



Published in final edited form as:

J Addict Dis. 2010 July ; 29(3): 314–324. doi:10.1080/10550887.2010.489450.

Caregiver Burden and Alcohol Use in a Community Sample

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Abstract

Little attention has been paid to the relationship between caregiver burden and alcohol use. It is important to examine the particular aspects of caregiver burden which most influence alcohol use. A mail survey was conducted utilizing a representative sample of 998 employed Chicago residents who provided informal care for at least one person. Ordinary least squares regression models were computed to examine the relationship between caregiver burden and drinking outcomes. Findings suggest that caregivers who experience social and emotional burden related to caregiving are at risk for problematic alcohol use and warrant attention from health and mental health service professionals.

Keywords

Caregiving; burden; alcohol abuse; social support

Introduction

Many individuals in the United States find themselves in the role of an informal (unpaid) caregiver during the course of their lives. Parents provide care for their children, adult children may care for their elderly parents, and one spouse may care for another after an illness or injury. Healthcare innovations, which have resulted in longer life expectancies, combined with rising healthcare costs and pressures to keep individuals living in the community rather than institutionalized, have resulted in a rise in caregiving for the elderly, those with severe mental illnesses, those with chronic medical conditions, and those with developmental disabilities.^{1–4} This suggests that increasing numbers of people are faced with issues related to caregiver burden. While caregiver burden has been linked to an array of deleterious physical and mental health consequences, little attention has been paid to its effects on drinking behaviors. Thus, this paper focuses on the consequences of caregiver burden on alcohol use and abuse.

Caregiver burden

Caregiver burden can be conceptualized as both the tasks that need to be done in the course of caregiving and the way in which the caregiver appraises the performance of these tasks.⁵ Caregiving tasks take many different forms. For example, caregivers may assist care recipients with activities of daily living, prepare meals, perform housekeeping tasks, run errands, or manage finances. Caregivers may also be responsible for providing care after a

debilitating illness or for monitoring for a person suffering from dementia. A number of external factors, including caregiver personality, social support network, status in the family, and other responsibilities impact how an individual appraises their caregiving responsibilities.^{6,7} For example, a large body of literature has found that caregivers with a strong social support network report less burden than those who lack social support,^{8–10} regardless of the number or type of caregiving tasks. A positive interpretation of the caregiving role has been shown to be similarly protective.¹¹

Negative effects of caregiving

Considerable work has been done to document the negative effects caregivers suffer as a result of providing care, particularly for those who are caring for adults or for children with disabilities. Caregivers tend to report worse physical health, including insomnia, headache, and weight loss,^{12–15} and are more likely than non-caregivers to put off seeking needed medical care.^{16–17} Caregivers also report higher rates of depression and anxiety than non-caregivers.^{17–19} Finally, caregivers tend to report poorer quality of life than non-caregivers.^{20–21} These findings have been consistent across many different groups of caregivers, including those caring for disabled or chronically ill children, those caring for chronically ill adults, and those caring for older adults suffering from dementia. However, as elaborated later in the paper, alcohol-related outcomes have been relatively neglected in this literature.

While it is clear that increased caregiver burden increases negative health and psychological outcomes experienced by caregivers, little work has been done to determine which facets of caregiver burden are most predictive of negative caregiver outcomes. Caregiver burden was initially conceptualized as a unidimensional variable derived from a variety of items.²² This approach was found to be insufficient, however, and as the field moved forward both objective burden (tasks included in the caregiving role) and subjective burden (distress experienced in relation to those tasks) were measured.^{23–24} Subsequent instruments designed to measure caregiver burden further refined the idea of objective versus subjective burden, incorporating subscales that identified different types of objective and subjective burden.²⁵ For example, the Caregiver Burden Inventory (CBI), used in this study, includes five burden sub-scales: time-dependence burden, developmental burden, physical burden, social burden, and emotional burden.²⁶ Instruments such as the CBI provide for the opportunity to further identify the components of caregiving that are most risky to caregiver well-being.

