisfaction. These ethnic differences were attenuated, but continued to be statistically significant for most measures, when adjusting for years of education, employment, marital status, age, gender, frequency of attendance to religious events, and country of birth. In a study of two cross-sectional, representative samples of U.S. adults (the 2001 National Health Interview Survey and the 2007 Behavioral Risk Factor Surveillance System; with a combined sample of > 350,000; Barger et al., 2009), Hispanics were also less likely to be satisfied with their lives than non-Hispanic Whites. Interestingly, however, these ethnic differences in life satisfaction were

eliminated with adjustments for SES. Furthermore, they were reverted when accounting for variations in SES, health and social relationships, such that Hispanics were more likely to be satisfied with life in multivariable models adjusting for these factors (Barger et al., 2009).

Studies on ethnic differences in life satisfaction among older adults are more scant and generally based on data from over a decade ago (Baxter et al., 1998; Johnson et al., 1988; Lang et al., 1982). A report based on data from the San Luis Valley Health and Aging Study in southern Colorado (Baxter et al., 1998), which included community-dwelling adults ages 60 and over (792 Hispanics and 566 non-Hispanic Whites), showed significantly higher perceived quality of life among Hispanics than non-Hispanic Whites. In contrast, a study of Hispanics residing in the San Francisco's Mission District (Lang et al., 1982), showed that the proportion of middle-aged (40–64 years) and older (65–75 years) Hispanics who reported being satisfied with their lives was nearly half that of a national sample. Another report including persons ages 50 and older (N=168) from urban and rural regions of the Midwest (Johnson et al., 1988), showed Hispanics (n=32) had the lowest life satisfaction of all ethnic/racial groups considered (Hispanics, Whites, Blacks, Indians and Jews). Consistently, large population-based studies have shown that older Hispanics have higher 12-month rates of depressive disorder (Jimenez, Alegria, Chen, Chan, & Laderman, 2010), and similar lifetime prevalence rates of depressive, anxiety and substance use disorders compared to non-Hispanic Whites (Jimenez et al., 2010; Woodward et al., 2012). Most of these findings remain largely unchanged after adjusting for demographic variables such as gender, income, and education (Woodward et al., 2012). Although positive mental health is not merely the counterpart of mental illness (Keyes, 2005), taken together these findings suggest worse or similar mental health among older Hispanics than non-Hispanic Whites.

The main purpose of the present study was to compare satisfaction with life in a large cohort of community-dwelling Hispanics ages 50 and older, and a group of demographically matched non-Hispanic Whites participating in the Successful Aging Evaluation (SAGE) Study. Although there have been contradictory findings (Baxter et al., 1998), based on results from most prior studies (Jimenez et al., 2010; Johnson et al., 1988; Lang et al., 1982; Woodward et al., 2012), we hypothesized that older Hispanics would report lower satisfaction with life as compared to their non-Hispanic White counterparts.

We were also interested in identifying potentially modifiable factors that might account for these hypothesized ethnic differences in life satisfaction. This is a key step towards the development of targeted and culturally relevant interventions aimed at eliminating or ameliorating ethnic differences in life satisfaction. There are likely multiple variables that lead to ethnic differences in satisfaction with life. We provide a conceptual model of potential mechanisms in which certain demographic, biomedical and psychosocial factors that are differentially prevalent across ethnic groups lead to ethnic differences in life satisfaction (Figure 1). While some of these factors might be relatively unique to Hispanics as compared to non-Hispanic Whites in the U.S. (e.g. acculturation, language fluency, immigration status), most biomedical and psychosocial factors leading to life satisfaction are likely to occur across ethnic groups. The main reason these might explain ethnic differences is that they are more or less prevalent among Hispanics. Further, bi-directional links and complex interactions among the various factors may result in their impact being greater than

the sum of its parts. In the present study, we focused on indicators available in the SAGE study of biomedical (physical and cognitive functioning) and psychosocial (emotional, social, positive psychological traits, and religiosity/spirituality) factors (see Figure 1). The present study was meant to represent a first step towards a future more comprehensive examination of the proposed model including the potentially complex interactions and the role of other variables that may be relatively unique to Hispanics.

Methods

Participants

Participants included 252 adults enrolled in the SAGE study at the University of California San Diego Stein Institute for Research on Aging. Details on the SAGE study have been described previously (Jeste et al., 2013; Moore et al., 2014). Briefly, the SAGE study followed a structured multicohort longitudinal design to randomly select 1300 community-dwelling adults living in San Diego County, who were 50 years and older. Inclusion criteria were: 1) having a telephone in the home; 2) being physically and mentally able to participate in a phone interview and paper-and-pencil mail survey; and 3) being fluent in English. Individuals residing in a nursing home or skilled nursing facility, and those with an existing diagnosis of dementia or a terminal illness were excluded.

