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Race, Religion, and Abstinence From Alcohol in Late Life

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Objective: This study aimed to see whether involvement in religion helps explain why older Blacks are more likely to avoid drinking alcohol than older Whites. **Methods:** Interviews were conducted with a nationwide sample of older Whites and older Blacks. Survey items were administered to assess whether study participants consume alcohol, whether they affiliate with fundamentalist congregations, how often they attend religious services, how often they pray privately, and whether they derive a sense of meaning from their faith. **Results:** The findings reveal that older people who affiliate with fundamentalist churches and who find meaning in religion are more likely to avoid drinking. However, neither church attendance nor private prayer are related to alcohol use. Race differences in the odds of drinking were no longer statistically significant once the religion measures were added to the model. **Discussion:** The findings highlight the importance of religion in shaping the health behaviors of older adults.

Keywords: *abstinence; alcohol; religion*

There are several fairly clear patterns in research on aging and alcohol use. In particular, a number of studies show that in general, people tend to drink less as they grow older (Fillmore et al., 1991). But perhaps more important, there is some evidence that as people age they may be more likely to stop using alcohol altogether. For example, Adams and his associates (Adams, Garry, Rhyne, Hunt, & Goodwin,

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1990) report that over a 7-year period, the number of older people who stopped consuming alcohol increased by about 2% each year. Finally, there appear to be important race differences in the decision to abstain from alcohol in late life. More specifically, research indicates that 44.4% of older Whites currently drink, but only 22.3% of older Blacks consume alcoholic beverages (Centers for Disease Control and Prevention, 2001a). Most studies involving older people focus on factors that are related to the increased consumption of alcohol or problem drinking (Schutte, Bryne, Brennan, & Moos, 2001). But if the trend toward increased abstinence with age is legitimate, then researchers need to know more about the factors that encourage older people to avoid using alcohol. In addition, it is especially important to find out why there may be race differences in abstinence from alcohol during late life.

Although a number of factors are likely to influence the decision to abstain from drinking, a small cluster of studies indicates that religion may have something to do with it. More specifically, research by Krause (1991) indicates that greater subjective religiousness (e.g., greater importance of religion as well as the tendency to turn to religion during difficult times) is associated with a higher probability of abstaining from alcohol. Similarly, research by Musick, Blazer, and Hayes (2000) suggests that older people who attend church frequently and who pray or read the Bible often are more likely to avoid alcohol than older adults who are not as deeply involved in religion. Unfortunately, neither of these studies assessed whether religion may play a role in shaping race differences in alcohol use. There are two reasons why it is important to examine this issue. First, as noted above, older Blacks are more likely to abstain from using alcohol than older Whites. Second, research consistently indicates that older Blacks are more involved in religion than older White people (Levin, Taylor, & Chatters, 1994). Although these findings point toward the logical conclusion that religion may help explain race differences in abstinence from alcohol during late life, there do not appear to be any studies in the literature that evaluate this relationship empirically. The purpose of the present study is to do so.

At first glance, it may appear that exploring the interface between religion and abstinence from alcohol is a relatively straightforward matter. However, researchers have known for some time that religion

is a complex phenomenon that contains many different domains or dimensions. For example, a panel of experts recently concluded that religion is composed of at least 12 domains including organizational religiousness (e.g., frequency of church attendance), religious support, religious coping, and religious meaning (Fetzer Institute/National Institute on Aging Working Group, 1999). Because religion is a complex conceptual domain, and because so little research has been done in the area, it is hard to tell which dimension (or dimensions) of religion may be associated with abstinence from alcohol among older people.

Following the work of other investigators, the analyses presented below begin by assessing the relationship between denominational preference (Herd, 1996), church attendance (Krause, 1991), prayer (Musick et al., 2000), and abstinence from alcohol. However, to expand the scope of inquiry, a second goal of the present study is to bring a dimension of religion to the foreground that has not been evaluated previously in studies on abstinence from alcohol among older people. More specifically, an effort is made to see if religious meaning may help explain race differences in the decision to abstain from using alcohol in late life. Meaning is defined broadly as "having a purpose in life, having a sense of direction, a sense of order and a reason for existence, a clear personal identity, and a greater social consciousness" (Reker, 1997, p. 710). As Reker (2000) points out, a sense of meaning may arise from a number of sources, including personal relationships, work, and religion. Consistent with the overall theoretical focus of this study, the analyses presented below will focus specifically on meaning that arises from religious sources.

The discussion that follows is divided into three main sections. First, the theoretical underpinnings of the study are developed in detail. Following this, the sample and measures are introduced. Finally, results based on data provided by a recent nationwide survey of older Whites and older Blacks are reviewed and discussed.

Linking Religion and Race With the Decision to Avoid Alcohol

This section begins by exploring why denominational preference, church attendance, prayer, and religious meaning might be associated

with abstinence from alcohol. Then, a rationale is provided for why there may be race differences in the relationships among these constructs.

