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The Prospective Relationship Between Binge Drinking and Physician Visits Among Older Adults

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Abstract

Objectives—The objectives are to (a) determine if binge drinking is related to physician visits and (b) estimate the degree to which the relationship between binge drinking and physician visits can be explained by other health characteristics.

Method—Data on a sample of 4,960 older adults (70+ years of age in 2002) from the Health and Retirement Study (HRS) were used. Three linear regression models estimated the impact of binge drinking on physician visits.

Results—In the fully adjusted models, binge drinking did have an effect on the number of physician visits by older adults, with more frequent binge drinkers having fewer physician visits. This negative relationship exists even when demographic as well as other current health characteristics are controlled.

Discussion—The implications of these results are discussed in terms of more broadly communicating the risks associated with binge drinking and more effectively targeting interventions to older binge drinkers.

Keywords

binge drinking; alcohol; physician visits; older adults

Introduction

Binge drinking among older adults has been given relatively little attention in the literature, yet is known to have significant negative consequences on health and well-being (Curry et al., 2000; Okoro et al., 2004). Among those consequences are increased rates of depression (Kirchner et al., 2007), cancer (Morch et al., 2007), and cardiovascular disease. Binge drinking has also been linked to obtaining fewer preventative health screenings (Merrick et al., 2008). These negative associations may be compounded in older adulthood—especially

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Authors' Note

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for those in fragile health—given their health disadvantages relative to younger adults (Castro-Costa et al., 2008; Johnson, 2000).

Little is known about the prevalence rates of binge drinking among the older adult population but some evidence suggests it is a fairly common (Blazer & Wu, 2009) and growing problem. Using 2005 data from the National Survey of Drug Use on Health, one study estimates binge drinking (in the past 30 days) in the U.S. population among adults 65 years of age and older at 8.3% (Merrick et al., 2008; Moore, 2003). Given the difficulty in detecting problem alcohol use in this population, however, prevalence may be underestimated. Detection is made difficult because physicians and health care providers may associate symptoms of alcohol misuse with other symptoms seen in aging adults, such as depression or cognitive impairment (Mehta, Moriarty, Proctor, Bird, & Darling, 2006). Also, tools used to screen for alcohol problems, including binge drinking, were developed on younger age groups and therefore may not be valid for use with older adults (O'Connell, Chin, Cunningham, & Lawlor, 2003). With our rapidly aging population, learning more about this behavior among older adults—and particularly its impact on physician visits—is essential to anticipating health care treatment needs (Gfroerer, Penne, Pemberton, & Folsom, 2003).

Late adulthood is a unique time to study drinking behavior. At least cross-sectionally, a steady decline in the level of drinking appears to take place over the life course (Johnson, Gruenewald, Treno, & Taff, 1998), although more recent cohort changes in patterns of substance use also support that today's older adults drink at higher levels than previously (Canadian Centre on Substance Abuse, 2005; Zucker, 1998). Another interesting pattern in alcohol use among older adults is that alcohol consumption can change in response to major life events. Given the significant life transitions that typically accompany late adulthood, older adults may reactively adjust their drinking behavior (Byrne, Raphael, & Arnold, 1999; Jennison, 1992). Hospitalization and disease onset can lead to a reduction in alcohol consumption, and the side effects of medication, treatment, or the disease itself may make an individual feel too ill to drink (Moos, Brennan, Schutte, & Moos, 2005). However, retirement and widowhood can also result in increased consumption (Perreira & Sloan, 2001). In general, non-health-related stressful life events, particularly those more common in older age, may be associated with increased drinking whereas major health-related events may be associated with decreased drinking. Clearly, perceptions of these life transitions, as well as associated life style changes, may influence how an older adult uses alcohol in managing change (Perreira & Sloan, 2001).