To identify potential participants, we contracted with California Survey Research Services (http://www.calsurvey.com/), which had lists of age-targeted samples in the county. These included 15,896 home telephone numbers along with the corresponding residents' names and addresses. Participants were recruited by using list-assisted random-digit dialing procedures and telephone calling. Baseline data were used for all the Hispanics enrolled in SAGE (n=126) and a subset of matched non-Hispanic Whites (n=126) with comparable age, gender, and formal years of education.

Materials and Procedures

The study was approved by the university's Human Subjects Protection Committee. Participants were mailed a self-report survey of successful aging, which contained a consent form to participate in the study, a demographics worksheet, various standardized scales, and a pre- addressed and stamped return envelope.

Primary Outcome: Satisfaction with Life—The Satisfaction with Life Scale (SWLS) total score represented our main outcome of interest (Barile et al., 2013; Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993; Pavot & Diener, 2008). This scale assesses an individual's global judgment of her or his life satisfaction, and includes five items (i.e. *In most ways my life is close to my ideal; The conditions of my life are excellent; I am satisfied with my life; So far Ihave gotten the important things I want in life; If I could live my life over, I would change almost nothing*). Items are rated on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The total score represents the sum of responses to the five items, with scores ranging from 5 to 35. The SWLS has strong reliability and validity (Pavot & Diener, 2008; Vassar, 2008) and a number of factor analytic studies (Neto, 1993; Pavot & Diener, 1993) have supported a unidimensional structure for

the SWLS across a variety of populations and cultural contexts. Participants were also asked to retrospectively rate their degree of satisfaction with life at various life epochs, including childhood (12 years of age and younger), adolescence (ages 13–19 years of age), young adulthood (20–45 years), middle adulthood (45–65 years) and older adulthood (65 years and over) using a scale ranging from 1 (not at all satisfied) to 10 (very satisfied).

We examined the following variables as postulated factors that might explain ethnic differences in life satisfaction:

Physical Functioning—Self-report of physical health was assessed via the Physical Health Composite score from the Medical Outcomes Study 36-Item Short Form (MOS SF-36; Ware Jr & Sherbourne, 1992). Higher scores represent better health.

Cognitive Functioning—Objective cognitive function was measured with a modified version of the Telephone Interview for Cognitive Status, with higher scores representing better cognitive performance (de Jager, Budge, & Clarke, 2003). Subjective cognitive complaints were measured with the Cognitive Failures Questionnaire (Broadbent, Cooper, FitzGerald, & Parkes, 1982), with higher scores signifying self-report of more cognitive problems.

Emotional Functioning—Overall mental health functioning was measured with the MOS SF-36 Mental Composite. Depressive symptoms were evaluated with the Patient Health Questionnaire 9-Item Version (PHQ-9; Kroenke, Spitzer, & Williams, 2001). Symptoms of anxiety were measured with the Brief Symptom Inventory-Anxiety Subscale (Derogatis, 2000). The experience of stressful life events (e.g., loss of job, death) within the past year and related level of distress was measured with the Life Events Scale (Holmes & Rahe, 1967). For all these scales (except the MOS SF-36 Mental Composite), higher scores represent higher emotional distress.

Social Functioning—Three different aspects of social functioning were assessed: social status (MacArthur Scale of Subjective Social Status; Adler, Epel, Castellazzo, & Ickovics, 2000), social interactions (Duke Social Support Index-Social Interactions subscale; Blazer, Hybels, & Hughes, 1990), and instrumental support (Emotional Support Scale; Seeman, Berkman, Blazer, & Rowe, 1994). Higher scores in these measures represent better social functioning.

Positive Psychological Traits—The following positive psychological traits were assessed: compassion towards others (Santa Clara Brief Compassion Scale; Hwang, Plante, & Lackey, 2008), optimism (Life Orientation Test-Revised; Scheier, Carver, & Bridges, 1994), resilience (Connor-Davidson Resilience Scale 10-item version; Campbell-Sills & Stein, 2007; and Multidimensional Individual and Interpersonal Resilience Measure; Martin, Distelberg, Palmer, & Jeste, 2014), and personal mastery (Personal Mastery Scale; Pearlin, Mullan, Semple, & Skaff, 1990). For all these scales, higher scores are indicative of greater endorsement of that trait.

Religiosity/Spirituality—Two dimensions of spirituality were assessed via the Brief Multi- Dimensional Measure of Religiousness/Spirituality (Fetzer Institute/National Institute on Aging Working Group, 1999): (a) daily spiritual experiences, which indicate an individual's perception of their daily relationship with the transcendent; and (b) private religious practices, which refer to non-organizational/non-institutional religiosity and is distinctively different from public religious practices. Higher scores in these scales represent decreased religiosity/spirituality.