DENOMINATIONAL PREFERENCE

As Stark and Finke (2000) point out, a major function of religious organizations is to shape the norms, values, and behaviors of church members. There is some evidence that this may be true with respect to health behaviors. More specifically, some Christian denominations (e.g., Seventh-Day Adventists) encourage the faithful to follow strict dietary practices and to avoid the use of tobacco. But it is especially important for the purposes of the present study to point out that a number of fundamentalist denominations (e.g., Southern Baptists) strictly forbid the use of alcohol (Herd, 1996). A good deal of this influence may be exerted through formal religious teachings during weekly worship services or in Bible study groups, but research by Herd (1996) indicates there may be a strong social component involved as well. More specifically, findings from her study indicate that the social modeling and informal influence of fellow church members explains at least part of the relationship between membership in fundamentalist churches and alcohol consumption. This notion is consistent with a basic proposition developed by Stark and Finke in their comprehensive theory of religion. In particular, these investigators argue that "an individual's confidence in religious explanations is strengthened to the extent that others express their confidence in them" (Stark & Finke, 2000, p. 107).

Although some church members may decide not to comply with church views on alcohol (Musick et al., 2000), it would be difficult to study the relationship between religion and abstinence from alcohol without taking the potentially important influence of denominational preference into account. Based on the findings provided by Herd (1996) and others, it is hypothesized that older adults who affiliate with fundamentalist churches will be more likely to abstain from using alcohol than older people who are not members of fundamentalist churches.

CHURCH ATTENDANCE

As Stark and Finke (2000) point out, religious rituals play an important role in the life of the church. In particular, frequent attendance at rituals, such as weekly church services, enhances the solidarity of the group and builds commitment to the central values, ideals, and norms espoused by the congregation. In essence, this proposition represents a specific instance of the more general sociological principle that frequent interaction tends to increase agreement among group members (Homans, 1974). It follows from these observations that older people who attend church frequently should be less likely to use alcohol than older adults who do not go to church services often. There is, however, an important qualification.

More frequent attendance at religious services will be associated with abstaining from the use of alcohol only if official church doctrine prohibits the use of alcohol in the first place. Stated in more formal terms, this suggests that there may be a statistical interaction effect between denominational preference and church attendance on abstinence from alcohol. Some support for this perspective is provided by Cochran (1993), but his research was conducted with younger people. In contrast, there do not appear to be any studies in the literature that have assessed this potentially important statistical interaction effect in samples composed of older people.

PRIVATE PRAYER

As noted earlier, some studies suggest that frequent private prayer is associated with a greater probability of avoiding the use of alcoholic beverages (Musick et al., 2000). However, the underlying theoretical rationale for the relationship between these constructs is not well developed. One way to address this problem begins with the simple proposition that people who are more deeply committed to their faith are more likely to adopt official church doctrine than individuals who are not as involved in religion. Although commitment may be assessed in a number of different ways, one approach involves seeing whether people actively practice their faith when they leave the church and return to the secular world. The frequency of private prayer serves as a useful indicator of this. Based on this reasoning, it is hypothesized

that older people who often pray privately should be more likely to avoid the use of alcohol.

As with church attendance, it is important to think about how to correctly specify the relationship between private prayer and abstinence from alcohol. If private prayer is an indicator of religious commitment, then it should only be associated with the avoidance of alcohol when older people are committed to congregations that prohibit the use of alcohol. Once again, this specification calls for testing a statistical interaction effect between denominational preference and private prayer on the decision to abstain from using alcohol.

RELIGIOUS MEANING

According to Victor Frankl (1963), the desire to find a sense of meaning is one of the primary motivating forces in life. This observation is important because a number of investigators maintain that one of the central functions of religion is to help people fulfill this basic need. Evidence of this may be found, for example, in the classic work of Clark (1958) who argued that "religion more than any other human function satisfies the need for meaning in life" (p. 419). Similarly, in the process of conducting his thought-provoking work on religious coping, Pargament (1997) maintained that "in essence, religion offers meaning in life." Berger's (1990) work in the sociology of religion helps show how religion may perform this vitally important function. Berger maintained that people are inevitably confronted by a series of painful and discrepant situations in life that often are not amenable to change. This is certainly true for older people. For example, as Nuland's (1993) book on the physiology of aging reveals, physical decline is an unavoidable part of growing older. Although it is true that the timing and rate of decline may vary from person to person, physical decline, and ultimately death, are inevitable. In addition, there is some evidence that cognitive abilities also tend to decline for a number of people as they go through late life. More specifically, research by George and her colleagues suggests that by age 75, nearly one in four older people experience mild cognitive impairment (George, Landerman, Blazer, & Anthony, 1991).

Research in developmental psychology shows that the physiological changes associated with aging are accompanied by key

psychological challenges as well. More specifically, Erikson (1959) maintained that when people enter late life, they are confronted by the final developmental stage that is characterized by the crisis of integrity versus despair. This is a time of deep introspection, when older adults survey their lives, attempt to reconcile the things they have done, and make sense of the experiences they have encountered. Similar views have been expressed by Jung (1953), Buhler (1962), and Butler and Lewis (1982). Viewed broadly, a common theme cuts across the work on adult development. In particular, this literature suggests that as people grow older, they carefully reevaluate their past in an effort to weave their lives into a more coherent whole. Ultimately, the goal of this process is to imbue life with a deeper sense of meaning. However, as Erikson points out, everyone does not resolve this developmental challenge successfully, and some may eventually slip into despair.