Caregiving and alcohol use

Caregiver burden is important in part because a caregiver who is exhausted, depressed, or physically ill may be unable to provide the quality of care needed to their care recipient. While the relationship between caregiver burden and mental and physical health have been studied in great detail, the relationship between caregiver burden and alcohol use has largely been ignored. Alcohol use, particularly alcohol use that meets criteria for abuse or dependency, is a cause for concern among caregivers, as both their health and the health of their care recipient is at risk, particularly if they are responsible for assisting their care recipient with activities of daily living. For example, caregiver alcohol use has been linked to elder abuse.^{27–28}

Some well-known correlates of alcohol use in nationally representative adult samples are exhibited by a large proportion of caregivers. For example, depression and anxiety are predictors of increased alcohol use.^{29–30} Social isolation, which is experienced by some caregivers,^{31–32} is also predictive of increased alcohol use.³³ For these reasons, the relationship (if any) between caregiver burden and alcohol use deserves attention.

While relatively sparse, the research on caregiving and alcohol use suggests that a significant number of caregivers consume alcohol, and that some caregivers use alcohol as a result of stress derived from caregiving. A 1994 study by Connell found that 34.1% of spousal caregivers reported using alcohol as a coping strategy, and that 2.3% of spousal caregivers reported using alcohol as a coping strategy on a frequent basis.³⁴ A 2006 study by Heflinger and Brannan found that about one-third of caregivers for youth with substance abuse problems or mental health problems had used alcohol within the past 30 days.³⁵ Gallant and Connell (1997) found similar results in a study of spousal caregivers, with 30.3% reporting some alcohol use and 3.5% reporting increased alcohol use since assuming caregiving responsibilities.¹⁷ Saad et al. (1995) found that approximately 10% of caregivers in their sample used alcohol to reduce stress.³⁶ McKibben, Walsh, Rinki, Koin, and Gallegher-Thompson (1999) found that female dementia caregivers are more likely to use alcohol than their peers.³⁷ While these studies show that alcohol use is a concern among caregivers, they do not consider how different components of caregiver burden influences alcohol use.

In a study on role transition and alcohol use, Richman, Rospenda, and Kelley (1994) reported increased problem drinking in a sample of new parents following the birth of their children, particularly among those who reported reduced social support. While parents of healthy children are not typically considered in the caregiving literature, their findings suggest that caregiving of any kind may result in increased alcohol use, highlighting the need for further inquiry into this area.³⁸ This study seeks to address this gap in the research by examining the effects of different types of caregiver burden on drinking outcomes. Understanding more about what types of burden can lead to problematic alcohol use can suggest ways to help prevent problematic drinking among caregivers. This information can also be useful for health and mental health service providers who treat caregivers.

Caregiver Burden Inventory subscales as predictors of alcohol use

Negative effects associated with caregiving have been shown to be consistent across many different types of caregivers and when caregiver burden is conceptualized in a number of different ways. However, to the best of our knowledge, no study to date has considered the extent to which different facets of caregiver burden are associated with problematic alcohol use. We used Novak and Guest's 1989 Caregiver Burden Inventory, a survey designed to measure five components of caregiver burden listed above.²⁶ Each burden subscale and its expected relationship to alcohol use is described below.

Time-dependence burden—The time-dependence burden subscale measures the perceived impact caregiving has on the caregiver's time. Examples of items in this subscale include, "*My care recipient needs my help to perform daily tasks,*" and "*I have to watch my care recipient constantly when I am with them.*" Role theory suggests that individuals who have multiple roles are less likely to drink because the increased demands associated with multiple roles leave less time for drinking.³⁹⁻⁴⁰ For example, Hajema and Knibbe (1998) found that the acquisition of a spouse or parent role was associated with a decrease in alcohol consumption.⁴¹ We hypothesize that those who report high time-dependence burden will report less alcohol use than those with low time-dependence burden (H1).

