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Alcohol-Use Problems in Young Black Adults: Effects of Religiosity, Social Resources, and Mental Health*

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Abstract

Objective—Problems with alcohol remain a serious public health concern despite decreased use among some populations. Here we examine the relationship between alcohol problems and religiosity, hypothesizing that social resources may mediate this relationship.

Method—Using data from a longitudinal cohort study of a black community population ($N=1,242$) followed from age 6 to 32, analysis of moment structures (AMOS) multiple regression analyses were used to examine the association of religious involvement and alcohol-use problems, taking into account mediators, moderators, or both.

Results—Findings from this study support and extend the current literature that being male, having a major depressive disorder, completing fewer years of education, being unemployed, moving more frequently, and not attending church at least monthly are associated with serious problems with alcohol use in blacks. Those who were depressed and attended church frequently were no more likely to have alcohol problems than those who were not depressed. However, depression was strongly associated with alcohol problems for those who did not attend church frequently.

Conclusions—Frequency of church attendance was associated with fewer alcohol problems, and this relationship was moderated by depression. Other measures of religiosity were not significantly related to alcohol problems, and social resources did not mediate the relationship between alcohol problems and religiosity.

Over the past two decades, a number of religion and health studies have shown that religious involvement is protective in lowering overall mortality (Comstock and Partridge, 1972; McCullough et al., 2000) and morbidity (Idler and Kasl, 1992; Levin and Markides, 1986). Although less research is devoted to the interface of religion and substance use, religious involvement is consistently associated with decreased risk of alcohol and drug use problems and addiction (Miller, 1998).

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Religiosity and alcohol use

Problems with alcohol—and in many denominations even the use of alcohol—are seen as incompatible with religion and spirituality (Presbyterian Church, 1986; Miller, 1995). Religions such as Islam (Akabaliyev and Dimitrov, 1997; Lyon et al., 1976) and denominations such as Seventh-Day Adventists, Jehovah’s Witnesses, and Pentecostal churches forbid or strongly advise against alcohol use. On the other hand, Jewish and Christian scriptures describe the drinking of wine as part of ordinary life and involve wine in many of the key sacramental observances. Further, use of alcohol is permitted by some Judeo-Christian teachings, such as in the use of wine by Catholics for communion. Religion’s role in shaping moral attitudes regarding alcohol has led researchers to a long-standing interest in the relationship between religion and alcohol use.

Studies of both adolescent and adult populations report that alcohol use may be influenced by religion (Amoateng and Bahr, 1986; Catalano et al., 1992; Miller et al., 2000). Koenig and colleagues (1994), in a study of 2,969 adults ages 18–97 in North Carolina, found that recent use (past 6 months) and alcohol disorders as defined by the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III; American Psychiatric Association, 1980), were significantly less common among weekly churchgoers. Krause (1991) found older women and blacks had strong religious commitments and high rates of abstinence from alcohol. This finding persists even when measures of religious involvement have been one-dimensional and simplistic (e.g., denominational affiliation). Conversely, those exhibiting alcohol or drug problems tend to lack religious affiliation and involvement (Hilton, 1991; Larson and Wilson, 1980).

A number of factors underscore the need to explore religion and alcohol within a black community. In a review of findings from six national data sets, Chatters (2000) reports that levels of religiosity tend to be greater for blacks than for any other racial or ethnic group. In addition, the cultural context of religion for blacks is quite different than that for whites. Extending beyond the traditional functions of worship and spiritual development, religious institutions have long been a social resource and provider of instrumental support as well as a promoter of social control in minority communities (Johnson et al., 2000). This is not to portray “the Black Church” as a homogeneous structure—there is much variation within these institutions. It does, however, provide a strong rationale for bringing a multicultural lens to the exploration of religion and alcohol.