Berger (1990) maintained that religion helps people deal with issues, such as the physical and psychological challenges identified above, by providing theodicies. Theodicies are religiously based worldviews that offer explanations for suffering, evil, and (especially) death by showing how they fit into a larger cosmic order and purpose. Berger asserted that people who endorse and internalize these theodicies derive a deeper sense of meaning and purpose in life. However, he went on to argue that individuals who do not subscribe to religious theodicies are more likely to experience a state of anomy, which is a painful separation from the wider social order that casts the individual into a deep sense of inner turmoil.

The work of Frankl (1967, 1978) helps show how Erikson's (1959) notion of despair and Berger's (1990) views on anomy may lead to substance use. Frankl (1967) maintained that people who are unable to find a sense of meaning or purpose in life find themselves in an "existential vacuum" that is accompanied by a sense of indifference, apathy, and boredom. Moreover, he argued that those who experience this sort of existential vacuum are especially likely to use and abuse drugs, including alcohol. More specifically, he hypothesized that "addiction is at least partially to be traced back to the feeling of meaninglessness" (Frankl, 1978, p. 26).

If the observations of Frankl (1978), Erikson (1959), and others are correct, then older people who are deeply immersed in their faith and derive a sense of meaning from it should be more likely to abstain

from using alcohol than older people who are unable to find a sense of meaning. It is important to point out that this proposition is different from those that have been developed so far because it is not contingent on denominational preference. More specifically, people who are affiliated with any denomination should find that religion provides a sense of meaning and purpose in life, and as a result, they should be more likely to avoid the use of alcohol.

There appear to be very few studies in the literature that assess the relationship between meaning in life and abstinence from alcohol. Those that do typically suffer from one of two problems. More specifically, these studies either focus on meaning in life that does not specifically arise from religious sources or they assess special populations, such as recovering alcoholics (e.g., Amodeo, Kurtz, & Cutter, 1992). The present study aims to contribute to the literature by studying religious-based meaning and abstinence from alcohol based on data from a nationwide random probability survey of older people.

RACE DIFFERENCES

The theoretical rationale provided up to this point suggests that religion may be associated with the decision to avoid alcohol in late life. But consistent with the specific aims of this study, it is important to think about how race differences may arise in this relationship.

As noted earlier, a considerable number of studies indicate that older Blacks are more deeply involved in religion than older Whites. In one of the more comprehensive studies, Levin et al. (1994) explored race differences in religion across four national surveys. Race comparisons were made on 21 indicators of religion. The findings indicated that older Blacks are more religious than older Whites in 19 of the 21 tests. This study revealed, for example, that compared to older Whites, older Blacks attend church more often, read religious books more often, and feel that religion is more important in their lives.

A key premise in the present study is that some fundamental underlying factor must be at work for race differences to emerge in such a wide range of religion measures. More specifically, it is assumed that older Blacks go to church more often, pray more often, and feel that religion is more important to them because they are more likely to find

meaning in religion than older Whites. A key task at this juncture is to show why this may be so.

In their thought-provoking volume, Cooper-Lewter and Mitchell (1986) argue that at the basis of Black culture is a set of core religious beliefs, or religious worldviews. Included among the 10 core religious beliefs they identify are beliefs about the nature of God and His relationship to man, as well as beliefs about basic human nature and the way people should relate to each other. They go on to point out that these core religious beliefs "are the bedrock attitudes that govern all deliberate behavior and relationships and also all spontaneous responses to crises" (Cooper-Lewter & Mitchell, 1986, p. 3). Although these investigators do not use the term *religious meaning* explicitly, it seems reasonable to argue that older Blacks endorse these core worldviews, and engage in the behaviors they promote, because they find a deep sense of meaning in them.

Further evidence of race differences in religious meaning is provided by Ellison (1993). He argues that one of the primary functions of the church in the Black community is to provide individuals with a sense of their own inherent uniqueness as individuals. Moreover, he maintains that the church promotes and rewards a range of spiritual qualities, including wisdom and morality. It seems likely that these important functions, in turn, promote a sense of meaning in life.

There are clear historical reasons why the church came to play such a central role in shaping a sense of meaning in the Black community. A number of investigators maintain that due to centuries of discrimination and prejudice, the church became the social center of the Black community (DuBois, 2000). In addition to becoming the center of religious training and worship, the church also became the nucleus of social activities and a conduit for the dispersion of social services (Billingsley, 1999). As Lincoln and Mamiya (1990) point out, the church assumed this pivotal position because it was the only institution in the Black community that was wholly owned and controlled by Blacks.

But the wider social forces that were at work did more than just shape the organizational aspects of the church. In addition, these historical influences shaped the content of Black theology as well. More specifically, Paris (1995) maintains that religion in the African American community is guided by a "survival theology." Arising from

centuries of slavery, discrimination, and prejudice, this survival theology emphasizes “the maintenance, preservation, and enhancement of a meaningful life . . . in the midst of the actual experience of suffering and the existential threat of death” (Paris, 1995, p. 48). Similar views are expressed by Cone (1975), who argued that one of the primary functions of the church in the Black community is to show people that their lives have meaning and that God will enter human affairs on the side of the oppressed to ultimately ensure justice. Support for the views of Paris and Cone may be found in an insightful qualitative study by Black (1999). She found that Black women were able to find a sense of meaning in the midst of poverty and racism because they “interpreted it as a measure of their strength, imbued it with divine purpose, and foresaw a just end” (Black, 1999, p. 372).