The scales used to assess postulated factors that might explain ethnic differences in life satisfaction were developed and validated, for the most part, in primarily non-Hispanic White samples. Subsequent research on their psychometric properties among Hispanics living in the U.S. varies across scales. For example, the SF-36 has been shown to have adequate internal consistency and construct validity among Hispanics (Katerndahl, Amodei, Larme, & Palmer, 2002; Peek, Ray, Patel, Stoebner-May, & Ottenbacher, 2004), equivalent response patterns on the PHQ-9 have been found between English and Spanish-speaking Hispanic women (Merz, Malcarne, Roesch, Riley, & Sadler, 2011), and both our measures of objective cognitive function (Manly et al., 2011), and subjective cognitive complaints (Alders & Levine-Madori, 2010; Lagana & Sosa, 2004) have been used in previous studies of Hispanics. In contrast, findings on the psychometric properties of our measure of anxiety symptoms in Hispanics have been mixed (Asner-Self, Schreiber, & Marotta, 2006; Prelow, Weaver, Swenson, & Bowman, 2005; Torres, Miller, & Moore, 2013; Wiesner et al., 2010), and there is limited published research on the psychometric properties among Hispanics of the scales used to assess social functioning, positive psychological traits, and religiosity/ spirituality (Katerndahl et al., 2002; Sanchon-Macias, Prieto-Salceda, Bover-Bover, & Gastaldo, 2013).

Statistical Analyses

Continuous variables were examined for normality of distribution using the Shapiro–Wilk W test and tested for homogeneity of variance assumptions between ethnic groups using Levene's test. To examine differences in satisfaction with life and its correlates among ethnic groups, we performed univariable analyses on our outcome measure and predictors of interest by ethnic group using independent sample t-tests (or Wilcoxon rank-sum tests when appropriate) for continuous variables and Chi-Square tests for categorical variables.

To determine factors that might account for ethnic differences in the SWLS we followed three steps: Step 1) among the postulated correlates of satisfaction with life (i.e. physical, cognitive, social, and emotional functioning, positive psychological traits, and religiosity/ spirituality) we selected those variables that differed significantly between ethnic groups based on univariable analyses described above; Step 2) we then separately examined the association between each of these variables and SWLS total score using Spearman ρ in the overall sample, and selected those variables that were significantly associated; and Step 3) we used estimation methods described by Preacher and Hayes (2004, 2008) to examine whether the variables selected through the previous two steps accounted for ethnic differences in life satisfaction. This approach estimates the path coefficients in a multiple mediator model and generates bootstrap confidence intervals (for bootstrapping, z = 5,000

samples were requested) for total and specific indirect effects of ethnicity on life satisfaction through the identified potential explanatory factors. It includes a series on univariable regressions, and a multivariable linear regression model on SWLS total score with predictors being ethnicity (Hispanic/non- Hispanic White) and the potential explanatory factors. This approach allows for examination of the effect of multiple explanatory variables simultaneously on SWLS and makes any violations of the assumption of normal distributions of scores less problematic.

Results

Demographic Characteristics and Satisfaction with Life by Ethnic Group

Table 1 shows demographic characteristics of our sample by ethnic group. Hispanics ranged in age from 50 to 94 years, and non-Hispanic Whites from 50 to 96 years. A little over half of the participants were male and nearly two-thirds had more than high school education in both ethnic groups. There were no significant group differences in marital status and income.

Internal consistency of the SWLS was strong and comparable for Hispanics and non-Hispanic Whites (Cronbach's $\alpha = 0.87$ and 0.88, respectively). Hispanics reported significantly higher overall levels of current life satisfaction than non-Hispanic Whites as assessed by the SWLS (Table 1). Hispanics scored significantly higher in all items comprising this scale (all *ps*<0.01). Based on established cutoff scores for the SWLS (Pavot & Diener, 2008), we dichotomized our sample into participants who reported being satisfied (SWLS Total Score > 20) and those who did not (SWLS Total Score ≤ 20). We found that a significantly higher proportion of Hispanics (88%) reported being satisfied than non-Hispanic Whites (72%). Consistently, Hispanics reported significantly higher satisfaction with life at various life epochs including adolescence, middle adulthood and late adulthood (Table 1).

Explanatory Factors of Ethnic Differences in Life Satisfaction

In order to identify factors that might account for ethnic differences in satisfaction with life we first conducted univariable analyses examining ethnic differences on the postulated factors (i.e., physical, cognitive, social, and emotional functioning, positive psychological traits, and spirituality). Hispanics reported significantly higher levels of spirituality/religiosity, including higher levels of daily spiritual experiences and private religious practices, as well as more compassion towards others (all *ps*<0.001). Hispanics performed significantly lower on a performance-based measure of cognitive function, but reported similar levels of cognitive symptoms as non-Hispanic Whites. Groups were comparable on other psychological/personality characteristics, as well as measures of physical, emotional, and social functioning (Table 1).

We then ran separate correlational analyses between variables that differed across groups and SWLS total score in the overall sample. Daily spiritual experiences (Spearman $\rho = -0.23$, $p<0.001$), private religious practices (Spearman $\rho = -0.14$, $p=0.04$), and compassion (Spearman $\rho = 0.20$, $p<0.01$), were all associated with SWLS total score, but cognitive

function was not (Spearman ρ = −0.03, *p*=0.64). These significant correlates were selected to be included in multivariable analyses examining their effect on the association between Hispanic ethnicity and life satisfaction.