Developmental burden—The developmental burden subscale measures the extent to which caregivers feel "off-time" or out-of-synch compared to the rest of their peers. Examples of items in this subscale include, "*I feel that I am missing out on life because of caregiving,*" and "*My social life has suffered because of caregiving.*" Novak and Guest (1989) suggested that caregivers may feel considerable anxiety and stress as they compare their situation with others in their peer group who are free of caregiving responsibilities.²⁶

Mjelde-Mossey, Barak and Knight (2004) found that among caregivers, those who utilized self-controlling and distancing coping techniques were more likely to consume alcohol than other caregivers.⁴² Self-controlling involves not sharing with others how difficult a situation is; distancing involves cognitively and emotionally detaching from a stressor. Both of these behaviors suggest that caregivers who use these coping techniques do not feel as if they can share their experiences with others, increasing a sense of detachment from peers. Thus, we hypothesize that caregivers who report greater developmental burden will exhibit more drinking behavior than those who report low developmental burden (H2).

Physical burden—The physical burden subscale measures caregivers' feelings of fatigue due to caregiving. Examples of items in this subscale include, "*I'm not sleeping enough because of caregiving,*" and "*Caregiving has made me physically sick.*" There is evidence that suggests that people who are in poor health do not drink. For example, Green, Polen, and Perrin (2003) found that in both men and women, good physical health was predictive of greater alcohol consumption.⁴³ We hypothesize that caregivers who report high physical burden will drink less than those who report low physical burden (H3).

Social burden—The social burden subscale measures caregivers' feelings of conflict resulting from their caregiving roles in their work and family lives. Examples of items in this subscale include, "*I've had problems with my spouse/partner because of caregiving responsibilities,*" and "*I don't do as good a job at work as I used to because of my caregiving responsibilities.*" Social support has been shown repeatedly to help mediate the harmful effects of burden on caregivers' health. Zarit, Reever, and Bach-Peterson (1980) found that burden was less severe for caregivers with a strong social support network;²² George and Gwyther (1986) found that just the perception of a strong support network was sufficient to protect against some caregiving burden.⁴⁴ We hypothesize that caregivers who report considerable strain in other relationships because of their caregiving role will drink more than those who do not feel that their caregiving interferes with their other social roles (H4).

Emotional burden—The emotional burden subscale measures negative feelings caregivers have for their care recipient. Examples of items in this subscale include, "*I resent my care recipient,*" and "*I feel uncomfortable when I have friends over because of caregiving.*" It has been posited that individuals use alcohol to escape from or avoid uncomfortable situations or negative feelings.⁴⁵ Cooper, Frone, Russell, and Mudar (1995) found support for the idea that drinking can be used to regulate negative emotions in both adolescents and adults.⁴⁶ We hypothesize that caregivers who report high levels of emotional burden will drink more than those who report low levels of emotional burden (H5).

Method

Participants

Data for this study derive from a mail survey conducted by the first and fourth authors to assess how people balance their caregiving responsibilities with their work, as well as how family and work responsibilities affect people's well-being in a sample of employed adults (age 18 and older) who were fluent in English or Spanish. The sample was identified by purchasing randomly selected phone numbers for block groups within the City of Chicago and screening for eligible participants. In the case of multiple eligible respondents in the same household, the Trolldahl-Carter-Bryant method of respondent selection was used to select the respondent.⁴⁷⁻⁴⁸ Eligibility criteria included being at least 18 years of age, having been employed at least 20 hours per week at some time in the past 12 months prior to the

survey, currently performing unpaid caregiving for children or an adult, and fluency in English or Spanish.

Of the 35,000 sample numbers contacted, 22,281 (71.6%) were working residential numbers. Contact was made at 15,464 (69.4%) numbers, and individuals at 10,011 (64.8%) numbers cooperated with the screener. Of those, 2,114 completed the screener and were found to be eligible for the study. Verbal informed consent was obtained from potential respondents for inclusion in the study.

The questionnaire was mailed to the 2,114 participants who agreed to be sent a mail questionnaire. Completed questionnaires were returned by 998 (47.2%) participants. Of those who completed the survey, 16.1% were Latino, 37.1% were African American, 42.5% were White, and 4.3% were Asian/Pacific Islander or of “other” race/ethnicity.