If rates of alcohol use are lower among people who find a sense of meaning in life through religion, and the primary function of the church is to help Black people find meaning in life, it follows that religious meaning may play an important role in explaining race differences in alcohol use in late life.

Method

SAMPLE

The data for this study come from a nationwide survey of older Whites and older African Americans. The study population is defined as all household residents who were either White or Black, non-institutionalized, English speaking, and 66 years of age or older. Geographically, the study population was restricted to eligible persons residing in the coterminous United States (i.e., residents of Alaska and Hawaii were excluded). Finally, the study was restricted to individuals who were either currently practicing Christians, people who were Christians in the past but no longer practice any religion, and individuals who were not affiliated with any faith at any point in their lifetime. People who practice a religion other than Christianity (e.g., Jews or Muslims) were excluded because it would be difficult to devise measures of religion that would be suitable for persons of all faiths.

The sampling frame consisted of all eligible persons contained in the Health Care Finance Administration (HCFA) Medicare Beneficiary Eligibility List (HCFA is now called Centers for Medicare and Medicaid Services). This list contains the name, address, sex, and race of virtually every older person in the United States. It should be emphasized that people are included in this database even if they are not receiving Social Security benefits. Nevertheless, some older people are not in the database because they do not have a Social Security number. This can be due to a number of factors, such as illegal immigration.

A five-step procedure was used to draw the sample. First, once each year, researchers at HCFA draw a 5% sample of names from their nationwide master file. These names are selected with a simple random sampling procedure. The sampled names include all individuals who are 65 years of age or older. However, by the time the field period for the present study began, individuals in the 5% file were at least 66 years of age. It is for this reason that the study population was defined above as including individuals who were 66 years of age or older. In the second step of the sampling procedure used in this study, the 5% file was split into two subfiles—one contained the names of older Whites and the other contained the names of older Blacks. Each subfile was then sorted by county and then by zip codes within each county. Then in the third step, an n th interval was calculated for each file based on the total number of eligible records. In the fourth step, about 25 names were selected above and below each case identified in Step 3 to form primary sampling units (PSUs). Finally, in the last step, sampled persons within each PSU were recruited for an interview with the goal of obtaining about 10 cases per PSU.

Interviewing began in March 2001 and concluded in August 2001. The data collection was performed by Louis Harris and Associates (now Harris Interactive). A total of 1,500 interviews were obtained. Older Blacks were oversampled so that sufficient statistical power would be available to fully assess race differences in religion. More specifically, the sample contained 750 older Whites and 750 older African Americans. The overall response rate for the study was 62%.

After using listwise deletion of missing values to deal with item nonresponse, complete data were available for 1,162 older study

Table 1
Study Measures

1. Abstinence from alcohol: Computed variable contrasting those who never drink (scored 1) with those who currently consume alcohol (scored 0).
2. Denominational preference: Computed variable contrasting study participants who affiliate with a fundamentalist congregation (scored 1) with all other respondents (scored 0).
3. Church attendance: ^a How often do you attend religious services?
4. Private prayer: ^b How often do you pray by yourself?
5. Religious meaning: ^c (a) God put me in this life for a purpose; (b) God has a specific plan for my life; (c) God has a reason for everything that happens to me.

a. This variable is scored in the following manner (coding in parentheses): *Several times a week* (9); *every week* (8); *nearly every week* (7); *2-3 times a month* (6); *about once a month* (5); *several times a year* (4); *about once or twice a year* (3); *less than once a year* (2); *never* (1).

b. This variable is scored in the following manner: *Several times a day* (8); *once a day* (7); *a few times a week* (6); *once a week* (5); *a few times a month* (4); *once a month* (3); *less than once a month* (2); *never* (1).

c. These variables are scored in the following manner: *Strongly agree* (4); *agree* (3); *disagree* (2); *strongly disagree* (1).

participants. Approximately 49% were older Whites and 51% were older Blacks. The average age of these individuals was 74.3 years ($SD = 6.3$ years). Approximately 43% were older men, and 50% of all study participants indicated they were married at the time of the interview. Finally, these older adults reported they had successfully completed an average of 11.6 years of schooling ($SD = 3.4$ years). These descriptive statistics, as well as the results presented below, are based on weighted data.

MEASURES

Table 1 contains the core survey items that are analyzed in this study. The procedures used to score these measures are provided in the footnotes of this table.

Abstinence from alcohol. As shown in Table 1, the participants in this study were asked if they ever consume beer, wine, or liquor. A binary outcome variable was created from responses to this item, where a score of 1 stands for older people who do not use alcohol and a score of 0 denotes those who consume alcoholic beverages.

Preliminary data analysis reveals that approximately 61% of older Whites and 75% of older African Americans never drink alcohol. The difference between these prevalence estimates is significant at the .001 level.