Figure 2 presents the model examining the association between ethnicity and satisfaction with life, including whether daily spiritual experiences, private religious practices, and compassion, might account for this association. Raw score (unstandardized) coefficients for all of the paths in this model appear in this Figure. The *a* and *c* paths show the coefficients for separate univariable linear regression analyses examining the association of ethnicity to each of the proposed intermediate factors (*a* paths) and to SWLS (*c* path). The overall multivariable model on satisfaction with life including terms for ethnicity, daily spiritual experiences, private religious practices and compassion was significant (F [4, 217] = 5.29, $p<0.001$, $Adj\ R^2 = 0.07$). Coefficients for each of the terms in this multivariable model appear in Figure 2 (*c'*=ethnicity; *b1*=daily spiritual experiences; *b2*=private religious practices; *b3*=compassion). The association between Hispanic ethnicity and SWLS not controlling for the other variables (path *c*) was significant (*Estimate*=1.09, *SE*=0.39, $p<0.01$), while the association of ethnicity with SWLS controlling for the three intermediate variables (i.e. daily spiritual experiences, private religious practices and compassion; path *c*') was not (*Estimate*=0.72, *SE*=0.42, *p*=0.08). The path through daily spirituality was estimated by the product of *a1* × *b1*, −2.9 × −0.20 = 0.59, and its 95% CI (0.19 to 1.15) obtained by bootstrapping did not include 0, indicating that it was statistically significant. In contrast, the paths through religious practices (*a2* × *b2* = −.41, 95% *CI*= − 0.92 to 0.002) and compassion (*a3* × *b3* = 0.19, 95% *CI* = − 0.02 to 0.49) were not significant. Overall, these results suggested that higher satisfaction with life among Hispanics might be "explained" by more daily spiritual experiences, but not religious practices or compassion.

Discussion

Present findings indicate greater life satisfaction in community-dwelling older English-speaking Hispanics compared to their demographically matched non-Hispanic White counterparts. Additionally, higher levels of spirituality appeared to play a key role in explaining these ethnic differences in life satisfaction.

The finding that life satisfaction was significantly higher among Hispanics than non-Hispanic Whites is inconsistent with several previous studies showing similar or worse life satisfaction and mental health among older Hispanics (Jimenez et al., 2010; Johnson et al., 1988; Lang et al., 1982; Woodward et al., 2012). The limited data available comparing life satisfaction in older Hispanics and non-Hispanic Whites, are from studies conducted nearly two decades ago (Johnson et al., 1988; Lang et al., 1982). Thus, our inconsistent findings could be related to cohort effects. Methodological aspects also vary considerably across studies, including whether ethnic groups are comparable on other demographic variables. While there is undoubtedly much to be learned from studies investigating mental health in population-based cohorts, where Hispanics tend to fare worse in level of education, income and other demographic variables, our study shows that when ethnic groups are comparable on these variables, Hispanics are more satisfied with their lives than non-Hispanic Whites.

These findings are also seemingly in contrast to those indicating similar or higher prevalence of mental disorders among older Hispanics compared to Whites (Jimenez et al., 2010; Woodward et al., 2012). As previously suggested, however, mental wellness is not necessarily at the other end of a continuum with mental illness (Keyes, 2005). It is also yet to be elucidated whether life satisfaction varies among older patients with mental illnesses from different ethnic groups.

Our findings showing higher life satisfaction in Hispanics compared to non-Hispanic Whites are in line, however, with the notion of the "Hispanics paradox" (Markides & Coreil, 1986). This term refers to the tendency for Hispanics to show reduced mortality and some better health outcomes (Brown, Chireau, Jallah, & Howard, 2007; National Center for Health Statistics, 2014) despite adverse circumstances; a trend that appears to extend to mental health among younger cohorts (Alegria et al., 2008; Breslau et al., 2006). Identification of possible strengths among Hispanics leading to this "paradoxical effect" on mental health can provide key insights for Hispanic mental health. Furthermore, understanding what Hispanics do to reduce the likelihood of mental disorders and foster well-being could be of value for individuals of other ethnic groups too.

When trying to understand factors driving ethnic differences in life satisfaction it is important to bear in mind that this construct is, at least in part, culturally dependent. Being satisfied with life, or the global evaluation of the quality of one's life (Pavot and Diener, 1993) is tied to the cultural expectations regarding which are the aspects of life that are most valued and the personal evaluation that one has been able to fulfill those important components of one's life. While it is important to avoid stereotyping Hispanics as being characterized by a monolithic background, there are salient cultural aspects that tend to characterize a Hispanic collective experience. As a collectivist culture, Hispanics tend to be group-oriented and place a strong emphasis on family and community ties (familism). They also tend to be more focused on relationships (personalismo) and maintain the belief that the individual can do little to alter fate (fatalism), which is often thought to be "in God's hands". These values permeate individuals' worldviews, and may play an important role in forging their perceptions of well being and life satisfaction. Relatedly, prior studies have found that perceptions of successful aging vary across ethnic groups, and that particularly among Hispanics, spirituality and a sense of community are key components of aging well (Hilton, Gonzalez, Saleh, Maitoza, & Anngela-Cole, 2012).