The study was approved by the university Institutional Review Board. Telephone pre-screens were conducted from November 2006 to August 2007. The first batch of surveys was mailed in December 2006; the cutoff date for accepting returned surveys was December 2007. A \$30 American Express card was sent with the mail questionnaire to those who agreed to complete the survey. A reminder postcard was sent to individuals who did not respond to the initial mailing. Phone screens and surveys were administered in English or Spanish. Special care was taken to include men and Hispanic participants.

Measures

Caregiving responsibilities—Caregivers indicated the number of care recipients for whom they provided informal care in each of the following relationship categories: child(ren) under age 18, child(ren) over age 18, spouse/ partner, parent(s), brother(s)/ sister(s), aunt(s)/ uncle(s), grandparent(s), friend(s), and other(s).

Caregiver burden—Respondents completed a modified version of the *Caregiver Burden Index (CBI)*, a 19-item measure used to assess five types of caregiver burden: time-dependence ($\alpha = 0.85$), developmental ($\alpha = 0.85$), physical ($\alpha = 0.86$), social ($\alpha = 0.73$), and emotional ($\alpha = 0.77$). Examples of items from each of these subscales are listed in the introduction above. Responses for each of these measures was given on a 4-point scale from 1 = Not at all true to 4 = Extremely true.²⁶ Due to length limitations, the item with the lowest factor loading value for each subscale was not included in this study. Thus, each subscale score was derived from summing participants’ responses on 4 items, with the exception of the physical burden subscale, which derived its value from 3 items.

Drinking Frequency and Quantity—Respondents were asked to estimate the number of days they drank any kind of alcoholic beverage, and typical number of drinks consumed on drinking days in the past 30 days.

Excessive drinking—Binge drinking was assessed by the number of days respondents had 5 or more drinks containing alcohol for men, or 4 or more drinks containing alcohol for women on one occasion in the past 12 months. Drinking to intoxication was assessed by one item: “About how often in the past 12 months did you drink enough to feel drunk, that is, where drinking noticeably affected your thinking, talking, or behavior?” Responses to each of these measures were given on an 8-point scale from 0= “Never” to 7= “5 times a week or more”.⁴⁹

Problem drinking—The 10-item *Brief Michigan Alcohol Screening Test (BMAST)*⁵⁰ was used to measure problematic alcohol use in the past-year. The BMAST correlates strongly with the full version of the MAST,⁵⁰ and is an effective screening tool for alcohol problems

among current drinkers.^{51–52} Respondents answered “yes” (coded 1–5) or “no” (coded 0) for each item. Items were summed to create a composite index of problem drinking.

Demographic variables included age, gender (1 = female, 0 = male), marital status (1= married, 0= widowed/divorced/separated/never married), race/ ethnicity (dummy coded groups for White, African American, Hispanic, and Asian/ Pacific Islander/other), household income, and average number of hours worked per week. Age was measured continuously in years, average number of hours worked per week was measured continuously in hours, and income was an ordinal scale ranging from 0 (less than \$10,000) to 7 (greater than \$90,000).

Results

Ordinary least squares regression models were computed to examine the relationship between drinking outcomes and each caregiver burden subscale. Pairwise deletion of missing data resulted in sample sizes that varied slightly by model, ranging from 776 to 802. Models were tested in two steps, with the demographic control variables entered in step 1 and burden subscale scores entered individually at step 2.

Descriptive statistics of the sample are presented in Table 1, both overall and by presence of any alcohol consumption in the past 12 months. Chi-square analyses, Kruskal-Wallis tests and one-way analysis of variance (ANOVA) were performed to examine differences between participants who had and had not had at least one alcoholic beverage in the past 12 months. Compared to non-drinkers, those who reported drinking in the past 12 months were more likely to be younger, male, white, and married ($p < .05$). Drinkers were also more likely to report higher household income and higher levels of educational attainment ($p < .05$). Drinkers reported higher scores on the physical and social scales of the Caregiver Burden Index ($p < .05$). Those who did not drink were more likely to be African American ($p < .05$). Descriptive statistics for the alcohol use variables are found in Table 2.