Denominational preference. The participants in this study were asked a series of detailed questions (not shown in Table 1) about their denominational preference. These data were then coded with the scheme devised by Smith (1987). More specifically, Smith developed a scheme for classifying a wide range of Christian churches as fundamentalist, moderate, or liberal. Based on the work of Herd (1996), it was anticipated that fundamentalists would be more likely than either moderates or liberals to endorse proscriptions regarding the use of alcohol. Consequently, a binary measure was created from the data to contrast fundamentalists (scored 1) with moderates, liberals, and older people who are not affiliated with any denomination (scored 0). Preliminary analysis revealed that approximately 55% of the participants in this study were affiliated with fundamentalist congregations.

Church attendance. A single item was administered to determine how often study participants attended religious services. This indicator is coded so that a high score reflects more frequent church attendance.

Private prayer. The older respondents in this study were also asked how often they pray when they are alone. A high score on this measure represents more frequent private prayer.

Religious meaning. Three questions were developed especially for this study to assess religious meaning. It is important to briefly discuss how these items were written. Before the nationwide survey was conducted, 3 years were spent conducting a series of focus groups, in-depth interviews, and cognitive interviews with a separate group of 399 older Whites and older Blacks (see Krause, 2002a, for a detailed discussion of this item development strategy). The goal of this intensive item development program was to craft a set of religion measures that capture the way older Whites and older Blacks think about and practice religion in daily life. Throughout, the intent was to maximize

the salience of the items by using the respondents' own words and phrases to write the question stems.

Following the recommendations of the Fetzer Institute/National Institute on Aging Working Group (1999), the three questions in Table 1 were written so that they explicitly capture meaning that arises from religion and not a more general sense of meaning that could come from any number of sources. So, for example, these items ask if respondents feel that God has a specific plan for their lives and whether God put them in this life for a purpose. These indicators are coded so that a high score denotes a greater sense of religious meaning. The internal consistency reliability estimate for this brief composite measure is .909.

Race. A binary variable was used to contrast older Whites (scored 1) with older African Americans (scored 0).

Region of the country. Research reveals that people who live in the South tend to be more involved in religion than people who live in other regions of the United States. This appears to be especially true of African Americans (Ellison & Sherkat, 1995). In addition, research indicates that rates of alcohol consumption tend to be somewhat lower in the South (Centers for Disease Control and Prevention, 2001b). To statistically control for these potentially important effects, a measure was included in the analyses presented below which contrasts older people who reside in the South (scored 1) with older adults who live elsewhere in the United States (scored 0).

Demographic control measures. The relationships between race, religion, and abstinence from alcohol were assessed after the effects of age, sex, education, and marital status were controlled statistically. Age is scored in a continuous format. Similarly, education is coded in a continuous format reflecting the total number of years of completed schooling. Sex is a binary variable contrasting older men (scored 1) with older women (scored 0), and marital status is a binary indicator where a score of 1 is assigned to older study participants who were married at the time of the survey and a score of 0 stands for older people who were not married when the interview took place.

Table 2
The Relationship Between Race and Religious Fundamentalism (N = 1,162)

	b ^a	β ^b	Odds Ratio
Age	-.023*	-.145	.977
Sex	-.117	-.011	.890
Education	-.049**	-.165	.952
Marital status	-.010	-.005	.990
Race	-1.702****	-.851	.182
Region	.588****	.290	1.801
-2 log likelihood	1350.768		

a. Unstandardized logistic regression coefficient.

b. Standardized logistic regression coefficient computed by multiplying the unstandardized logistic regression coefficient by the standard deviation of the independent variable.

* $p < .05$. ** $p < .01$. **** $p < .001$.

Results

The findings from this study are presented below in two sections. As discussed earlier, the overall goal of this research is to see if religion helps explain race differences in the odds of avoiding alcohol during late life. A necessary prerequisite for evaluating this proposition involves ascertaining whether older Blacks are more involved in religion than older Whites. It is for this reason that the relationship between race and the religion measures is examined below in the first section. Following this, the relationships among religion, race, and abstinence from alcohol are reviewed.

RACE AND RELIGION IN LATE LIFE

A series of analyses were performed to see if there are race differences in religious involvement during late life. Two statistical procedures were used for this purpose. First, logistic regression analyses were used to assess the relationship between race and denominational preference because the denominational preference measure is scored in a binary format that contrasts fundamentalists with others. The results of these analyses appear in Table 2. Second, because the remaining religion outcomes are scored in a continuous format, ordinary least squares (OLS) multiple regression analyses were performed

Table 3
The Relationship Between Race, Church Attendance, Private Prayer, and Religious Meaning
 (N = 1,162)

Independent Variables	Church Attendance		Private Prayer		Religious Meaning	
	β^a	b^b	β	b	β	b
Age	-.055	(-.023)	.006	(.002)	-.024	(-.007)
Sex	-.181***	(-.958)	-.254***	(-.893)	-.145***	(-.532)
Education	.130***	(.101)	-.017	(-.009)	-.045	(-.024)
Marital status	.083***	(.434)	.039	(.137)	.029	(.107)
Race	-.163***	(-.854)	-.262***	(-.911)	-.264***	(-.962)
Region	.031	(.166)	-.031	(-.108)	-.056	(-.205)
Multiple R^2	.068		.130		.094	

a. Standardized regression coefficient.

b. Unstandardized regression coefficient.

*** $p < .005$.

to see if there are race differences in church attendance, private prayer, and religious meaning. The findings from these OLS analyses are presented in Table 3.