Racial differences in usage rates for alcohol and other drugs are complex and seem to vary by age and the measure of alcohol. Data from the National Household Survey on Drug Abuse (Kandel et al., 1997) found that blacks overall had lower rates of alcohol use than whites and most other ethnic and racial groups. Similar findings have been noted by Amey et al. (1996), O’Malley et al. (1998), and Vega et al. (1993). In analyzing ethnic differences in alcoholism using the Epidemiological Catchment Area (ECA) data, Helzer et al. (1991) found that, whereas in the youngest men (ages 18–29) the lifetime prevalence rate of alcoholism in whites was more than twice that in blacks, this difference reversed as older age groups were examined. A similar pattern of use was found for black and white women. Kandel et al. (1997) found that, among users, blacks had higher rates of dependence on

alcohol compared with whites. Researchers also found that blacks seemed to suffer greater negative consequences from alcohol use (Jones-Webb, 1998). Both the racial differences in religiosity and in patterns of use of alcohol suggest that the investigation of the relationship between religion and alcohol within a black population is warranted.

Religiosity and social resources

One hypothesis for the relationship between religion and alcohol problems is that religious involvement leads to greater social integration and social support and this leads to less alcohol use and fewer alcohol problems. In this study, the term *social resources* refers to social integration and social support. Religious institutions typically encourage and promote socialization among members of their congregations (Coward, 1986; Koenig et al., 2001), although this varies by religion (Durkheim, 1968). Further, religious involvement can provide a source of collective support on which members can draw during crises or other difficult times. Involvement in a religious community may be socially and psychologically rewarding (Ellison and George, 1994; Kark et al., 1996).

The effects of social support on health have been well documented (Andreasson, 1998; Berkman and Syme, 1979; Cohen and Syme, 1985). Research suggests that the perception of social support or the resources provided by other people (Cohen and Syme, 1985) may protect individuals from becoming depressed (Cohen and Wills, 1985; Lepore, 1992) and from abusing alcohol (Barrera et al., 1993; Maton and Zimmerman, 1992) and may lead to lower rates of alcohol use (Pierce et al., 2000). One can turn to family and friends to provide emotional or instrumental assistance and to reduce time spent worrying and thus lessen the experience of anxiety and depression (Wethington and Kessler, 1986; Wills and Cleary, 1996).

Several studies show that persons who participate in religious activities, such as worship services or prayer or study groups, have more extensive social support networks, social contacts, and satisfaction with the support (Ellison and George, 1994; Koenig et al., 1997). The evidence that religious involvement can often reduce feelings of loneliness and isolation suggests that people look to a church, mosque, or synagogue for a sense of connectedness (Ellison and George, 1994; Pargament, 1997).

Religiosity and depression

With respect to studies of religious involvement and depression, most have found a negative association (Gartner et al., 1991). Of the 29 cross-sectional studies examined in McCullough and Larson's (1999) review of the literature on religion and depression, 24 found lower levels of depressive symptoms reported by people involved in religious organizations. Similar findings also exist in the limited longitudinal evidence on Christian denominations (McCullough and Larson, 1999). Musick et al. (2000) found that among rural Baptists alcohol use was unrelated to changes in depressive symptoms, although levels of depression were greater among those who used alcohol and did not attend church regularly.

Overall, the evidence suggests that religiosity is associated with lower levels of depression. The presence of alcohol as a social lubricant may negatively impact mental well-being

among persons with little or no social support (Bazargan et al., 2004). Involvement in a religious community may help reduce alcohol problems in three ways. First, being connected reduces isolation and loneliness that might lead to alcohol use. Second, both religious teachings and the involvement in the church community act as social controls on problematic alcohol use. Third, religiosity may lower depression, which then relates to less problem alcohol use.

The present study examines if young adult involvement in religion is associated with problem alcohol use. Next, we explore if social resources or depression explain this relationship and if the relationships are similar for men and women.