Binge Drinking and Physician Visits

A number of studies have investigated similar relationships in younger and more broadly age-defined samples (Armstrong et al., 1998; Baumeister et al., 2006a, 2006b; Zarkin, Bray, Babor, & Biddle-Higgins, 2004). Among these studies, results are mixed. Some suggest a U-shaped relationship between alcohol consumption and health care utilization (e.g., Anzai et al., 2005), wherein individuals who abstain from drinking alcohol and those who consume alcohol in excess use health care services more often. This model involves the presumption that heavier alcohol use is related either causally or consequentially to poorer health

outcomes, which should be related to a need for more services, and in turn would lead to a greater seeking out of health care. Others find that individuals who drink alcohol excessively use health care services less often (Baumeister et al., 2006; Zarkin et al., 2004). For example, a study conducted by Rice and Duncan (1995) using data from the National Health Interview Survey examined alcohol use and its association with self-reported physician visits among adults 60 years of age and older. They found that in the fully adjusted models, greater alcohol consumption predicted fewer visits to the physician. These findings support a model that heavier drinkers tend to be less self-caring as well as possibly more concerned about others' judgments of their high use, which in turn would lead to lower utilization.

In sum, the present study uses a focused approach to examine a specific and relatively unexplored area of problem drinking among older adults, binge drinking, and its association with a particular aspect of health care utilization—physician visits. Research on binge drinking among older adult populations suggests an association between binge drinking and physician visits. To help shed light on this, our research has two objectives: (a) determine if binge drinking is related to physician visits and (b) estimate the degree to which the relationship between binge drinking and physician visits can be explained by other health characteristics. This study hypothesizes that once health behaviors and conditions are controlled, older adults who binge drink more often will visit a physician less often.

Method

Data

We used data from the 2002 and 2004 waves of the Health and Retirement Study (HRS), a biennial longitudinal survey of a nationally representative cohort of U.S. adults initially aged 50 and older who have been followed since 1992, with new cohorts enrolled in 1998. The HRS was designed to study health transitions in older adults and their impact on individuals, families, and society. The HRS data include detailed information on socioeconomic and demographic characteristics, body weight, health behaviors (i.e., smoking, drinking, and exercise), health conditions, and functional impairment. Also included is information on insurance, family structure, family transfers, housing, cognitive functioning, net worth, and income. HRS data are a valuable source of secondary information that allow for the examination of the impact of binge drinking on physician visits among older adults. The analytical sample used for these analyses consisted of community dwelling, self-respondents who were 70 years of age and older during the 2002 survey.

Measurement of Physician Visits (2004)

Our measure for frequency of physician visits was based on respondents' answer to the question: "Aside from any hospital stays and outpatient surgery, how many times have you seen or talked to a medical doctor about your health, including emergency room or clinic visits in the last 2 years?" This measure was top coded at 30 (greater than the 99th percentile) to tighten the distribution.

Measurement of Binge Drinking (2002)

Frequency of binge drinking is based on the SAMHSA consensus panel definition (SAMHSA/CSAT, 1998) and was measured via respondents' answer to the question: "In the last 3 months, on how many days have you had four or more drinks on one occasion?" The natural logarithm of household income was used in the multivariate analyses to linearize the effect of the skewed distribution.

Measurement of Other Independent Variables (2002)

Socioeconomic and demographic characteristics for these analyses included age, gender, race/ethnicity, marital status, education, and net worth. Age was measured in years. As women tend to seek medical treatment and advice more often than men do (Redondo-Sendino, Guallar-Castillon, Banegas, & Rodriguez-Artalejo, 2006), we included gender as a variable, coded as a dummy variable (1 = *male*, 0 = *female*). Race/ethnicity is coded using four categories: African American (non-Hispanic), Latino, Other race classifications (non-Hispanic), and White (non-Hispanic). In the multivariate analyses, White was used as the reference category. People who are married tend to be healthier across a wide range of health outcomes than those who are not married (Pienta, Hayward, & Jenkins, 2000). We, therefore, include marital status, coded with a dummy variable (1 = *married/coupled*, 0 = *not married/coupled*). As individuals with lower socioeconomic status tend to seek routine health care less often (AHRQ, 2005), we include variables for education and net worth, the former measured as a continuous variable of years of completed education (range: 0–17) and the latter measured in quartiles.

Measurement of Health Indicator Characteristics (2002)

Health characteristics are expected to be important correlates of binge drinking and physician visits, and we included two categories: (a) indicators of health behaviors—self-reported amount of exercise and body mass index (BMI) and (b) indicators of health conditions—self-reported physician-diagnosed disease status and depressive symptoms. Constructed as a dummy variable, the measure for exercise was based on respondents' answer to the question: "On average over the last 12 months have you participated in vigorous physical activity or exercise three times a week or more?" (1 = *no* and 0 = *yes*). The measure for BMI used self-reported height (measured in feet and inches) and weight (measured in pounds) converted and calculated as weight in kilograms/height in meters². Next, BMI was categorized according to the National Heart Lung and Blood Institute (NHLBI) guidelines for body weight. Those categories are defined as underweight (BMI < 18.5), normal weight (BMI: 18.5–24.9), overweight (BMI: 25.0–29.9), and obese (BMI: 30.0 and over) (National Heart, Lung, and Blood Institute, 1998). Normal weight was used as the reference category in multivariate analyses.