Three coefficients are provided in Table 2 to more fully describe the relationship between race and denominational preference. In addition to the unstandardized logistic regression coefficients (*bs*) and odds ratios, Table 2 also contains standardized logistic regression coefficients (β s). Before turning to the substantive findings, it is important to briefly discuss why standardized estimates are important and how they were computed.

One problem with logistic regression analysis arises from the fact that it is difficult to determine whether the impact of one independent variable is greater than another. Comparing odds ratios doesn't help because as Selvin (1991) points out, the size of these estimates is influenced by the metric of the independent variable. Fortunately, Selvin provides a simple way of rank ordering (i.e., standardizing) the relative effects of the independent variables in logistic regression analysis. This procedure involves multiplying the unstandardized logistic regression coefficient by the standard deviation of the independent variable. Cast in the context of the present study, these standardized estimates indicate the change in log-odds of abstaining from alcohol for a one standard deviation change in a given independent variable.

The data in Table 2 reveal that older Whites are much less likely than older African Americans to be affiliated with a fundamentalist church ($\beta = -.851; p < .001$). Stated another way, the odds ratio in this table (.182) suggests that older Whites are about 82% less likely than older Blacks to be associated with a fundamentalist congregation.

The data in Table 3 reveal that compared to older Blacks, older Whites attend church less often ($\beta = -.163; p < .005$) and pray less frequently ($\beta = -.262; p < .005$). Finally, the results in Table 3 indicate that older Whites are less likely than older African Americans to find a sense of meaning in religion ($\beta = -.264; p < .005$). Taken as a whole, the findings reviewed up to this point suggest that older Blacks are much more involved in religion than older Whites.

RACE, RELIGION, AND ALCOHOL USE

Because the alcohol outcome measure used in this study is scored in a binary format, logistic regression analyses were performed to assess the relationships among religion, race, and alcohol use. The findings from these logistic regression analyses are presented in Table 4. The logistic regression analyses were conducted in a controlled hierarchical manner consisting of three steps. In the first step (see Model 1 in Table 4), only race, region of the country, and the demographic control measures were entered into the equation. This was done for the following reason. Earlier, basic prevalence data were presented that indicate that older Blacks are more likely to abstain from using alcohol than older Whites. Model 1 was estimated to see if race differences in alcohol use remain after the effects of other well-known demographic correlates of alcohol intake (e.g., gender) are taken into consideration. The next model (Model 2) was designed to see if entering the religion measures (i.e., denominational preference, church attendance, private prayer, and religious meaning) into the equation reduces the relationship between race and the avoidance of alcohol. If it does, then there would be some evidence that religion helps explain why older Blacks are less likely to drink than older Whites. Finally, consistent with the theoretical rationale provided earlier, Model 3 contains tests for the statistical interaction effects between fundamentalism and church attendance, private prayer, and religious meaning, respectively.

Table 4
Race, Religion, and Alcohol Use (N = 1,162)

	Model 1			Model 2			Model 3		
	b ^a	β^b	Odds Ratio	b	β	Odds Ratio	b	β	Odds Ratio
Age	.034***	.214	1.035	.041***	.258	1.041	.041***	.258	1.042
Sex	-1.318***	-.652	.268	-1.260***	.623	.284	-1.253***	-.620	.286
Education	-.110***	-.370	.896	-.101***	-.340	.904	-.103***	-.347	.902
Marital status	-.151	-.076	.860	-.151	-.075	.859	-.149	-.074	.862
Race	-.472***	-.236	.624	-.049	-.025	.952	-.016	-.008	.984
Region	.315	.155	1.370	.378**	.186	1.460	.377**	.186	1.458
Fundamentalist	—	—	—	.636***	.317	1.890	-1.020	-.508	.361
Church attendance	—	—	—	-.039	-.102	.962	-.088*	-.231	.916
Private prayer	—	—	—	.061	.106	1.063	.020	.035	1.020
Religious meaning	—	—	—	.144***	.262	1.155	.152**	.277	1.164
(Fundamentalist × Attendance)	—	—	—	—	—	—	.104	— ^c	1.109
(Fundamentalist × Prayer)	—	—	—	—	—	—	.143	—	1.154
(Fundamentalist × Meaning)	—	—	—	—	—	—	.006	—	1.006
-2 log likelihood			1269.473			1231.083			1221.514

a. Unstandardized logistic regression coefficient.

b. Standardized logistic regression coefficient computed by multiplying the unstandardized logistic regression coefficient by the standard deviation of the independent variable.

c. Standardized logistic regression coefficients are not provided for multiplicative terms because standardized estimates have no meaning in this context.

* $p < .05$. ** $p < .01$. *** $p < .005$.

The data in Model 1 reveal that race is still related to abstinence from alcohol ($\beta = -.472$; $p < .005$) after the effects of age, sex, education, marital status, and region of the country have been controlled statistically. The odds ratio associated with this relationship indicates (odds ratio = 0.624) that compared to older Blacks, older Whites are about 38% less likely to avoid consuming alcohol.