Our study examined the role that a number of potentially modifiable factors might have in explaining ethnic differences in life satisfaction among older adults. Among the factors considered, daily experiences of spirituality emerged as the most important factor. While acknowledging the cross-sectional nature of the present study, our findings indicate that spirituality might be a key factor driving better positive mental health outcomes among Hispanics.

Spirituality and religiosity play a salient role in the Hispanic culture. A high proportion of Hispanics report affiliation with a religious group (The Pew Forum on Religion and Public Life, 2008), and Hispanics tend to use religion and spirituality as coping mechanisms more readily than non-Hispanic Whites (Adams, Aranda, Kemp, & Akagi, 2002; Calderon &

Tennstedt, 1998; Coon et al., 2004). Furthermore, religiosity/spirituality seems to have a positive impact on health (Powell, Shahabi, & Thoresen, 2003; Seybold & Hill, 2001) and well-being in older age, independent of the effect of other factors (Lawler-Row & Elliott, 2009). For instance, among Mexican Americans, weekly church attendance has been linked to reduced mortality risk over and above a host of other factors (Hill, Angel, Ellison, & Angel, 2005), and intrinsic religiosity (i.e. internalized religion) has been associated with decreased caregiver burden (Herrera, Lee, Nanyonjo, Laufman, & Torres-Vigil, 2009). Consistently, spirituality has been found to influence perceptions of successful aging among Hispanics (Hilton, et al., 2012), and has been identified as a potentially key factor driving well-being among older Hispanics despite physical functional disability and chronic health conditions (Beyene, Becker, & Mayen, 2002).

There are various ways in which spiritual experiences might exert an influence on life satisfaction. For example, spirituality may be a tool by which persons promote and maintain resilience in later life (Manning, 2013). It may also help ascribe meaning to one's life, and provide a sense of unconditional support from the transcendent, among others (Krause, 2003; Levin & Chatters, 1998; Maton & Wells, 1995). The cross-sectional nature of our study, however, pre-empts strong conclusions about the directionality of these findings, but certainly provides interesting information warranting further investigation.

Interestingly, in the present study, private religious practices were associated with satisfaction with life in univariable analyses including the overall sample. Yet, only daily experiences of spirituality emerged as a significant explanatory factor for higher life satisfaction in Hispanics. This is consistent with findings from a prior population-based study in a younger cohort that showed that religious practices did not account for ethnic differences in positive mental health (Coverdill et al., 2011). While private religious practices and daily spiritual experiences are closely tied concepts, prior research indicates that they are distinct dimensions of the broader concept of religiousness/spirituality (Idler et al., 2003). Private religious practices refer to behaviors that take place in the home or in daily life, alone or with family (e.g. saying prayers or grace before or after meals at home). Daily spiritual experiences refer to individuals' emotional perception of the transcendent in daily life (e.g. I find strength and comfort in my religion). Present and prior findings (Idler et al., 2003) highlight the importance of considering different dimensions of religiosity/spirituality in understanding its relation to mental health.

Similarly, compassion was also higher in our Hispanic group and associated with life satisfaction in univariable analyses in the overall sample, which is consistent with prior findings (Moore et al., 2013; Steffen & Masters, 2005), but did not account for ethnic differences in well-being in our study. Compassion has been defined as being moved by the suffering of others and having the desire to alleviate that suffering (Steffen & Masters, 2005). It has been linked to increased religiosity/spirituality (Hendrik & Hendrik, 1987; Leak, 1993; Steffen & Masters, 2005), and may play a key role in mediating the relationship between some forms of religiosity and positive mental health (Steffen & Masters, 2005). While addressing the mechanisms by which religiosity/spirituality may impact health outcomes is beyond the scope of the present study, these prior findings highlight the

potentially complex associations among these variables and the need to better understand them in future studies.

The strengths of our study include the relatively large sample size of older Hispanics, having a demographically-matched sample of non-Hispanic Whites, and having standardized comprehensive assessments of various potential key determinants of ethnic differences in life satisfaction.