Method

Study design and data collection

Data are from the Woodlawn Project, a longitudinal study beginning in 1966–67 when the cohort was in first grade in inner city Chicago ($N = 1,242$; 606 [48.8%] boys and 636 [51.2%] girls). Most families (99%) in the Woodlawn neighborhood were blacks of low socioeconomic status; a few were homeowners and had jobs providing income above the U.S. poverty level. Mothers or mother surrogates were interviewed at the start of the study to establish a detailed profile of the family and the focal child. Subsequently, both mothers ($n = 939$) and focal children ($n = 705$) were interviewed again in 1975–76 when the children were in their mid-teens. Our outcome measures were obtained in 1992–94 when the cohort members were ages 32–34. Eighty percent—456 men (47.9%) and 496 women (52.1%)—of those who were alive at the time of the interview were re-interviewed. Loss to follow-up was due to death (44), incapacitation (3), refusal (39), and not being located (204). To determine whether the young adults interviewed differed from those not interviewed, we compared data for the two groups from the initial assessment in 1966–67. Cohort members interviewed in young adulthood were more likely to have lived above the U.S. poverty level in 1966–67, to come from families typified as mother-father households, and, according to Board of Education records, to be high school graduates. Specific methodology and details concerning these attrition analyses may be obtained from earlier publications (Ensminger et al., 1997; Juon and Ensminger, 1997; Kellam et al., 1980). Informed consent was given for participation in all phases of the research.

Measures

Outcome measures—We focus on alcohol-use problems given that blacks do not differ from other Americans in alcohol use but do have higher rates of problem alcohol use. This measure was developed as a latent construct from four categories of symptoms elicited using the Michigan version of the Composite International Diagnostic Interview (CIDI; Kessler et al., 1994; World Health Organization, 1990) based on DSM-Third Edition, Revised (DSM-III-R; American Psychiatric Association, 1987), criteria (Robins et al., 1988). These categories are as follows: dependence (eight symptoms), functional impairment (four symptoms), health problems (five), and excessive use (four items). According to the DSM-III-R, these symptoms are often used to determine abuse or dependence. Here we are using them as a latent construct indicating alcohol problems, not as diagnostic criteria. Factor

loadings ranged from .81 for impairment to .86 for both dependence symptoms and health problems.

Religiosity measures from childhood and adolescence reported by mothers—

Measures of mothers' religious involvement in 1966–67 and again in 1975–76 were obtained. In the first-grade interview, mothers specified how important religion was to them on a scale of 1 to 4 (extremely, very, somewhat, or not too important). When the child was an adolescent, the mother reported on how frequently she attended church services, whether she was a church member, and, if she was, the church denomination. None of these measures of mothers' religiosity was associated with the young adults' alcohol-use problems and are not further considered here.

Religiosity measures reported by young adults—

Three measures of religiosity or spirituality were developed from the young adult interview (Table 1). We constructed a denomination classification regarding alcohol use from the young adult's report of church membership using groupings devised originally by Ellison and Sherkat (1990) and later modified by Sherkat (2002). The eight categories include the following: (1) traditionally white denominations such as Episcopalian, (2) traditionally black denominations such as Baptist, (3) Methodists, (4) sectarian groups such as Church of God in Christ and Jehovah's Witnesses, (5) Catholics, (6) nondenominational, (7) others, and (8) none. We also obtained the frequency with which the respondent attended church services. A third measure, more associated with spirituality, was based on how much religion provides the young adult with guidance in day-to-day living (a great deal, quite a bit, some, or none). Only frequency of church attendance was associated with alcohol-use problems, and all other measures of religiosity were dropped from further analyses.

Social resources—We included measures of social support and social integration: how well young adults felt they were doing with their friends on a scale of 1 to 6 (very well to not so well); frequency of getting together with or talking with friends on the phone on a scale of 1 to 7 (every day to never or almost never); the number of close friends reported (0 to a maximum of 10); the number of times the young adult had moved over the past 5 years (none, once or twice, or three or more times); and civic involvement as indicated by voting and organizational membership. Frequency of contact with friends, number of close friends, and civic involvement were not related to alcohol problems in bivariate analyses and are not further considered here.

From the young adult interview we obtained marital status, the number of children in the home, and the frequency of contact with mothers (mother deceased, less than once per week, 1–6 days per week, and every day). In bivariate analyses neither marital status nor number of children was related to problems with alcohol use and are not considered further here.

Socioeconomic resources in young adulthood—Education and employment were considered as socioeconomic resources for the young adults. Current employment, full or part time, was dichotomized (yes or no). Education was assessed as the number of years of school completed.

