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Treated and Untreated Remission from Problem Drinking in Late Life: Post-Remission Functioning and Health-Related Quality of Life

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Abstract

Objective—To evaluate the post-remission status of older remitted problem drinkers who achieved stable remission without treatment.

Method—The post-remission drinking behavior, health-related functioning, life context, coping, and help-seeking of older, untreated ($n = 330$) and treated ($n = 120$) former problem drinkers who had been remitted for a minimum of six years were compared twice over the course of six-years to each other and to lifetime nonproblem drinkers ($n = 232$). Analyses considered the impact of severity of drinking problem history.

Results—Untreated remitters were more likely than treated remitters to continue to drink, exhibited fewer chronic health problems and less depressive symptomatology, and were less likely to smoke. Untreated remitters' life contexts were somewhat more benign than those of treated ones, and they were less likely to describe a coping motive for drinking and engage in post-remission help-seeking. Although untreated remitters more closely resembled lifetime nonproblem drinkers than did treated remitters, both untreated and treated remitter groups exhibited worse health-related functioning, more financial and interpersonal stressors, and more post-remission help-seeking than did lifetime nonproblem drinkers.

Conclusions—Regardless of whether late-life remission was gained without or with treatment, prior drinking problems conveyed a legacy of health-related and life context deficits.

Keywords

Alcohol; untreated remission; older adults; health; stress; coping

1. Introduction

Two thirds or more of problem drinkers remit “naturally,” without treatment or self-help group participation (Cohen et al., 2007; Dawson, 1996; Sobell et al., 1996; Watson and Sher, 1998). Despite this, there has been almost no evaluation of the long-term public health and quality of life impact of untreated remission. Studies that have examined the long-term status of untreated

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remitters have focused almost exclusively on relapse rates and other drinking-related outcomes. The few studies that have included examination of non-drinking outcomes have focused on mixed-aged samples of untreated remitters that have excluded older adults. Furthermore, samples studied thus far have often comprised volunteers recruited by media advertisement, yielding biased results (Rumpf et al., 2000). Given the growing number of individuals with current or past drinking problems expected to enter late life over the next decade (Adams and Cox, 1995; Korper et al., 2002), the need to anticipate the functioning and quality of life deficits and health care needs of older untreated remitters is particularly salient at this time. In order to assess the potential public health care needs of this understudied group, we prospectively compared the post-remission drinking behavior, health-related functioning, life context (stressors and resources), coping, and help-seeking of late-life untreated remitters to that of older treated remitters and lifetime nonproblem drinkers recruited without use of media solicitation.

1.1 Post-remission drinking behavior

We know of no studies that have directly compared the drinking outcomes of older untreated and treated remitted problem drinkers. However, two prior studies focusing on convenience samples of older adults with current or past alcohol use disorder have included descriptions of older, untreated remitted problem drinkers. Consistent with results reported for mixed-aged samples (Moos and Moos, 2006; Sobell et al., 1996), Chermack and colleagues (1996) found that untreated remission was more closely associated with continued drinking, whereas abstinence was more common among treated remitters. In the other study, untreated remitters' drinking outcomes were described as unstable over the course of three years (Walton et al., 2000). However, this latter study included no comparison group and focused upon a small number of untreated remitters who had not maintained remission for an extended period of time. Sobell et al. (2000) have recommended that examination of remission outcomes focus upon individuals who have been remitted for five or more years in order to avoid confusing research findings about remission with findings associated with frequent transient changes in alcohol use. In the current study, we examine outcomes among a large sample of untreated remitters who had been remitted for a minimum of six years.

1.2. Non-drinking outcomes and behavior

Prior research focused on predicting untreated versus treated remission among mixed-aged convenience samples has found that problem drinkers who later attain remission without treatment often have less severe drinking problem histories, fewer health deficits, and more benign and helpful life contexts than those who attain remission with treatment (Granfield and Cloud, 1996; Tucker et al., 2003). Given such a pre-remission profile, untreated remitters might be expected to continue to display healthier functioning and life contexts in the post-remission period (Tucker and Gladsjo, 1993). Alternatively, if treatment boosts improvement in former problem drinkers' functioning over that experienced by those who forgo treatment, untreated remitters would not necessarily be expected to exhibit better post-remission outcomes (Moos and Moos, 2006).