Two important findings emerge from the data provided by Model 2. The first involves the religion measures, whereas the second has to do with the effects of race. As anticipated, the findings in Model 2 indicate that religion is associated with the decision to avoid alcohol in late life. Consistent with previous research (Herd, 1996), the findings reveal that older adults who affiliate with fundamentalist congregations are considerably less likely to drink alcohol than older people who are not fundamentalist ($\beta = .317$; $p < .005$). In fact, as the odds ratio associated with this relationship reveals (odds ratio = 1.890), fundamentalists are nearly twice as likely to abstain from using alcohol than older people who do not affiliate with a fundamentalist church.¹ The data in Model 2 further suggest that older people who derive a sense of meaning from their faith are less likely to drink alcohol than older adults who do not find meaning in religion ($\beta = .262$; $p < .005$). More specifically, the data indicate that a one-unit increase in religious meaning is associated with a 15.5% increase in the odds of avoiding alcohol. Finally, in contrast to the results that have emerged so far, the findings further reveal that neither church attendance ($\beta = -.102$; n.s.) nor the frequency of private prayer ($\beta = .106$; n.s.) are significantly related to the avoidance of alcoholic beverages.

The findings provided by Model 2 further suggest that once the religion measures are included in the equation, race no longer exerts a statistically significant direct effect on the decision to consume alcohol ($\beta = -.025$; n.s.). When viewed in conjunction with all the findings that have been presented up to this point, these data indicate that older Blacks are less likely than older Whites to consume alcohol because older Blacks are more likely to be affiliated with fundamentalist denominations and because older African Americans are more likely than older Whites to derive a sense of meaning from their faith.²

Model 3 contains the results of the logistic regression analyses that were obtained after three multiplicative terms were added to the equation to see if the effects of church attendance, private prayer, and

religious meaning depend on whether an older person is affiliated with a congregation that eschews the use of alcohol (i.e., a fundamentalist denomination). As the data in this model reveal, none of the interaction terms is statistically significant. When these results are coupled with the findings from Model 2, two important conclusions emerge from the analyses. First, neither church attendance nor the frequency of private prayer appear to play a role in the decision to avoid alcohol. Second, religious meaning is a potentially important factor, but the effect of this previously unexamined construct appears to operate independently of denominational preference: People who find meaning in religion are more likely to avoid the use of alcohol regardless of whether they affiliate with a fundamentalist congregation.³

Discussion

Research consistently shows that Blacks are more likely to avoid using alcohol than Whites. Moreover, this appears to be true in a number of different age groups (e.g., Klonoff & Landrine, 1999). In fact, most of the studies in this field involve only younger people. In the process of explaining the relationship between race and alcohol use in younger age groups, most researchers turn to familial influences (Johnson & Johnson, 1999) or the impact of traditional African American culture (Klonoff & Landrine, 1999). The purpose of the present study was to assess the relationship between race and abstinence from alcohol in a different age group (i.e., older people) and to evaluate a different set of factors that may shape the decision to avoid drinking (i.e., religion). The findings provided above suggest that focusing on religion was justified. More specifically, the results indicate that greater involvement in religion fully explains race differences in the decision to avoid alcohol in late life. Put another way, once measures of religion were included in the analyses, initial race differences in abstinence from alcohol were no longer statistically significant. Four measures of religion were evaluated in this study. Two did not appear to be related to the use of alcohol (i.e., the frequency of church attendance and private prayer). However, consistent with previous research (Herd, 1996), affiliation with a fundamentalist denomination was associated with a sharp decline in the odds of drinking. Moreover, the

results further suggest that older people who derive a sense of meaning from religion are less likely to consume alcoholic beverages than older adults who do not find meaning in religion.

These findings are noteworthy for three reasons. First, this appears to be the first time that an effort has been made to explain race differences in abstinence from alcohol during late life. Second, the fact that the data are provided by a nationwide sample of older Whites and older Blacks makes it easier to generalize the findings to a wider population. Third, this appears to be the first time that the relationship between religious-based meaning and abstinence from alcohol has been evaluated in this literature.

Although the findings from this study may have made a contribution to the literature, a great deal of work remains to be done. To begin with, the data suggest that religious meaning is associated with the avoidance of alcohol, but the intervening variables linking these two constructs were not empirically evaluated. For example, it would be useful to know if religious meaning promotes greater life satisfaction, and whether older people who feel more satisfied with their lives are, in turn, less likely to consume alcoholic beverages (Amodeo et al., 1992). In addition, greater insight may be obtained if a distinction is made between the use of alcohol as a coping response to stress and the regular use of alcohol as a lifestyle factor. Subsequent analysis may reveal that religious meaning plays a larger role in shaping the use of alcohol as a coping response because it provides a cognitive framework for interpreting stressful events (Pargament, 1997), and it may enhance positive psychological orientations that make it easier to deal with the vicissitudes of life, including optimism (Krause, 2002b) and forgiveness (McCullough, Pargament, & Thoresen, 2000).

In the process, it would be helpful to view the relationship between religion and the avoidance of alcohol from a life course perspective (George, 1996). More specifically, research indicates that there are several different trajectories of religious involvement over the life course (Ingersoll-Dayton, Krause, & Morgan, 2002). For example, some people remain religious all their lives, others are never deeply involved in religion, and yet other individuals are religious when they are younger, disengage from religion in young adulthood, and return to religion during midlife. It would be interesting to see if these

different patterns of lifelong involvement with religion have a differential impact on the use of alcohol.