Mental health measures in young adulthood—The presence of major depressive disorder (MDD) was indicated by the Michigan version of the CIDI according to the criteria of DSM-III-R.

Alcohol-related measures from adolescence—Information regarding alcohol use from earlier periods of the life course was available from the mother’s interview when the young adult was an adolescent. The mothers reported their own use of alcohol over the previous 12 months (none, one or two times, occasional use, or regular use) and the rules established for the adolescent about drinking beer or wine on a scale of 1 to 4 (absolutely forbid, mostly forbid, urge not to, or leave it up to the child). The latter was not related to alcohol problems in young adulthood in bivariate analyses and is not further considered here.

Analyses

We first examined each of the variables in bivariate analyses to assess its relationship with problem alcohol use. Next, the latent outcome variable—alcohol-use problems—was regressed on each of the predictors in the presence of frequency of church attendance, our major independent variable. Only those predictors reaching statistical significance in both preliminary analyses were retained for further analysis. We did not further consider those variables that were not related to alcohol-use problems.

Next we examined a series of multivariate models that added variables in steps with frequency of church attendance being the variable in the first model. When other variables were added, we examined whether the criteria for mediation were met (Baron and Kenney, 1986). AMOS (analysis of moment structures) 4.0 (Arbuckle and Wothke, 1999) was used in the regression analyses for two important methodological reasons: to accommodate the latent outcome variable (alcohol-use problems) and to reduce bias in handling incomplete data by using full information maximum likelihood estimation (FIML). This technique produces estimates with correct standard errors, using all nonmissing data, implicitly averaging over a predictive distribution for cases with missing values. Analytical or numerical methods, not simulation techniques, are used to perform the averaging. FIML produces somewhat less biased conclusions than standard missing data methods (Little and Rubin, 1987; Muthen et al., 1987; Schafer, 1997) and enables the entire sample of 1,242 to be included in the regression analyses. It is important to note that these missing data techniques do not simulate missing data; rather, they make use of all data that are present (i.e., list-wise deletion of cases with missing data is not used).

Using this subset of variables, four sequential multiple regression models were fitted to assess the effects on alcohol-use problems associated with the following: (1) religiosity, (2) socioeconomic resources, (3) social support and social integration, and (4) depression. These models were additive so that once variables were introduced into the model they remained throughout subsequent analyses. Analyses were performed with the total sample and by gender. Based on the results from the fourth model, we also included a fifth model that evaluated whether depression moderated the relationship between church attendance and alcohol problems.

Results

Nearly 29% of cohort members at age 32 reported attending church services at least once per week, and 42% reported that religion provides a great deal of day-to-day guidance in their lives (Table 1). Major depressive disorder was diagnosed (using the CIDI) in nearly 16% of the respondents. Men and women and depressed and nondepressed groups did not differ significantly on the religiosity measure. However, both men and those who were depressed reported significantly more alcohol-use problems overall. Note that although our outcome variable of alcohol-use problems is a latent construct, we present it in Tables 1 and 2 in simplified form—the sum of problems reported in each of the four categories making up the construct. Seventy-six percent of the cohort members reported no alcohol-use problems; those who did have problems reported an average (SD) of 4.2 (3.88) symptoms and were primarily men (72%). Dependence symptoms were the most prevalent of the four symptom types (75%), followed by health problems (59%), excessive or prolonged use problems (50%), and functional impairment (39%). Table 2 shows the Pearson correlation coefficients between alcohol-use problems, family, social, religious, and mental health characteristics used in subsequent regression analyses.

As shown in Table 3, Model 1, low frequency of church attendance was strongly associated with alcohol-use problems ($p < .001$). In Model 2, male gender, completing fewer years of education, and being unemployed were strongly associated with alcohol problems. When these variables were added in Model 2, the relationship of church attendance to alcohol problems was reduced ($p = .061$). This mediating effect was primarily due to male gender, for whom unemployment was strongly associated with alcohol-use problems ($p < .001$). No such association was seen among women (analyses by gender are not shown).