1.2.1. Post-remission health-related functioning—We know of no studies that have systematically compared the acute or chronic health problems of older untreated and treated remitted problem drinkers. However, among mixed-aged and younger samples, some have found that untreated remitters report more health-related problems than do treated remitters (Bischof et al., 2004; Blomqvist, 2002). In a study that included, but was not focused primarily upon, comparisons of mixed-aged untreated and treated remitters, Moos and Moos (2006) found no differences between remitter groups on another aspect of health-related functioning, depressive symptoms.

Epidemiological data have shown that individuals who do not seek treatment for their alcohol-related problems are less likely to be nicotine dependent than those who do (Cohen et al., 2007). Furthermore, among convenience samples (e.g., Breslau et al., 1996), drinking problem remission has been associated with an increased likelihood of smoking cessation. It is unclear, however, whether smoking cessation rates differ for untreated and treated remitters. Another aspect of health-related functioning that is particularly salient for older adults is the concomitant use of medications and alcohol. Older adults are heavy users of prescription medications (Cook, 1999), and even small amounts of alcohol, when combined with certain medications, have the potential to cause adverse health effects (Adams, 1995; Pringle et al., 2005). Since virtually all psychoactive medications interact with alcohol, and because the most serious alcohol-related adverse drug reactions occur with psychoactive medications (Pringle et al., 2005), the current study focuses on their use.

1.2.2. Post-remission life context—It is generally accepted that stressors and resources can influence problem drinkers' success in achieving remission (Bischof et al., 2000; Bischof et al., 2004), but examination of post-remission life context of stably remitted problem drinkers has thus far received little attention. Therefore, it is largely unknown if untreated remitters of any age have similar, better, or worse post-remission life contexts than do treated remitters. However, Moos and Moos (2006) found no apparent differences between mixed-aged untreated and treated remitters on the severity of their post-remission acute or chronic stressors and available social resources (Moos and Moos, 2006). In the current study of older adults, we evaluated whether older untreated and treated remitters differed on their post-remission stressors and resources.

1.2.3. Post-remission coping and help-seeking—Although reliance on approach, rather than avoidance, coping strategies has been associated with better outcomes among treated problem drinkers (Moos and Finney et al., 1990), little is known about the differential coping strategies of untreated and treated remitters. Prior research with mixed-aged adult samples has suggested that, post-remission, untreated remitters are less likely than treated remitters to cope by seeking support, rely on avoidance coping strategies, or report a coping motive (e.g., drinking to relieve tension) or emotion-focused reason for drinking (Blomqvist, 2002; Moos and Moos, 2006). In regard to post-remission help-seeking, we expected that untreated remitters, having already chosen in the past not to seek help with their drinking problems, would be less likely than treated remitters to seek help with subsequent personal or relationship issues.

1.3. Study overview

In the current study, over the course of six years we twice compared the post-remission drinking behavior, health-related functioning, life context, coping, and help-seeking of older untreated and treated former problem drinkers who had been remitted for a minimum of six years. We also assessed whether untreated remitters came closer than treated remitters to achieving "normalization" of their health and life contexts by comparing untreated and treated remitters to lifetime nonproblem drinkers. In addition, because it has been suggested that the process of change may be more extended or gradual among untreated than treated remitters (Blomqvist, 2002; Timko et al., 2000), we evaluated whether the rate of change on assessed variables differed over time. Finally, since prior research has demonstrated that severity of drinking problem history and time since drinking problem remission may influence remission outcomes (Chermack et al, 1996.; Moos and Moos, 2006), we completed analyses considering the potential role of these variables in explaining study findings.

2. Method

2.1. Participants

All participants were drawn from a larger sample of older community residents (55–65 years old at baseline) who had had some outpatient contact with a health care facility within the last three years and who participated in a 10-year, longitudinal study assessing the course of late-life alcohol consumption and problem drinking. A screening procedure excluded individuals who had never consumed alcohol and lifetime nonproblem drinkers who consumed alcohol less than once a week. Telephone contact was successfully made with 96% of eligible respondents (2217 out of 2318), and 96% ($n = 2125$) of these individuals agreed to participate in the first wave of data collection. Overall, 1884 (89%) of the individuals agreeing to participate completed the baseline data collection. Informed consent was obtained from all 1884 participants.