Results of the significant regression analyses are found in Table 3 and Table 4. Hypotheses 1, 2, and 3 were not supported, as time-dependence burden, physical burden, and developmental burden did not predict alcohol use. Those results are not presented here, but available from the first author by request. Hypotheses 4 and 5, that high levels of social burden and emotional burden would predict more alcohol use, were supported. Social burden was predictive of the average number of drinks per day in the past 30 days ($p < .01$), the frequency of drinking to intoxication in the past 12 months ($p < .01$), and scores on the Brief MAST ($p < .05$). Emotional burden was predictive of the number of days on which alcohol was consumed in the past 30 days ($p < .05$), the frequency of drinking to intoxication in the past 12 months ($p < .01$), and scores on the Brief MAST ($p < .01$). In all of these cases, higher scores on the burden scales were predictive of increased drinking behavior and problem drinking.

Discussion

In a group of employed caregivers, higher scores on two types of caregiver burden, social burden and emotional burden, were predictive of increased drinking behaviors and problem drinking, while higher scores on the time-dependence, developmental, and physical burden subscales were not predictive of drinking. The social burden subscale emphasizes perceptions of how caregiving has impacted family relationships, with higher scores coinciding with relationships strained by caregiving. The emotional burden subscale includes items that measure caregiver attitude toward the care recipient, including feeling embarrassed by or resentful toward the care recipient. Higher scores on this subscale

coincided with more negative feelings toward the care recipient. While these findings provide no support for our first three hypotheses, that increased amount of time spent on caregiving and physical illness resulting from caregiving activities would be predictive of less alcohol use (H1 and H3) and that reporting feeling out of touch with one's peers would be predictive of greater alcohol use (H2), they did provide support for our fourth and fifth hypotheses, that caregiving can result in increased drinking behaviors when caregiving impedes the caregiver's social interactions with family or friends or when the caregiver has negative feelings about caregiving. These findings are similar to previous work on the mitigating effect of social support on caregiver burden and the expectation that alcohol use will help regulate negative thoughts.

These findings have a practical application for health and mental health service providers who work with caregivers. Previous research has documented the physical and mental health risks associated with being a caregiver. Increased alcohol use should be included in this catalog of risks, and those who work with caregivers should be particularly attentive regarding reports of strained family relationships or negative feelings towards their care recipient(s), as alcohol use puts both the caregiver and the care recipient at risk. Interventions designed to improve caregiver social support and to reduce negative caregiver reactions to care recipient behaviors may be particularly useful. For example, The New York University Silberstein Aging and Dementia Research Center has pioneered an intervention designed to enhance social support for spousal caregivers of individuals with Alzheimer's disease. This intervention has improved many aspects of well-being for both the caregiver and the care recipient. Participating in the intervention delayed nursing home placement for the care recipient⁵³ reduced caregiver depression,⁵⁴⁻⁵⁵ reduced negative caregiver reactions to the problem behavior of the care recipient,⁵⁶ and improved caregiver satisfaction with social support, which in turn predicted better mental health outcomes for the caregivers.⁵⁷⁻⁵⁸

This paper differs from previous work on caregiving, caregiver burden, and alcohol use in two ways. First, unlike much of the work in the caregiving field, this study did not focus on one subset of caregivers (e.g., spousal caregiver of a stroke victim or parental caregiver of a child with sickle cell disease). All caregivers, including parents caring for healthy children under the age of 18, were included in our analyses. We felt that this was appropriate for several reasons. First, we were interested in the subjective experience of caregiving and the relationship between that experience and alcohol use rather than in the experiences of just one particular group of caregivers. Caregiving includes a wide range of events and occurs in many different types of situations; few caregivers share the same experience. Further, the caregiving experience is tempered by many factors, including caregiver personality, support network, and physical resources. It is impossible to define the caregiving experience simply by the characteristics of the care recipient. For these reasons, we wanted to survey a wide range of caregivers.

Secondly, we measured five well-defined sub-types of caregiver burden with a multi-item questionnaire rather than using just a few items to create one or two burden variables (either a composite variable or an "objective burden" variable and a "subjective burden" variable.) Because caregiving is a complex task that involves a wide range of activities, it is reasonable to assume that caregiving burden can manifest itself in multiple ways. We used this more complex method of measuring caregiver burden to begin to understand which types of burden put caregivers at particular risk for increased alcohol use, something that to our knowledge has not been done when examining caregiver burden as a predictor of alcohol use.