Introducing social support and social integration variables (Model 3) revealed that additional risk factors for problem alcohol use included less frequent contact with mothers and having moved more often. The association of church attendance with alcohol problems was further lessened in this model ($p = .182$). In gender-stratified analyses, the association between low contact with mothers and more alcohol-use problems was found only for men, as was the effect of unemployment (analyses not shown).

Major depressive disorder (Model 4) was strongly associated with problems with alcohol ($p < .001$). Further, in this model the strength of the relationship of church attendance with alcohol-use problems increased, approaching statistical significance ($p < .053$). Mothers' regular use of alcohol as reported during the respondent's adolescence had a marginal effect on young adult alcohol problems ($p < .056$). Results from separate analyses by gender were quite similar. The protective effect on men of having more frequent contact with their mothers persisted with the addition of depression, as did the detrimental effect of being unemployed.

Because of the strengthening of the effect of religion when depression was included in the model, we considered that depression might be a moderator in the relationship between frequent church attendance and alcohol problems. We examined an additional model that included an interaction between depression and religious involvement on alcohol problems

(Model 5). This interaction was strongly related to alcohol-use problems ($p < .001$). Depression moderates the effect of church attendance such that alcohol-use problems of those who are depressed are much lower for frequent attendees compared with less frequent attendees (by more than one-half standard deviation). However, frequency of church attendance is not related to alcohol problems for those who are not depressed. With gender stratification, we found that the interaction between depression and church attendance was present for both men and women but was more powerful for men. Further, men's unemployment and low contact with mothers persisted as significant predictors of alcohol-use problems.

Discussion

Substance use and its associated problems have become major public health concerns. We examined whether or not young adult involvement in religion is associated with fewer alcohol problems and if socioeconomic resources, social integration or support, or depression further explain this relationship. Also, we wanted to determine if these relationships were similar for men and women.

Our overall findings from this study in blacks support and extend the current literature that being male, having major depressive disorder, lacking social resources, being unemployed, and not attending church at least monthly are associated with alcohol problems. This is consistent with others' findings on how religiosity relates to substance use (Gartner et al., 1991; Koenig et al., 1994, 2001). Further, these findings in a black population are consistent with those in other populations.

We included multiple measures in response to the criticism in the literature regarding the use of only a single measure of religiosity. However, only the church involvement measure was associated with alcohol problems. This may indicate that the social participation and social involvement aspect of religion is related to misuse. Alternatively, measures of other dimensions of religiosity are not as well developed as is church involvement, and as these measures are further refined, their impact may become apparent. We found no support for denominational differences in the religiosity-alcohol use relationship; some investigators have reported such differences, but most have failed to emerge with definite conclusions. For example, Bock et al. (1987) reported stronger negative relationships between religiosity and alcohol use in conservative Protestant groups than among those affiliated with other religious faiths. We also found that neither our measure of spirituality nor measures of religiosity from earlier in the life course had an impact on alcohol problems.

Religion and social resources

Regarding our research question on social support/social integration and alcohol problems, we found some confirmation. Those who moved fewer times and men who saw their mothers frequently had lower alcohol-use problems, and when these were included in the regression analyses, the relationship between attendance at church and alcohol problems declined. Mothers' earlier use of alcohol was marginally associated with subjects' use of alcohol as a young adult. Others have suggested that parental use may influence later experimentation and lead to the generational practice of alcohol use and dependence

(Hawkins et al., 1985; Oetting et al., 1998; Umberson, 1987) or this may indicate a genetic component to alcohol problems. It is important to note that alcohol use among the mothers in this population was very low, and the marginal significance may be related to the lack of variability on this measure. Other studies have also reported low alcohol use among black women (e.g., Krause, 1991). Mothers' reports of rules restricting use of alcohol by adolescents had little impact on the development of alcohol-use problems in later life, which may be the result of the reports being made by the mothers rather than the adolescents.