The sample of 1884 participants was comparable to similarly aged community samples with regard to hospitalization and health characteristics (Brennan et al., 1990). We re-contacted the sample one and four years after baseline, obtaining 94% response rates. A seven-year follow-up was conducted on part of the sample to obtain information on lifetime history of drinking problems. Ten years after baseline, 93% of all surviving participants ($n = 1291$) completed another follow-up that included assessment of drinking problem history for participants not assessed at the seven-year follow-up. By applying the criteria described below to surviving individuals who participated in both the 4- and 10-year follow-ups ($n = 1255$), we formed two groups of former problem drinkers (untreated and treated remitters, described below) who were compared to each other and to lifetime nonproblem drinkers (also described below) on their drinking behavior, health-related functioning, life context, and coping and help-seeking behavior at the 4- and 10-year follow-ups.

2.1.1. Late-life untreated remitters—There were 377 individuals who had experienced drinking problems at some time in their life, achieved remission after age 50, were free of drinking problems at the 4-year follow-up, and had never received formal treatment or attended self- or mutual-help groups for problem drinking. (Operational definitions of drinking problems and treatment are provided below.) Of these, 12.4% (47 out of 377) relapsed, reporting one or more drinking problems at the 10-year follow-up. The current study focuses on the remaining 330 participants who remained free of drinking problems at the 10-year follow-up.

2.1.2. Late-life treated remitters—There were 127 individuals who had experienced drinking problems at some time in their life, achieved remission after age 50, were free of drinking problems at the 4-year follow-up, and had received formal treatment for problem drinking. Significantly fewer of these treated remitters relapsed by the 10-year follow-up than did untreated remitters (5.5% vs. 12.4%, respectively, $\chi^2 (df = 1) = 4.78, p < .05$). We focus here on the 120 treated remitters who remained free of drinking problems at the 10-year follow-up.

Three indicators of drinking problems were used to determine whether participants had, at some point in their lives, experienced drinking problems. A history of drinking problems was determined by endorsement of one or more of the following three criteria: (1) Reporting one or more drinking problems on a 28-item list of lifetime history of drinking problems assessing symptoms of alcohol use disorders using items adapted from the Structured Clinical Interview for DSM-III-R, the Alcohol Dependence Scale (Skinner et al., 1982), and lifetime versions of items from the Drinking Problems Index (DPI; Finney et al., 1991), a measure designed specifically to assess negative consequences of drinking among older adults ($\alpha = .94$; 30-day test-retest $r = .90$; Schutte et al., 2001); (2) Reporting one or more drinking problems on a

screening questionnaire comprising five, three-part items administered prior to baseline that assessed whether each of five drinking problems were experienced (yes/no) in the last year, the year before last, or more than two years ago; (3) Reporting one or more drinking problems at baseline or the one-year follow-up on the 17-item DPI (Finney et al., 1991; $\alpha = 0.90$).

Formal treatment experience was indicated by having at least one of the following: (1) Endorsement (one or more times) of an item included in the baseline and all follow-up surveys asking whether help for drinking problems had been obtained in the last 12 months; and (2) Endorsement of one or more items on the lifetime drinking history questionnaire assessing whether help for drinking problems had ever been received from a “hospital/clinic”, “psychologist/psychiatrist”, or “physician”. Among those who reported one or more drinking problems on the lifetime history questionnaire (116 of 120 treated remitters), 45.7% had received treatment from a hospital/clinic, 21.5% from a psychologist/psychiatrist (but not a hospital/clinic), and 32.8% from a physician (but not a psychologist/psychiatrist or hospital/clinic). In addition, 43% of those with a history of formal treatment for drinking problems also reported a history of self- or mutual-help group participation. (Only 10 individuals in our original sample had a history of such group participation in the absence of formal treatment; these individuals were not included in our group of 120 treated remitters.)

2.1.3. Lifetime nonproblem drinkers—Individuals in this comparison group ($n = 232$) reported no history of drinking problems on the screening questionnaire or on the DPI at baseline or at any follow-up. In addition, individuals in this group reported none of the 28 drinking problems assessed on the lifetime drinking problem questionnaire.