Disease status was based on self-reports of physician-diagnosed serious health conditions. Respondents were asked if a doctor has ever told them that they have high blood pressure or hypertension, diabetes or high blood sugar, cancer or a malignant tumor of any kind (excluding skin cancer), chronic lung disease such as chronic bronchitis or emphysema, heart problems, arthritis, or a stroke. These seven measures were summed to create a continuous measure of disease status. The depression indicator used in these analyses was an

abbreviated version of the Center for Epidemiological Studies Depression Scale (CESD; Steffick, 2000) and was based on respondents' answers to items such as "Much of the time during the past week I felt (a) depressed, (b) lonely, or (c) sad." The nine responses (1 = *yes* and 0 = *no*) in this area were summed to create a continuous measure of depressive symptoms.

Method

Ordinary least squares regression models, allowing for the weighting and complex survey design of the HRS, were used to estimate the number of physician visits. To understand the relative impact of each set of variables (i.e., socioeconomic and demographic characteristics and health characteristics), three models were estimated. The first model contained only binge drinking. The second contained binge drinking while controlling for socioeconomic and demographic characteristics. The third and final model included binge drinking and controls for both socioeconomic/demographic characteristics and health characteristics.

Results

Table 1 presents descriptive characteristics for this nationally representative sample of older adults aged 70+. The average age of the respondents was 77.2 years. The majority of respondents were female (61.0%), currently married/coupled (53.1%), non-Hispanic White (86.7%), and did not participate in exercise (61.0%). The quartiles of net worth for this sample ranged from less than US\$62,000 to more than US\$442,000; respondents' average educational level was 12.1 years of completed schooling; 39.9% had a normal BMI; and they were relatively healthy, with 2.1 disease conditions and 2.0 depressive symptoms on average. The average number of times respondents reported binge drinking over the previous 3 months was less than once (0.5).

Results for the three multivariate linear regression models are presented in Table 2 in the form of standardized regression coefficients. Model 1 includes only logged binge drinking as a predictor. In this model, binge drinking had a negative association ($b = -0.03$, $p < .01$) with physician visits; that is, the greater the number of binge drinking occasions, the fewer the number of physician visits.

In Model 2, in which socioeconomic and demographic characteristics were added as predictors, the association between binge drinking and physician visits remained negative and essentially unchanged ($b = -0.03$, $p < .01$). We also found that respondents who were older ($b = 0.03$, $p < .01$) and who had completed a greater number of years of education ($b = 0.08$, $p < .001$) reported more physician visits than their counterparts. Interestingly, older adults in the lower quartiles for net worth (compared to those in the highest quartile) and those who self-identified as being White (compared to persons from "other" racial/ethnic classifications; $b = 0.04$, $p < .05$) reported more physician visits.

As in the previous model, we found little change in the relationship between binge drinking and physician visits with the addition of health characteristics in Model 3. The relationship remained negative, with a greater frequency of binge drinking predicting a lower frequency of physician visits, although the effect of binge drinking was slightly reduced in magnitude

and significance ($b = -0.02, p < .05$). This suggests that health may mediate part of the relationship between binge drinking and physician visits. We note that adding health characteristics to Model 3 did change some of the previous relationships between net worth and physician visits. The associations between the two highest net worth quartiles (compared to the lowest) were no longer statistically significant and the association between the second (compared to the lowest) quartile was reduced in magnitude and significance ($b = -0.04, p < .05$). In regard to health characteristics, as would be expected, individuals who did not participate in exercise ($b = 0.05, p < .001$) and who had a greater number of disease conditions ($b = 0.21, p < .001$) and depressive symptoms ($b = 0.06, p < .001$) reported more frequent physician visits.