Gender differences

We found that religiosity related to alcohol problems for both women and men. Previous research on religiosity among blacks has typically found that, in comparison with men, women are more likely to affiliate, attend, and participate in church services (Levin and Taylor, 1993; Taylor et al., 1999). Gary's (1985) and Brown and Gary's (1994) research with black men revealed significant protective effects for both religiosity and presence of denominational affiliation.

Religion and mental health

Our findings suggest that religious involvement has a positive influence on the relationship between depression and alcohol use. For those reporting depression, attending church buffered their alcohol problems. Several studies of black adults have yielded results showing a protective trend of religious involvement on depression (Brown et al., 1995; Gary, 1985; Larson et al., 1992; Levin et al., 1996). Our findings indicate the buffering effect of church attendance on alcohol problems for those who are depressed. The data presented here differ somewhat from the literature showing that church attendance is related to depressive symptoms. We find no relationship between church attendance and major depressive disorder. This seeming disparity may be explained partially by our use of depression as a diagnostic entity rather than a symptom count, as most often cited in other studies.

Conclusions and implications

We began this study with questioning the relationship between religious involvement and alcohol problems. We hypothesized that social resources might explain this relationship. There was limited support for this. The relationship between church attendance and problem alcohol use declined when the social support and social integration measures were added. An unexpected finding was the moderating effect of depression on the relationship between religious involvement and alcohol problems. We also found that unemployment mediated the relationship between alcohol problems and religiosity, especially for men. Those who were unemployed were less likely to attend church, and they were also more likely to have alcohol problems. The direction of this relationship cannot be determined from the results, but it is likely that the associations are bidirectional. Those who are involved in church may be less likely to be unemployed owing to the social ties that church might bring and the usefulness of social ties in obtaining and maintaining employment. Those who are unemployed may also be less likely to attend church. Being involved in church and having a job both serve to structure one's time and may help control alcohol problems.

A considerable amount of research substantiates the importance of religion to blacks. This study, as others, provides a broader perspective and suggests the importance and influence of religious institutions on substance use and problems. The role of churches as partners in the elimination of health disparities including substance abuse and mental health conditions is supported by this research.

However, it is possible that those with alcohol problems may not feel comfortable attending church or want to be involved. Either way, there are implications for intervention and prevention programs. Because those who had alcohol problems were less likely to attend church than those without problems, faith-based prevention and early intervention programs need to develop ways of reaching out to nonattenders. If faith-based institutions are to focus on alcohol issues, they must realize that those most at risk are less likely to be in the faith community, and they should be encouraged to reach people from all walks of life, especially those considered hard to reach (Musgrave et al., 2002). Collaboration with religious institutions may be useful in developing research and interventions linking religion and health. This is a promising area, given the key role that black churches play in promoting social control in disadvantaged communities (Johnson et al., 2000).

Strengths and limitations

One strength of the present study is its use of a prospective longitudinal design with a defined community population of blacks. This design allowed us to examine the prevalence of alcohol problems within a one-race heterogeneous sample and to observe this behavior from a life-course perspective. Another benefit was the use of multiple constructs of religiosity. The frequency of church attendance turned out to be the most salient in terms of alcohol problems.

A limitation of the study is its generalizability to all Americans. Nonetheless, the findings are relevant for other urban, black populations. Many of the findings are consistent with other studies in different populations. Finally, although we were fairly successful in interviewing a large proportion of the original sample, the impact of attrition on study findings is also a concern.

Future research

The findings here have implications for further study and intervention. The National Institute for Healthcare Research panel on the “Scientific Research on Spirituality and Health: A Consensus Report” (1997) recommended that future research include the effect of spiritual interventions on the prevention and treatment of alcohol and drug problems at both an individual and societal level. Our findings suggest that church involvement also has the potential to be considered in the study of spirituality. Much remains to be learned about the relationship between religiosity and substance use and dependence. Recognizing that clergy and pastoral ministers have opportunities to address problems of alcoholism and drug use has led to the development of core competencies to enable faith communities to become actively involved in reducing the impact of alcoholism and drug addiction on the affected individuals and their families (Center for Substance Abuse Treatment, 2004).