2.2. Measures

2.2.1. Post-remission drinking behavior—Recent drinking behavior was tapped at the 4- and 10-year follow-ups using identical Health and Daily Living Form items (HDL; Moos and Cronkite et al., 1990). First, we assessed whether participants were abstinent in the last 12 months (yes/no). Among nonabstinent participants, we assessed quantity of alcohol consumed on heaviest drinking days (number of ounces of 100% alcohol) with three items that inquired about quantities of wine, beer, and hard liquor consumed on heaviest drinking days in the last month. We standardized responses by converting them to reflect their ethanol content, and then summed the three ethanol quantities. In addition, a quantity-frequency composite of alcohol consumption was calculated using information about typical and heaviest quantity and frequency of drinking the three types of alcoholic beverages and assessed participants’ average daily consumption (number of ounces of 100% alcohol). For both alcohol consumption composites, higher scores reflected more alcohol consumption. Next, relying on the American Geriatrics Society’s (AGS; 2003) drinking guidelines for lifetime nonproblem-drinking older adults, we assessed heavy drinking (yes/no) as the consumption of four or more standard drinks on heavy drinking days. The definition of a standard drink in the United States is 0.6 fluid ounces of 100% ethanol (approximately 14 grams of ethanol) which is found, for example, in a 5-ounce glass of wine (12% alcohol), a 12-ounce can of beer (5% alcohol), or a 1.5-ounce shot of 80-proof hard liquor (National Institute on Alcohol Abuse and Alcoholism, 2007). Evidence supporting the validity of self-report measures of alcohol consumption is available for mixed-aged and older adult samples (Babor et al., 1987; Gladsjo et al., 1992; Sobell et al., 2000; Stacy et al., 1985).

2.2.2. Post-remission health-related functioning—Acute negative health events and chronic health stressors were assessed with the Life Stressors and Social Resources Inventory (LISRES; Moos and Moos, 1994). Health-related negative events were assessed with identical items at both follow-ups by asking participants if they had been hospitalized or experienced any of 26 new medical conditions (e.g., anemia, cancer, diabetes) or serious physical ailments

(e.g., shortness of breath, back pain) in the last year. Chronic health stressors were appraised with 26 items indicating medical conditions and serious physical ailments that began more than a year ago. Severity of depressive symptoms during the last month was assessed using the HDL by summing responses to 18 items scored on a 5-point scale (Cronbach's $\alpha = 0.92$). Current smoking status (yes/no) and the number of types of psychoactive medications (amphetamines, antidepressants, pain killers, sleeping pills, tranquilizers) being used in the last month were also assessed. Using information about participants' consumption of psychoactive medications (yes/no) and drinking status (abstinent/nonabstinent), we created a composite to indicate concurrent use of psychoactive medication and alcohol (yes/no).

2.2.3. Post-remission life context—Non-health chronic stressors and resources were assessed with the LISRES (Moos and Moos, 1994). Financial stressors were assessed with six items rated on a 4-point scale ($\alpha = .93$) and measured problems such as inability to afford necessities and pay bills. Spouse (or partner) interpersonal stressors ($\alpha = .82$) were assessed with five items rated on a 5-point scale (e.g., "Is he or she critical or disapproving of you?"). Five parallel items tapped friend stressors ($\alpha = .77$).

Three types of resources were assessed: financial, spouse (or partner), and friend. Financial resources were defined by participants' family income. Spouse resources ($\alpha = .88$) and friend resources ($\alpha = .90$) were tapped with separate LISRES subscales, each comprising six items rated on 5-point scales assessing emotional aspects of supportive relationships (e.g., "Does he/she cheer you up when you are sad or worried?") and instrumental ones (e.g., "Can you count on him/her to help you when you need it?"). Friends' approval of drinking was measured with four items, each rated on a 4-point scale, assessing friends' consumption of alcohol and their approval of heavy drinking.

2.2.4. Post-remission coping and help-seeking—We assessed participants' percent approach coping using 48 items from the Coping Responses Inventory (CRI; Moos, 1993), each scored on a 4-point scale and tapping one of four types of approach coping and four types of avoidance coping strategies ($\alpha = .75$). We also asked participants whether they drank alcohol to forget "once or twice" or "occasionally" in the past 12 months (yes/no), but not as frequently as "fairly often" or "often." In addition, we determined whether participants had sought help with a personal or relationship problem during the last 12 months from a mental health care provider or other counselor (yes/no).

2.2.5. Historical influences—The severity of remitted participants' lifetime drinking history was assessed as the number of lifetime drinking problems derived from the previously mentioned 28-item lifetime history of drinking problems questionnaire. In addition, because severity of drinking history comprises qualitative (e.g., dependence vs. abuse) as well as quantitative (e.g., number of drinking problems) components, we also assessed whether participants had a lifetime history of symptoms consistent with a DSM-III-R diagnosis of alcohol dependence (APA, 1987). Time since remission was assessed using remitted participants' responses to screening questionnaire items at baseline and follow-up DPIs. Using these, we calculated whether participants had, at the time of the 10-year follow-up, been remitted for more than 12 years (yes/no).