Discussion

Given the rapidly growing older population in the United States and the increasing costs of health care, more effectively targeting populations at risk is an essential part of both improving services to older adults and reducing overall health care costs. Identifying critical subgroups that are more likely to engage in risky behaviors, such as those who tend to both binge drink frequently and visit a physician infrequently, is a first step in developing targeted health care interventions. Yet little work has focused on the possible relationship of binge drinking on physician visits among older adults. The research reported here addresses this issue.

The results of this study support the hypotheses. More specifically, these analyses explored two hypotheses: (a) older adults who binge drink more frequently will visit a physician less often than their counterparts and (b) the negative binge drinking-physician visit relationship will be partly explained by health characteristics. The findings that older adults who reported binge drinking on more occasions during the previous 3 months also reported fewer physician visits, and that part of this negative relationship can be explained by health characteristics, supports these hypotheses. However, even outside those health characteristics, binge drinking has an independent relationship to physician visits. Older adults who binge drink more often, visit a physician less often than their more moderate drinking counterparts.

There are several possible explanations for these findings. One is that older adults who binge drink more frequently simply ignore any side-effects or symptoms of disease they may experience. In turn, they avoid visiting a physician until their condition is well advanced and more costly to treat (Hunkeler, Hung, Rice, Weisner, & Hu, 2001). Greater impulsivity and a poorer future time perspective may also be a part of this picture. The obverse of this pattern may also partially explain the relationship namely that lower binge drinking adults are more cautious and focused on risk for disease. Due to this greater sensitivity to health risk, these older adults would then seek medical care and advice more often. A third possible explanation why lower binge drinking is related to more physician visits and why the relationship is partly explained by poorer health is that older adults who abstain or binge less often may either perceive themselves or actually be less healthy (Armstrong, Midanik, & Klatsky, 1998; Hajat, Haines, Bulpitt, & Fletcher, 2004; Rice et al., 2000). In analyses not presented here (but provided on request), while controlling for socioeconomic

characteristics, depressive symptoms, and health behaviors, we tested if binge drinking was related to poorer health. Binge drinking on fewer occasions predicted a greater number of diseases ($b = 0.06, p < .1$), providing some support for this third explanation. Evidence suggests that experiencing a major health event reduces alcohol consumption. That experience may motivate them to cut down on drinking due to its negative association on health (Moos et al., 2005). Due to this “less healthy” perception or realization, those older adults may seek medical care and advice more often.

Two issues should be considered in interpreting these findings. First, healthier individuals in general, and healthier Latino and African American older adults in particular, are likely to be overrepresented in this analytical sample of adults aged 70+ because of disparities in mortality. As Latino and African American older adults have higher mortality rates (from various diseases) than non-Hispanic Whites (Buka, 2002; Schulz, Williams, Israel, & Lempert, 2002), the non-White binge drinking respondents in this older age sample may be particularly robust. The implication here is that any association found between binge drinking and the physician visits is likely to be a conservative estimate.

The second issue is that these results are based on self-reported data without external verification. Past studies suggest that self-reported measures of health care utilization can produce accurate estimates (Cleary & Jette, 1984; Ritter et al., 2001) but should be interpreted cautiously as individuals tend to underreport utilization as their utilization increases (Roberts, Bergstralh, Schmidt, & Jacobsen, 1996). If this sample of older adults were to follow this pattern, then our results would likely again be a conservative estimate of the relationship between binge drinking and physician visits.

The interpretation and resultant implications of these findings are important for developing interventions for older binge drinkers. Older adults are receptive to behavioral interventions (Merrill et al., 2008) and benefit clinically as well (Mundt, French, Roebuck, Manwell, & Barry, 2005). The use of newer technologies may make alcohol interventions even more efficacious. Real-time reminder note systems prompting and guiding physicians through the intervention and interactive voice recognition to improve the monitoring and education of the patient are examples of some of the newer technological advances (Blow & Barry, 2002). More effective interventions will likely lead to improved drinking behavior and overall health of older adults particularly among certain subgroups, such as women (Blow & Barry, 2002).

One step in an effective intervention should also consider mechanisms that facilitate communication about problem drinking between older binge drinkers and their physicians. Motivational interviewing would be one such strategy. An example of a study targeted toward older adults that showed beneficial alcohol use outcomes was conducted by Fleming, Manwell, Barry, Adams, and Stauffacher (1999). The intervention consisted of two brief physician lead counseling sessions. At 12-month follow-up, compared to the control group, the intervention group significantly drank less. With that study in mind, an effective strategy would be to improve physician training in the area of alcohol misuse and abuse, particularly for physicians who see primarily older adults (Dyson, 2006). Given that binge drinkers may avoid physician contact, outreach efforts in the form of public information or patient

education, particularly in facilities where older adults receive care would also be important. Such interventions have the potential to reduce the medical expenses from tertiary treatment of advanced disease and improve the health and quality of life of older adults.