The present study also has several limitations that need to be acknowledged. Our study included only English-speaking Hispanics living in San Diego County, and the level of education of our sample was higher than that of the general older U.S. Hispanic population (Talamantes & Sanchez-Reilly, 2010). Thus, caution is warranted in generalizing our findings more broadly to all Hispanics living in the U.S., particularly given the large heterogeneity among Hispanics. We have limited information on factors that might be particularly relevant to Hispanics, such as the country of origin, immigration status and the number of years living in the U.S., which might have allowed us to better characterize our Hispanic group. However, 91% of Hispanics in San Diego County are of Mexican origin/descent 36% are foreign-born and 76% are U.S. citizens (Lopez & Dockterman, 2011; Pew Research Center, 2013). Thus, we expect most of our participants to be of Mexican origin/descent and to be U.S.-born. Also, the fact that our participants were all English speaking, suggests at least a moderate level of acculturation into the mainstream culture. Prior findings show distinct mental health outcomes among subgroups of Hispanics based on degree of acculturation, country of origin/descent and immigration status (U.S. Department of Health and Human Services, 2001). Thus, the observed greater life satisfaction among Hispanics compared to non-Hispanic Whites might be more or less notable in other subgroups. Importantly, Hispanics of Mexican origin/descent represent 63% of the total U.S. Hispanic population (9% Puerto Ricans; 4% Cubans, 3% Dominican, 8% Central American, 6% South American and 7% other; Ennis, Rios-Vargas, & Albert, 2011).

Another limitation of the current study is that there is limited information on the psychometric properties of some of the instruments we used, particularly in Hispanics. This might have prevented us from optimally assessing the impact of these constructs. However, most of our measures have adequate psychometric properties, and the SWLS showed strong and comparable reliability for the two ethnic groups in our sample. There is a great need for research establishing the psychometric properties of psychological instruments among Hispanics, including their comparability across ethnic groups. Given the cross-sectional nature of our study, directionality cannot be determined by our findings. The ongoing SAGE study, however, involves yearly follow-up assessments, which will allow us to examine the association between our variables of interest longitudinally.

Overall, our findings indicate that at least some subgroups of older Hispanics might be more satisfied with their life than non-Hispanic Whites. The results also highlight the important role that spirituality might play in fostering well-being in older age. While the focus of psychiatry has been mostly on diagnosis and treatment of individuals with severe psychopathology, elucidating key factors that promote mental health and well-being is a foundational step for the development of mental illness prevention programs. For clinicians,

this might translate into making patients aware of the important role of spirituality as a tool to enhance mental wellness, as well as in encouraging this aspect of a patient's life, which is often unrecognized or discounted within the medical literature.

Future studies specifically developed to identify key predictors of positive mental health among Hispanics, and that also include Spanish-speaking Hispanics and assess other culturally-relevant factors (such as country of origin, acculturation, years in the U.S., and immigration history) would be better suited to address the question of which might be the most important predictors of life satisfaction among diverse groups of older Hispanics. Identifying these key determinants could be an important step toward development of culturally-relevant prevention and intervention programs to promote positive mental health in this understudied and growing segment of the U.S. population.

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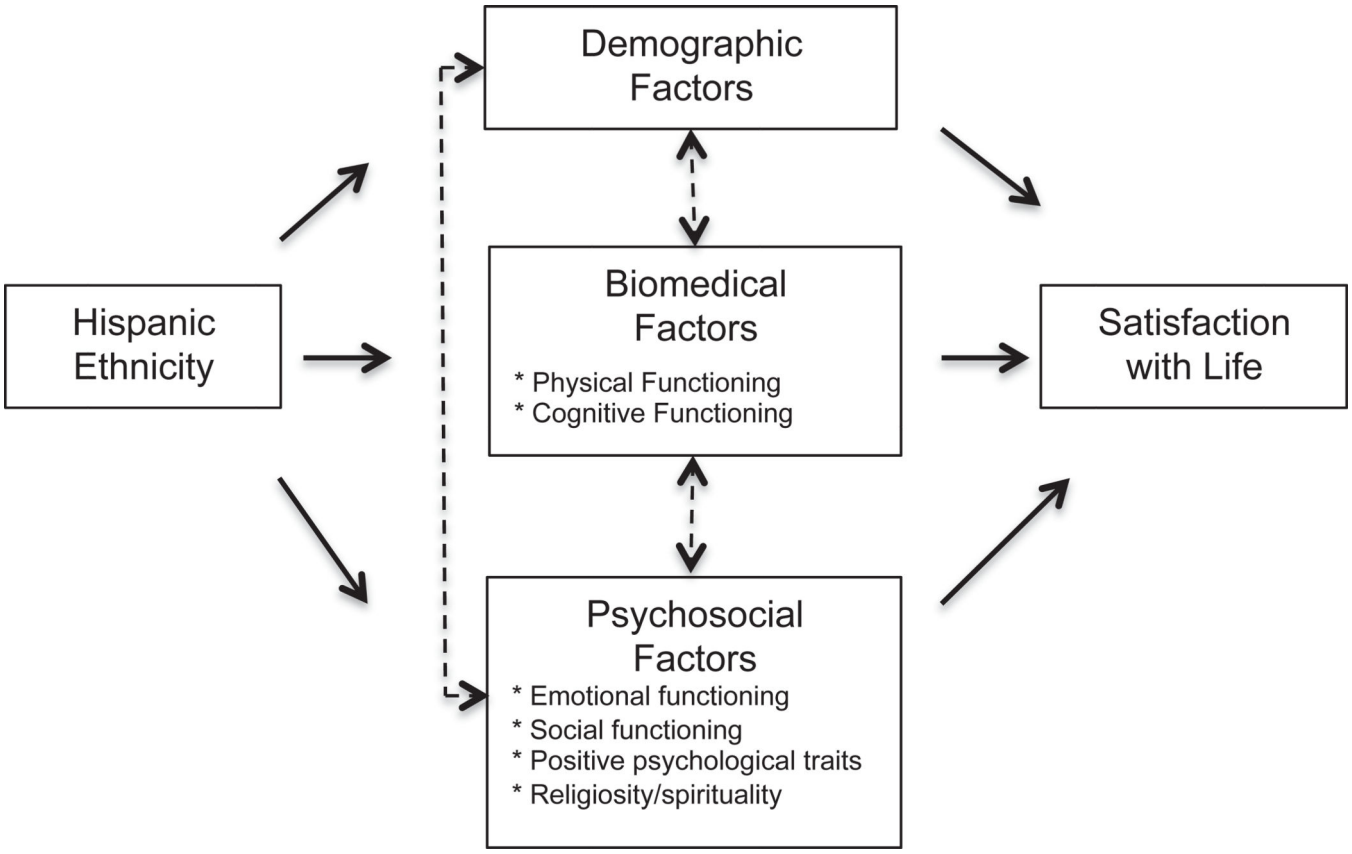