2.3. Summary of analyses

We first evaluated demographic differences among the groups of untreated remitted problem drinkers ($n = 330$), treated remitted problem drinkers ($n = 120$), and lifetime nonproblem drinkers ($n = 232$) using chi-square tests and one-way analyses of variance (ANOVAs) with Bonferroni correction for multiple pair-wise comparisons. Next, we evaluated group differences on post-remission drinking behavior, health-related functioning, life context, and

coping and help-seeking using repeated-measures, multivariate analyses of covariance (MANCOVAs) that controlled for group differences on gender, education, and marital status (see Table 1). MANCOVAs assessed group, time, and group-by-time effects. The nature of significant effects was determined using one-way ANOVAs with Bonferroni correction.

As shown in Table 1, compared to treated remitters, untreated remitters had significantly fewer lifetime drinking problems and were less likely to have ever met symptom criteria for alcohol dependence. Time since drinking problem remission, however, was similar for the two remitter groups ($p > .10$; Table 1). These results suggested that any obtained differences between remitter groups might be attributable to group difference on severity of drinking problem history. We therefore reran MANCOVAs to control for this difference.

3. Results

As shown in Table 1, the sample was mostly white, married, not employed (retired), and well-educated. There were no differences between untreated and treated remitters on ethnicity, employment status, or age, but there were more women among the untreated (46%) than treated remitters (33%), and more women among the lifetime nonproblem drinkers than among either remitter group (63%). Treated remitters were less likely than were lifetime nonproblem drinkers to be married at the 4-year follow-up. However, at the 10-year follow-up, in the context of a general decline in the number of married participants (largely due to an increase in the number of widowed participants), there was no significant group difference on marital status at the 10-year follow-up. Untreated remitters and lifetime nonproblem drinkers were better educated than treated remitters: Whereas approximately 48% of untreated remitters and lifetime nonproblem drinkers had completed 16 or more years of formal education, only 30% of treated remitters had done so (not shown).

Overall, the percentage of older adults continuing to drink decreased significantly between the 4- and 10-year follow-ups (Table 2). Among participants who continued to drink, average daily alcohol consumption did not change significantly, but there was a general decline in heavy drinking. In addition, there was an overall increase in chronic health stressors, stability in depressive symptoms, and a general decline in smoking. The latter was especially noticeable among treated remitters, who started out with a higher proportion of smokers. In contrast to the declines in use of alcohol and nicotine, psychoactive medication usage generally rose between the 4- and 10-year follow-ups. Financial and friend stressors declined significantly over time, while financial, spouse, and friend resources stayed relatively constant. Overall use of approach coping strategies and post-remission help-seeking also remained relatively constant among the groups, but there was an overall decline in drinking to forget.

3.1. Comparison of untreated and treated remitters

Untreated remitters were more likely than those with a history of treatment to continue to drink in the post-remission period (84% vs. 43%; Table 2). However, among those who continued to drink, there was no significant difference between remitter groups on the average amount of alcohol consumed daily or on heavy drinking days.

Examination of remitters' health-related functioning revealed that untreated and treated remitter groups did not differ on the number of recently experienced negative health events (i.e., newly developed health problems, hospitalization). However, at both follow-ups, untreated remitters consistently reported fewer chronic health conditions and less depressive symptomatology, and they were less likely to smoke than treated remitters. In addition, untreated remitters were less likely to use psychoactive medication: Forty percent of untreated, compared with 47% of treated, remitters were using at least one psychoactive medication at the four-year follow-up ($F(df = 2) = 36.95, p < .001$; not shown). Among remitters using any

psychoactive medication, untreated remitters used fewer types. This finding remained significant in follow-up analyses accounting for untreated remitters' potentially reduced need for such medications (i.e., fewer chronic health problems, less severe depression symptomatology), ($F(df = 2) = 4.04, p < .05$, not shown).

Many aspects of life context did not differ significantly for untreated and treated remitters (Table 2). However, compared to treated remitters, untreated remitters did experience fewer financial stressors and possessed more financial resources. In regard to coping strategies, untreated remitters relied more on approach coping at the four-year follow-up and, at both follow-ups, were less likely to drink to forget and to seek post-remission help for a personal or relationship problem. The latter finding remained significant in follow-up analyses accounting for untreated remitters' potentially reduced need for services (i.e., fewer chronic health problems, less severe depression symptomatology) ($F(df = 2) = 10.50, p < .01$, not shown).