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References

- Agency for Healthcare Research and Quality (AHRQ). National healthcare disparities report. Rockville, MD: Agency for Healthcare Research and Quality; 2005. Retrieved from <http://www.ahrq.gov/qual/nhdr05/nhdr05.htm>
- Anzai Y, Kuriyama S, Nishino Y, Takahashi K, Ohkubo T, Ohmori K, et al. Impact of alcohol consumption upon medical care utilization and costs in men: 4-year observation of National Health Insurance beneficiaries in Japan. *Addiction*. 2005; 100:19–27. [PubMed: 15598185]
- Armstrong AM, Midanik T, Klatsky L. Alcohol consumption and utilization of health services in a health maintenance organization. *Medical Care*. 1998; 36:1599–1605. [PubMed: 9821947]
- Baumeister SE, Meyer C, Carreon D, Freyer J, Rumpf HJ, Hapke U, et al. Alcohol consumption and health-services utilization in Germany. *Journal of Studies on Alcohol*. 2006a; 67:429–435. [PubMed: 16608153]
- Baumeister SE, Schumann A, Nakazono TT, Alte D, Friedrich N, John U, et al. Alcohol consumption and out-patient services utilization by abstainers and drinkers. *Addiction*. 2006b; 101:1285–1291. [PubMed: 16911727]
- Blazer DG, Wu L. The epidemiology of at-risk and binge drinking among middle-aged and elderly community adults: National survey on drug use and health. *American Journal of Psychiatry*. 2009; 166:1–8.
- Blow FC, Barry KL. Use and misuse of alcohol among older women. *Alcohol Research & Health*. 2002; 26:308–315. [PubMed: 12875042]
- Buka SL. Disparities in health status and substance use: Ethnicity and socioeconomic factors. *Public Health Reports*. 2002; 117:s118–s126. [PubMed: 12435835]
- Byrne GJA, Raphael B, Arnold E. Alcohol consumption and psychological distress in recently widowed older men. *Australian and New Zealand Journal of Psychiatry*. 1999; 33:740–748. [PubMed: 10545000]
- Canadian Centre on Substance Abuse. Canadian Addiction Survey (Detailed report). 2005 Mar. Retrieved June 29, 2010, from <http://www.ccsa.ca/eng/priorities/research/canadianaddiction/pages/default.aspx>
- Castro-Costa E, Ferri CP, Lima-Costa MF, Zaleski M, Pinsky I, Caetano R, et al. Alcohol consumption in late-life—The first Brazilian National Alcohol Survey (BNAS). *Addictive Behaviors*. 2008; 33:1598–1601. [PubMed: 18760540]
- Cleary PD, Jette AM. The validity of self-reported physician utilization measures. *Medical Care*. 1984; 22:796–803. [PubMed: 6492908]
- Curry SJ, Ludman E, Grothas L, Donovan D, Kim E, Fishman P. At-risk drinking among patients making routine primary care visits. *Preventive Medicine*. 2000; 31:595–602. [PubMed: 11071841]
- Dyson J. Alcohol misuse and older people. *Nursing Older People*. 2006; 18:32–35. [PubMed: 16927549]