These findings provide a preliminary model to guide future work on the relationship between caregiving and alcohol. Previous research has demonstrated that, for certain people, serving as a caregiver is associated with greater alcohol use.^{17,34–35} While this study did not examine alcohol consumption before and after assuming a caregiving role, it does suggest that some types of caregiver burden are more likely to result in increased drinking behavior and problem drinking. More work is necessary to understand how caregiver burden increases alcohol consumption. Although it might be argued that experiences of burden are strongly linked to anxiety and depression, we did not directly assess those relationships in this paper. The link between caregiver burden, anxiety and depression, and drinking behavior also deserves attention in future research.

It is possible that personality traits such as neuroticism may contribute to the association between caregiver burden and problem alcohol use. Neuroticism is a reliable predictor of problematic alcohol use in previous research.⁵⁹ While we were unable to control for neuroticism in the present study, we do not believe neuroticism would have a significant impact on our findings. Previous research examining the role of personality vulnerability on drinking outcomes found that, after controlling for neuroticism, the association between perceived workplace harassment and deleterious drinking behavior was attenuated but was still significant.⁶⁰ Therefore, we are fairly confident that neuroticism would not play a critical role in explaining the relationship between caregiver burden and problem alcohol use.

Other limitations should be considered when interpreting these results. The sample is not nationally representative; rather, it was derived from employed caregivers in the Chicago metropolitan area. As our analyses included only one wave of data, our findings cannot be interpreted as causal. Finally, while our regression models were statistically significant and the addition of the burden variables to the control variables resulted in a statistically significant R-squared change, these models only accounted for relatively small percentages of the overall variance, and our results should be interpreted conservatively.

In summary, caregivers who report higher levels of social and emotional burden were also more likely to engage in more frequent drinking behaviors and to report higher scores on the Brief MAST. Those who provide services to caregivers should be aware of this relationship and consider increased alcohol use a potential risk faced by caregivers. The results reported here are preliminary and suggest that additional work to better understand the connection between caregiving and alcohol use is necessary.

Acknowledgments

This paper was made possible by grant number R01AA015766 from the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of NIAAA. The data were collected by the Survey Research Laboratory at the University of Illinois at Chicago.

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Table 1

Demographic characteristics of all responders and of responders who reported having at least one alcoholic drink in the past year.

	Had at least one alcoholic beverage in the past 12 months	
	All participants (n = 998)	No (n = 127)
Race (%)		
White**	42.5	20.5
African American**	37.1	53.5
Hispanic	16.1	19.7
Other	4.3	6.3
Sex (%)		
Men	45.9	35.2
Women	54.1	64.8
Age (M, SD)**	42.1 (10.1)	44.6 (10.4)
Education**		
Less than high school	6.2	10.6
High school diploma	35.9	50.4
Associate's/ 2 year degree	10.3	14.6
Bachelor's degree	28.2	17.9
Graduate/ professional degree	19.4	6.5
Household Income (%)**		
\$10,000 or less	7.1	9.9
\$10,001–\$20,000	7.1	14.9
\$20,001–\$30,000	10.3	11.6
\$30,001–\$50,000	19.5	28.1
\$50,001–\$70,000	15.0	14.9
\$70,001–\$90,000	12.4	12.4
\$90,001 or more	28.7	8.3
Marital Status (%)		
Married*	57.0	48.8