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Table 1
Description of sample in young adulthood: alcohol use problems, religiosity, and mental health (% or mean [SD])

Variable	Total group	Males (48.8%)	Females (51.2%)	Depressed ^a (15.7%)	Nondepressed (84.3%)
Alcohol-use problems ^b (0–18)	1.0 (2.60)	1.5 (3.04)	0.5 (2.01) ^c	2.9 (4.26)	0.6 (1.87) ^c
Alcohol dependence or abuse ^a	13.4%	20.4%	7.1% ^b	35.6%	9.3% ^c
Maximum drinks in the past year					
0	5.9%	6.1%	5.6%	2.0%	6.6%
<12	35.2%	25.0%	44.6%	23.5%	37.4%
Light use (1/day)	7.4%	10.7%	4.2%	12.1%	6.5%
Moderate use (2–4/day)	26.3%	22.6%	29.6%	22.8%	26.9%
Heavy use (5/day)	25.3%	35.5%	15.9% ^c	39.6%	22.7% ^c
Church attendance					
Less than once/year	29.8%	33.7%	26.2%	32.9%	29.2%
Less than once/month	17.6%	18.1%	17.2%	16.1%	17.9%
Once/month	13.5%	13.2%	13.8%	6.7%	14.8%
Every 2 weeks	10.3%	8.6%	12.0%	12.1%	10.0%
Once/week	18.9%	17.6%	20.1%	20.8%	18.5%
More than once/week	9.8%	8.8%	10.8%	11.4%	9.5%
Black religious groups ^d					
Methodist/Baptist	33.7%	28.6%	38.4%	36.5%	33.2%
Secarian	7.6%	8.6%	6.7%	7.4%	7.6%
Catholic	4.5%	4.8%	4.3%	2.0%	5.0%
Others	6.7%	6.4%	6.9%	6.8%	6.6%
White liberal	1.5%	1.5%	1.4%	2.0%	1.4%
None	46.0%	50.0%	42.3% ^c	45.3%	46.1%
Guidance from religion					
None	7.5%	8.8%	6.4%	4.3%	8.1%
Some	27.0%	30.2%	24.0%	28.1%	26.8%
Quite a bit	23.6%	21.7%	25.3%	25.9%	23.2%
A great deal	41.9%	39.3%	44.3%	41.7%	41.9%

Variable	Total group	Males (48.8%)	Females (51.2%)	Depressed ^a (15.7%)	Nondepressed (84.3%)
Major depression	15.7%	15.1%	16.1%	—	—

^aMajor depressive disorder and alcohol dependence or abuse were determined by the Composite International Diagnostic Interview (Michigan version) with Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised, criteria;

^balcohol-use problems is a latent construct created from counts of dependence symptoms, impairment symptoms, health problems, and longer and higher quantity of use; the sum of symptoms in these four categories was used in this table;

^c $p < .05$ in Student's *t* test or chi-square;

^ddenomination classification is a modification of that proposed by Ellison and Sherkat (1990).

Alcohol-use problems, religiosity, social resources and integration, and mental health: Pearson correlation coefficients for the total group

Table 2

	1	2	3	4	5	6	7	8	9
1. Alcohol-use problems ^a	1								
2. Freq. of church attendance	-.108 [‡]	1							
3. Gender (male)	.195 [‡]	-.085 [‡]	1						
4. Years of school	-.168 [‡]	.195 [‡]	-.133 [‡]	1					
5. Unemployed	.166 [‡]	-.135 [‡]	-.076 [*]	-.378 [‡]	1				
6. More contact with mother	-.128 [‡]	.079 [*]	-.116 [‡]	.086 [‡]	-.054	1			
7. Doing poorly with friends	.099 [‡]	-.132 [‡]	.023	-.085 [‡]	.103 [‡]	-.133 [‡]	1		
8. No. of moves in 5 years	.104 [‡]	-.118 [‡]	.107 [‡]	-.021	.034	-.138 [‡]	.067 [*]	1	
9. Depression	.316 [‡]	.014	-.014	-.114 [‡]	.124 [‡]	-.092 [‡]	.179 [‡]	.038	1
10. Mother regular alcohol use	.090 [*]	-.076 [*]	.049	-.057	.089 [*]	-.102 [‡]	.027	-.006	-.010

Note: Freq. = frequency.