- Fleming MF, Manwell LB, Barry KL, Adams W, Stauffacher EA. Brief physician advice for alcohol problems in older adults: A randomized community-based trial. *Journal of Family Practice*. 1999; 48:378–384. [PubMed: 10334615]
- Gfroerer J, Penne M, Pemberton M, Folsom R. Substance abuse treatment and need among older adults in 2020: The impact of aging baby-boom cohort. *Drug and Alcohol Dependence*. 2003; 69:127–135. [PubMed: 12609694]
- Hajat S, Haines A, Bulpitt C, Fletcher A. Patterns and determinants of alcohol consumption in people aged 75 years and older: Results from the MRC trial of assessment and management of older people in the community. *Age and Ageing*. 2004; 33:170–177. [PubMed: 14960434]
- Hunkeler EM, Hung YY, Rice DP, Weisner C, Hu T. Alcohol consumption patterns and health care costs in an HMO. *Drug Alcohol Dependence*. 2001; 64:181–190. [PubMed: 11543988]
- Jennison KM. The impact of stressful life events and social support on drinking among older adults: A general population survey. *International Journal of Aging & Human Development*. 1992; 35:99–123. [PubMed: 1399077]
- Johnson I. Alcohol problems in old age: A review of recent epidemiological research. *International Journal of Geriatric Psychiatry*. 2000; 15:575–581. [PubMed: 10918336]
- Johnson FW, Gruenewald PJ, Treno AJ, Taff GA. Drinking over the life course within gender and ethnic groups: A hyperparametric analysis. *Journal of Studies on Alcohol*. 1998; 59:568–581. [PubMed: 9718110]
- Kirchner JE, Zubritsky C, Cody M, Coakley E, Chen H, Ware JH, et al. Alcohol consumption among older adults in primary care. *Journal of General Internal Medicine*. 2007; 22:92–97. [PubMed: 17351846]
- Mehta MM, Moriarty KJ, Proctor D, Bird M, Darling W. Alcohol misuse in older people: Heavy consumption and protean presentations. *Community Health*. 2006; 60:1048–1052.
- Merrick EL, Hodgkin D, Garnick DW, Horgan CM, Panas L, Ryan M, et al. Unhealthy drinking patterns and receipt of preventive medical services by older adults. *Journal of General Internal Medicine*. 2008; 23:1741–1748. [PubMed: 18716847]
- Merrill RM, Aldana SG, Greenlaw RL, Diehl HA, Salberg A, Englert H. Can newly acquired healthy behaviors persist? An analysis of health behavior decay. *Preventing Chronic Disease: Public Health Research, Practice, and Policy*. 2008; 5:1–13.
- Moore, AA. Clinical guidelines for alcohol use disorders in older adults. Los Angeles and New York: David Geffen School of Medicine at UCLA and American Geriatrics Society Clinical Practice Committee; 2003 Nov. Retrieved from <http://www.americangeriatrics.org/products/positionpapers/alcohol.shtml>
- Moos RH, Brennan PL, Schutte KK, Moos BS. Older adults' health and changes in late-life drinking patterns. *Aging and Mental Health*. 2005; 9:49–59. [PubMed: 15841832]
- Morch LS, Johansen D, Thygesen LC, Tjonneland A, Lokkegaard E, Stahlberg C, et al. Alcohol drinking, consumption patterns and breast cancer among Danish nurses: A cohort study. *European Journal of Public Health*. 2007; 17:624–629. [PubMed: 17442702]
- Mundt MP, French MT, Roebuck MC, Manwell LB, Barry KL. Brief physician advice for problem drinking among older adults: An economic analysis of costs and benefits. *Journal of Studies on Alcohol*. 2005; 66:389–394. [PubMed: 16047528]
- National Heart, Lung, and Blood Institute (NHLBI). Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. NHLBI; 1998.
- O'Connell H, Chin AV, Cunningham C, Lawlor B. Alcohol use disorders in elderly people—Redefining an age old problem in old age. *British Medical Journal*. 2003; 327:664–667. [PubMed: 14500441]
- Okoro CA, Brewer RD, Naimi TS, Moriarty GD, Giles WH, Mokdad HA. Binge drinking and health-related quality of life: Do popular perceptions match reality? *American Journal of Preventive Medicine*. 2004; 26:230–233. [PubMed: 15026103]
- Perreira KM, Sloan FA. Life events and alcohol consumption among mature adults: A longitudinal analysis. *Journal of Studies on Alcohol*. 2001; 62:501–508. [PubMed: 11513228]
- Pienta AM, Hayward MD, Jenkins KR. Health consequences of marriage for the retirement years. *Journal of Family Issues*. 2000; 21:559–586.