Figure 1.

Multifactorial model of ethnic differences in satisfaction with life.* represents specific indicators available in the Successful Aging Evaluation (SAGE) Study and that are the focus of the present study

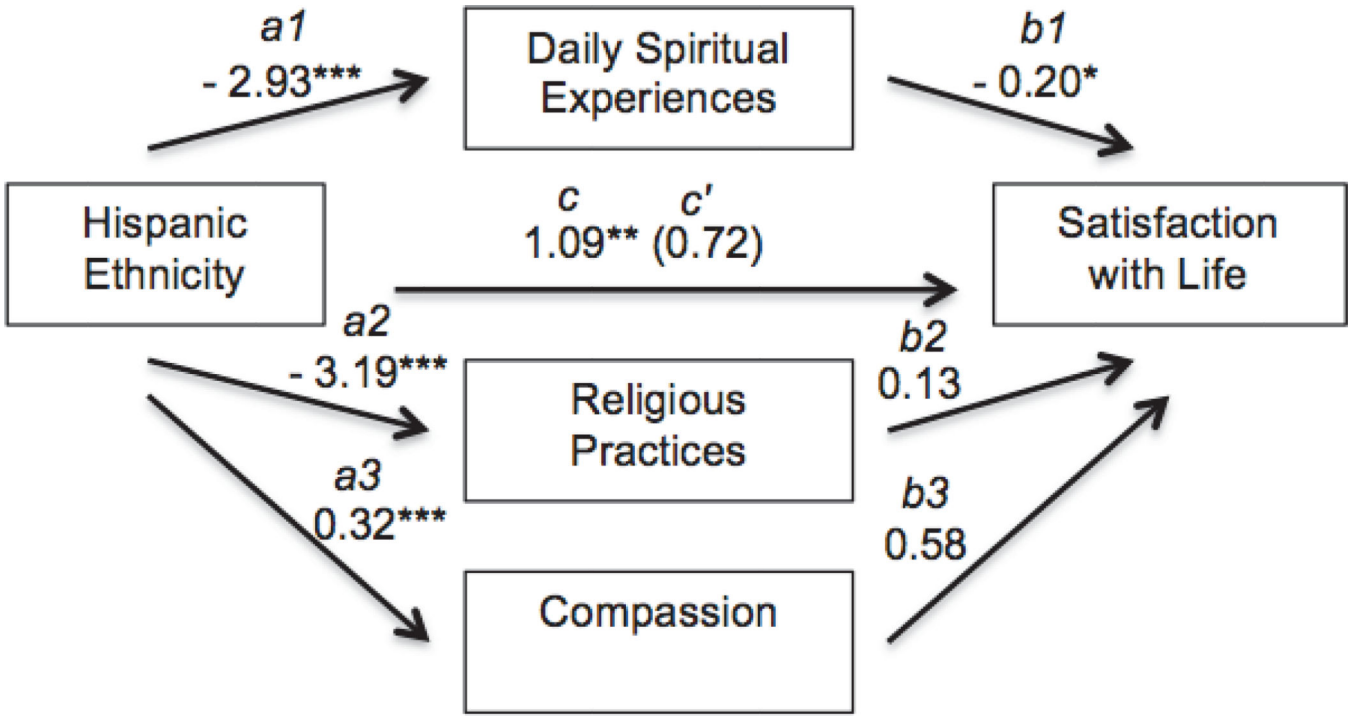

Figure 2.