	Had at least one alcoholic beverage in the past 12 months		
	All participants (n = 998)	Yes (n = 801)	No (n = 127)
Committed relationship (not married)	13.2	12.5	13.6
Never married	12.6	11.3	15.2
Widowed, divorced, separated	17.3	16.2	22.4
Average hours worked per week (M, SD)	36.5 (16.9)	36.9 (16.6)	36.7 (16.5)
Care recipients (M, SD)	2.1 (1.4)	2.1 (1.4)	2.3 (1.6)
Caregiver burden (M, SD)			
Time-dependence burden	9.9 (3.8)	10.0 (3.8)	9.5 (3.6)
Developmental burden	6.0 (2.4)	6.1 (2.4)	5.7 (2.4)
Physical burden**	4.2 (1.7)	4.3 (1.8)	3.7 (1.3)
Social burden**	5.7 (2.1)	5.8 (2.2)	5.1 (1.7)
Emotional burden	4.7 (1.6)	4.7 (1.6)	4.7 (1.6)

* p ≤ .05

** p ≤ .01

Table 2

Means and standard deviations for alcohol use variables.

	M (SD)
Number of days drank alcohol, past 30 days	6.7 (7.7)
Average number of drinks per day, past 30 days	1.9 (1.6)
Greatest amount drank in 1 day, past 30 days	2.7 (2.2)
Days had 5 (men)/4 (women) or more drinks in on day, past 12 months	1.2 (1.6)
Frequency of getting drunk, past 12 months	.74 (1.2)
Brief MAST	.81 (2.2)

Table 3

Social burden regression analyses.

	Average number of drinks per day, past 30 days (n = 752) F (13, 738) = 6.231			Frequency of getting drunk, past 12 months (n = 763) F (13, 749) = 10.448			Brief MAST (n = 757) F (13, 743) = 3.597		
	B	SE	ΔR ²	B	SE	ΔR ²	B	SE	ΔR ²
Step 1									
African American ^a	-.577**	.150		-.570**	.108		-.223	.210	
Hispanic ^a	-.319	.182		-.660**	.131		-.165	.256	
Other ^a	-.640*	.297		-.470*	.220		-.048	.419	
Sex (1 = women)	-.630	.128		-.372**	.092		-.398*	.180	
Age	-.025**	.006		-.030**	.005		.004	.009	
Education	-.170**	.053		-.006	.039		-.113	.076	
Household income	.067	.042		.022	.031		-.120*	.060	
Committed relationship ^b	.296	.204		.051	.146		.302	.284	
Never married ^b	.267	.213		.147	.155		.686*	.302	
Widowed, divorced, separated ^b	.416*	.187		.225	.136		.517	.264	
Average hours worked per week	-.002	.004		.002	.003		-.013*	.005	
Number of care recipients	-.061	.042		-.052	.031		-.084	.059	
Step 2									
Social burden	.073**	.027	.009**	.060**	.020	.011**	.075*	.038	.005*
Model R ²			.099			.154			.059

^aReference category = White

^bReference category = Married

* p < .05

** p < .01

Table 4

Emotional burden regression analyses.

	Number of days drank, past 30 days (n = 764) F (13, 750) = 12.507			Frequency of getting drunk, past 12 months (n = 768) F (13, 754) = 10.395			Brief MAST (n = 763) F (13, 749) = 3.808		
	B	SE	ΔR ²	B	SE	ΔR ²	B	SE	ΔR ²
Step 1									
African American ^a	-2.823**	.659		-.553**	.108		-.162	.207	
Hispanic ^a	-3.347**	.810		-.673**	.132		-.206	.255	
Other ^a	-4.837**	1.322		-.425	.220		-.002	.416	
Sex (1 = women)	-2.309**	.566		-.391**	.093		-.358*	.179	
Age	-.008	.028		-.031**	.005		.005	.009	
Education	-.799**	.239		-.008	.039		-.099	.075	
Household income	.291	.190		.022	.031		-.121*	.060	
Committed relationship ^b	-.276	.890		.058	.145		.248	.279	
Never married ^b	-.164	.934		.086	.153		.604*	.294	
Widowed, divorced, separated ^b	-.018	.826		.204	.135		.441	.260	
Average hours worked per week	-.003	.016		.002	.003		-.012*	.005	
Number of care recipients	-.503**	.186		-.040	.030		-.084	.058	
Step 2									
Social burden	.393*	.163	.006*	.080**	.027	.010**	.169**	.051	.014**
Model R ²			.178			.152			.062

^aReference category = White

^bReference category = Married

* p < .05

** p < .01