- Redondo-Sendino A, Guallar-Castillon P, Banegas JR, Rodriguez-Artalejo F. Gender differences in the utilization of health-care services among the older adult population of Spain. *BMC Public Health*. 2006; 6:155–164. [PubMed: 16780576]
- Rice DP, Conell C, Weisner C, Hunkeler EM, Fireman B, Hu T. Alcohol drinking patterns and medical care use in an HMO setting. *Journal of Behavioral Health Services and Research*. 2000; 27:3–16. [PubMed: 10695237]
- Rice C, Duncan DF. Alcohol use and reported physician visits in older adults. *Preventive Medicine*. 1995; 24:229–234. [PubMed: 7644444]
- Ritter PL, Stewart AL, Kaymaz H, Sobel DS, Block DA, Lorig KR. Self-reports of health care utilization compared to provider records. *Journal of Clinical Psychology*. 2001; 54:136–141.
- Roberts RO, Bergstralh EJ, Schmidt L, Jacobsen SJ. Comparison of self-reported and medical record health care utilization measures. *Journal of Clinical Epidemiology*. 1996; 49:989–995. [PubMed: 8780606]
- SAMHSA/CSAT. Tip 26: Substance Abuse among older adults (CSAT Treatment Improvement Protocols). 1998. Retrieved June 29, 2010, from <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.48302>
- Schulz AJ, Williams DR, Israel B, Lempert LB. Racial and spatial relations as fundamental determinants of health in Detroit. *Milbank Quarterly*. 2002; 80:677–707. [PubMed: 12532644]
- Steffick, DE. Documentation of affective functioning measures in the Health and Retirement Study (HRS Documentation Report). Ann Arbor: Survey Research Center, University of Michigan; 2000.
- Zarkin GA, Bray JW, Babor TF, Biddle-Higgins JC. Alcohol drinking patterns and health care utilization in a managed care organization. *Health Services Research*. 2004; 39:553–570. [PubMed: 15149478]
- Zucker, RA. Developmental aspects of aging, alcohol involvement, and their interrelationship. In: Gomberg, ESL.; Hegedus, AM.; Zucker, RA., editors. *Alcohol problems and aging*. Rockville, MD: U.S. Department of Health and Human Services; 1998. p. 3-26. NIAAA Research Monograph No. 33

Table 1

Descriptive Characteristics of the Sample

Binge drinking—Last 3 months (<i>M</i>)	0.5	(0–90)
Socioeconomic and demographic characteristics (2002)		
Age (<i>M</i>)	77.2	(70–101)
Male (%)	39.0	0.58 ^a
Race (%)		
African American	7.0	0.54 ^a
Latino	4.7	0.83 ^a
White	86.7	1.15 ^a
Other	1.6	0.35 ^a
Net worth (%)		
<US\$62,000	23.8	0.93 ^a
US\$62,001–US\$180,500	25.2	0.96 ^a
US\$180,501–US\$442,000	25.3	0.86 ^a
US\$442,000+	25.6	1.03 ^a
Education (<i>M</i>)	12.1	(0–17)
Currently married/coupled (%)	53.1	0.94 ^a
Health characteristics (2002)		
Body mass index (%)		
Underweight	2.5	0.21 ^a
Normal weight	39.9	1.08 ^a
Overweight	39.2	0.8 ^a
Obese	18.5	0.71 ^a
No exercise (%)	61.0	1.0 ^a
Disease conditions (<i>M</i>)	2.1	(0–7)
Depressive disorders (<i>M</i>)	2.0	(0–9)

Source: Health and Retirement Study (2002, 2004).

Note: Data in this table are weighted to account for differential probability of selection and nonresponse. Ranges are in parentheses.

^aStandard errors.

Table 2

The Relationships Between Physician Visits, Binge Drinking, Socioeconomic and Demographic Characteristics, and Health Characteristics Among Older Adults ($n = 4,960$)

	Model 1	Model 2	Model 3
Binge drinking	−0.03**	−0.03**	−0.02*
Socioeconomic and demographic characteristics			
Age		0.03**	0.02
Male		0.02	0.02
Race			
African American		0.02	0.02
Latino		0.03	0.07**
Other		−0.04*	−0.02
Net worth			
US\$62,001–US\$179,800		−0.07***	−0.04*
US\$179,801–US\$442,000		−0.08***	−0.03
US\$442,000+		−0.08**	−0.02
Education		0.08***	0.11***
Currently married/coupled		0.01	0.01
Health characteristics			
Body mass index			
Underweight			−0.01
Overweight			−0.01
Obese			0.01
No exercise			0.05***
Disease conditions (M)			0.21***
Depressive disorders (M)			0.06***

Note: Standardized regression coefficients are presented. Data in this table are weighted and adjusted for the complex survey design.

* $p < .05$.

** $p < .01$.

*** $p < .001$.