^a Alcohol-use problems is a latent construct created from counts of dependence symptoms, impairment symptoms, health problems, and longer and higher quantity of use; the sum of symptoms in these four categories was used in the correlation matrix to estimate the relationships of the predictor variables to this construct.

* $p < .05$;

[‡] $p < .01$;

[‡] $p < .001$.

Table 3

Predicting alcohol-use problems^a: unstandardized coefficients (*b*), standardized coefficients (β), and *p* values from AMOS multiple regression analysis using maximum likelihood estimation (*N* = 1,242)

	Model 1	Model 2	Model 3	Model 4	Model 5
Religiosity					
>Frequency attend church					
<i>b</i>	-0.056	-0.030	-0.022	-0.030	-0.010
β	-.118	-.064	-.045	-.063	-.021
<i>p</i>	<.001	.061	.182	.053	.538
Demographics—SES					
Gender (<i>f</i> = 1, <i>m</i> = 2)					
<i>b</i>	0.338	0.310	0.310	0.323	0.327
β	.201	.184	.184	.192	.194
<i>p</i>	<.001	<.001	<.001	<.001	<.001
Years of school					
<i>b</i>	-0.032	-0.031	-0.031	-0.020	-0.022
β	-.076	-.073	-.073	-.047	-.053
<i>p</i>	.039	.046	.046	.176	.129
Unemployed					
<i>b</i>	0.289	0.268	0.268	0.216	0.218
β	.165	.153	.153	.123	.124
<i>p</i>	<.001	<.001	<.001	<.001	<.001
Social integration					
>Frequency seeing mother					
<i>b</i>			-0.060	-0.039	-0.032
β			-.076	-.050	-.041
<i>p</i>			.024	.126	.210
Doing less well with friends					
<i>b</i>			0.033	0.000	-0.003
β			.053	.001	-.005
<i>p</i>			.113	.987	.887

	Model 1	Model 2	Model 3	Model 4	Model 5
>Moves in 5 years					
<i>b</i>		0.077	0.071	0.072	0.072
β		.072	.066	.068	.068
<i>p</i>		.034	.042	.036	.036
Mental health factors					
Major depressive disorder					
<i>b</i>			0.716	1.026	1.026
β			.309	.443	.443
<i>p</i>			<.001	<.001	<.001
Mother's regular use of alcohol					
<i>b</i>			0.088	0.089	0.089
β			.068	.068	.068
<i>p</i>			.056	.052	.052
Interaction term					
Depression \times Frequency of Church Attendance					
<i>b</i>				-0.119	-0.119
β				-.172	-.172
<i>p</i>				.001	.001
CFI ^b	.995	.990	.990	.986	.987
RMSEA ^c	.042	.036	.029	.032	.034
BCC ^d	46.03	96.86	155.45	216.56	254.42
χ^2 ^e	15.88	36.43	46.39	64.84	78.29
df ^f	5	14	23	29	32
<i>p</i> value for χ^2	.007	.001	.003	<.001	<.001
χ^2 /df	3.18	2.60	2.02	2.24	2.45

Notes: AMOS = analysis of moment structures; SES = socioeconomic status; f = female; m = male; CFI = comparative fit index; RMSEA = root mean square error of approximation; BCC = Browne-Cudeck criterion.

^aAlcohol-use problems is a latent construct created from counts of dependence symptoms, impairment symptoms, health problems, and longer and higher quantity of use;

^bhypothesized model represents an adequate fit to the data if CFI > .95.

^cRMSEA values < .05 indicate good fit between the hypothesized model and the observed data;

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p BCC produces a rank order of models; smaller values represent better fit of the hypothesized model;
 χ^2 Chi-square (minimum value of the discrepancy) is a test of the fit of the hypothesized model and perfect fit;
 f no. of distinct sample moments: no. of distinct parameters to be estimated (>2 considered adequate fit).