In the process of exploring these as well as other issues, researchers would benefit by paying attention to the limitations in this study. Four are discussed below. First, the data used in this study were gathered at one point in time only. As a result, the temporal ordering among the study variables was based on theoretical reasoning alone. It was hypothesized, for example, that older people who find a greater sense of meaning in religion are subsequently less likely to use alcohol. However, one might argue that those who don't drink in the first place are more likely to find a sense of meaning in life with the help of religion. Clearly, this, as well as other issues in the direction of causality, must be evaluated rigorously with data that have been gathered at more than two points in time.

The binary outcome measure used in this study contrasts older people who presently don't drink with older adults who currently consume alcohol. However, those who currently avoid using alcohol do not constitute a homogeneous group. Instead, at least four different patterns of prior alcohol use are subsumed in this category: lifelong abstainers, individuals who abstain after experiencing problems with long-term alcohol abuse, older people who avoid alcohol after undergoing intermittent patterns of problem drinking, and older adults who decide to stop drinking after engaging in a lifelong pattern of "normal" (i.e., nonproblem) drinking. Researchers are likely to gain greater insight if they assess the relationship between religion and these different patterns of prior involvement with alcohol.

Third, when the sample for this study was described, it was reported that some study participants failed to provide valid data for all the items. After using listwise deletion of missing values to deal with this problem, approximately 23% of the cases were excluded from the subsequent analyses. This raises the possibility that the study findings may be biased if those who were excluded differ in some systematic way from those who provided complete data. Unfortunately, there is considerable disagreement in the literature on how to handle this problem (Allison, 2002). Nevertheless, the potential influence of the listwise deletion procedures used in the present study should be kept in mind when the findings are reviewed.

Finally, the sample for this study consists of people who are at least 66 years of age. However, as an anonymous reviewer pointed out, it is possible that certain selection effects arising earlier in the life course may have influenced the relationship between religion and abstinence from alcohol in old age. For example, younger Blacks who are not religious may have died sooner than younger Blacks who were more involved in religion. Although the same may be true of younger Whites, the relative lack of resources outside religion in the Black community may have resulted in higher mortality rates earlier in life for African Americans. To the extent this is true, the sample of older Blacks in the present study may represent a hardy core of survivors with greater involvement in religion. Clearly, this as well as other life course issues should be evaluated with data that have been gathered from the same study participants over extended periods of time.

An impressive body of literature suggests that older people who are more involved in religion tend to enjoy better health than individuals who are not as religious (Koenig, McCullough, & Larson, 2001). Although religion is likely to influence health in a number of ways, many investigators believe these beneficial effects arise because people who are religious are more likely to engage in positive health behaviors (Levin, 2001). Yet the literature on religion and health behaviors remains underdeveloped. Most investigators who assess the relationship between religion and health behavior focus on factors such as denominational preference, church attendance, and the frequency of private prayer. Perhaps the greatest contribution of the present study arises from the fact that it encourages investigators to expand the scope of inquiry by examining the potentially important influence of a wider range of measures, such as religious meaning. By probing the full spectrum of religious domains, researchers will ultimately be in a better position to devise more explicit theories of how religion may influence the health of our aging population.

NOTES

1. Denominational preference is assessed by comparing fundamentalists to all others. However, the latter category (i.e., the "others") may contain a diverse array of older people, including Catholics, people with no religious affiliation, and Protestants who are not fundamentalist. This

raises the possibility that the odds of abstaining from alcohol may vary across these groups. In an effort to evaluate this possibility, three nominal categories were created to assess denominational preference: (a) fundamentalists; (b) Catholics and those with no religious preference; and (c) other Protestants. Subsequent analysis revealed that compared to fundamentalists, Catholics and those with no religious preference are much less likely to abstain from using alcohol (odds ratio = 0.343). In contrast, other Protestants were also less likely than fundamentalists to avoid alcohol (odds ratio = 0.707), but this relationship was not statistically significant at the .05 level (tables containing the results of these analyses are available from the author).

2. There may also be race differences in the relationship between the different measures of religion and alcohol use. Consequently, tests were performed to see if there are any significant statistical interaction effects between race and the religion measures (i.e., denominational preference, church attendance, private prayer, and religious meaning) on alcohol use. Subsequent analyses uncovered only one statistically significant interaction effect. More specifically, the interaction between race and church attendance was significant, indicating that older Blacks who attend church more often are more likely to abstain from using alcohol than older Blacks who do not go to church as often. In contrast to these results, there were no significant interactions between race, denominational preference, private prayer, or religious meaning on the use of alcohol (tables containing the results of these analyses are available from the author).

3. Some may take issue with the assertion that the effects of religious meaning are largely independent of the effects of denominational preference because older people who are affiliated with fundamentalist congregations may be more likely than older people from other denominations to derive a sense of meaning from their faith. However, preliminary analysis reveals that the relationship between fundamentalism and religious meaning is not substantial. In fact, fundamentalism was not related strongly to any of the other religion measures. More specifically, the following bivariate correlations were observed between fundamentalism and church attendance ($r = .129; p < .001$); private prayer ($r = .206; p < .001$); and religious meaning ($r = .229; p < .001$).

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