Model examining the association between ethnicity and satisfaction with life, including whether daily spiritual experiences, private religious practices, and compassion, might account for this association. The *c* coefficient represents the total relationship between ethnicity and satisfaction with life (not controlling for any of the proposed intermediate or explanatory factors). The *c*' coefficient represents the strength of the association between ethnicity and satisfaction with life after controlling for the three proposed intermediate factors that appear in the model. The *a* and *b* paths represent the indirect path involving each of the proposed intermediate factors. The *a* paths show the coefficients for the association of ethnicity to each of the proposed intermediate factors based on separate linear regression models. The *b* paths show the coefficients for the association of each of the proposed intermediate factors to satisfaction with life when included together in a multivariable regression model along with ethnicity. *p<.05 **p<.01 ***p<.001

Table 1

Demographic Characteristics and Aspects of Satisfaction with Life by Ethnic Group

	Hispanic (*n*=126)	White (*n*=126)	*Group Comparisons*		
			df	*t*/X^2	*p*
DEMOGRAPHICS					
Age (years)	73.2 (9.8)	73.3 (10.4)	--	--	--
Gender, male	57.9%	57.9%	--	--	--
Education					
HS or less	34.1%	34.1%	--	--	--
Some college to Bachelor	43.7%	43.7%	--	--	--
Post-graduate	22.2%	22.2%	--	--	--
Marital Status			3	0.5	0.93
Married	61.9%	63.5%			
Single	3.2%	2.4%			
Divorced/separated	18.3%	15.9%			
Widowed	16.7%	18.3%			
Annual Income			2	4.2	0.12
<35,000	57.9%	44.9%			
35,000 to <75,000	26.5%	37.6%			
>75,000	15.7%	17.4 %			
WELL-BEING					
Satisfaction with Life Scale Life Satisfaction Index	27.2 (5.5)	24.6 (6.4)	239	3.5	<0.001
Childhood	7.7 (2.2)	7.2 (2.6)	237	1.4	0.16
Adolescence	7.5 (2.2)	6.7 (2.4)	240	2.4	0.02
Young Adulthood	8.3 (1.5)	7.9 (1.9)	233	1.6	0.11
Middle Adulthood	8.5 (1.4)	8.0 (1.9)	225	2.1	0.04
Late Adulthood	8.7 (1.4)	8.1 (1.9)	180	2.7	0.01
PHYSICAL FUNCTIONING					
MOS SF-36 Physical Composite	44.3 (10.6)	45.3 (10.6)	235	−0.7	0.47
COGNITIVE FUNCTIONING					

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	Hispanic (*n*=126)	White (*n*=126)	*Group Comparisons*		
			df	*t*/X^2	*p*
Objective Cognitive Function	31.4 (5.5)	33.8 (5.1)	248	−3.5	<0.001
Subjective Cognitive Symptoms	31.6 (14.4)	30.5 (11.5)	199	0.7	0.51
EMOTIONAL FUNCTIONING					
MOS SF-36 Mental Composite	54.9 (8.7)	53.2 (8.8)	235	1.5	0.14
Depression Symptoms	2.4 (3.2)	2.9 (3.9)	221	−1.2	0.23
Anxiety Symptoms	2.0 (3.0)	2.0 (2.8)	237	0.17	0.86
Stressful Life Events	3.9 (3.8)	3.2 (2.9)	188	1.6	0.12
SOCIAL FUNCTIONING					
Subjective Social Status Scale	6.7 (1.7)	6.9 (1.6)	244	−1.2	0.22
Duke Social Support Index	8.5 (1.4)	8.7 (1.6)	237	−1.1	0.28
Emotional Support Scale	2.7 (0.5)	2.5 (0.7)	218	1.7	0.09
PSYCHOLOGICAL TRAITS Compassion	5.1 (1.3)	4.5 (1.3)	240	3.6	<0.001
Individual Resilience (CD-RISC)	30.1 (7.)	31.1 (6.8)	241	−1.1	0.26
Interpersonal Resilience (MIIRM)	66.8 (8.0)	66.7 (8.9)	205	0.1	0.92
Optimism	22.8 (3.5)	22.7 (3.9)	242	.17	0.87
Personal Mastery	21.2 (3.3)	21.3 (3.5)	237	−0.1	0.91
SPIRITUALITY/RELIGIOSITY					
Daily Spiritual Experiences	16.0 (7.9)	21.7 (8.7)	231	−5.3	<0.001
Private Religious Practices	21.5 (9.2)	28.0 (8.1)	228	−5.7	<0.001

Note. Values represent *M*(*SD*) unless otherwise noted. CD-RISC=Connor-Davidson Resilience Scale 10-item; MIIRM= Multidimensional Individual and Interpersonal Resilience Measure; MOS SF-36 = Medical Outcomes Study 36-Item Short Form