3.1.1. Controlling for group differences on severity of drinking problem history

—To determine the extent to which untreated remitters' less severe drinking problem histories might account for reported findings, we reran analyses to control for severity of drinking problem history (number of lifetime drinking problems and history of symptoms consistent with alcohol dependence). As in the previous analyses, untreated remitters were found to be significantly ($p < .05$) more likely than treated remitters to continue to drink. In addition, most non-drinking differences continued to attain statistical significance (chronic health stressors, smoking, psychoactive medication, drinking to forget, help-seeking) or closely approach it (depressive symptoms, $p = .07$; financial stressors, $p = .05$). However, remitter groups were no longer found to differ on combined alcohol-psychoactive medication use, financial resources, or approach coping ($p > .10$), thereby indicating that previously reported differences on these variables might be accounted for by untreated remitters' less severe drinking problem histories.

3.2. Comparison of untreated and treated remitters to lifetime nonproblem drinkers

Untreated remitters came somewhat closer to "normalization" than did treated remitters. Whereas untreated remitters could not be differentiated from lifetime nonproblem drinkers at the 4- or 10-year follow-up on their chronic health stressors, smoking rate, interpersonal friend stressors, and post-remission help-seeking, treated remitters had more health problems and friend stressors, were more likely to smoke, and were more likely to seek help for personal or interpersonal problems than were lifetime nonproblem drinkers.

However, both remitter groups fared worse than lifetime nonproblem drinkers in several ways. Although untreated and treated remitters were more likely than lifetime nonproblem drinkers to be abstinent from alcohol, remitters who continued to drink consumed heavier amounts of alcohol, and more of them exceeded recommended drinking limits, than did nonabstinent lifetime nonproblem drinkers. In addition, both remitter groups experienced significantly more acute negative health events and depressive symptoms and consumed more psychoactive medications. (This latter finding remained significant in analyses controlling for group differences on health stressors and depressive symptoms.) In comparison to lifetime nonproblem drinkers, untreated and treated remitters also encountered more spouse and financial stressors, possessed fewer financial resources, and were more likely to drink to forget.

4. Discussion

Most prior studies examining outcomes associated with untreated remission have focused exclusively on drinking behavior and have excluded older adults. The current study yields

unique information about older, untreated remitted problem drinkers' post-remission drinking behavior, health-related functioning, life context, coping, and help-seeking.

4.1 Post-remission drinking behavior

Among former problem drinkers who were remitted at the 4-year follow-up, untreated remitters were more likely to relapse by the 10-year follow-up than were older treated remitters (12% vs. 6%, respectively). Untreated remitters' greater tendency to continue to drink after remitting may have put them at increased risk for relapse. Support for the notion that it is continued drinking, rather than treatment status per se, that predicts relapse comes from Ilgen et al. (in press), who focused more directly on this issue. They found that, among a mixed-aged sample of treated and untreated remitted problem drinkers, remitters who continued to drink were at greater risk for relapse than were those became abstinent.

However, study findings regarding older adults who maintained remission for a minimum of six years highlight that it is possible for many longer-term remitters to continue to drink and yet avoid relapse. We found that approximately 84% of untreated and 43% of treated, successfully remitted problem drinkers were nonabstinent. Furthermore, our results suggest that it is possible for some older untreated and treated remitted problem drinkers to occasionally exceed current recommended daily drinking limits without experiencing drinking problem relapse.

On the other hand, even if drinking problem relapse is avoided, nonabstinent remitters' drinking patterns may place them at increased risk for poorer health outcomes. As noted above, we found that nonabstinent remitters (untreated and treated, alike) were more likely than lifetime nonproblem drinkers to exceed recommended daily drinking limits, a behavior that has been associated with poorer health outcomes (Dawson et. al., 2005; Greenfield, 1998; Walton et al., 2000). A second way through which continued drinking may confer increased health risk is when alcohol use is combined with psychoactive medication use (Pringle et al., 2005). Our results suggest that untreated remitters may be at greatest risk for such interactions: Whereas a fifth of treated remitters and lifetime nonproblem drinkers combined alcohol with psychoactive medication use, a third of untreated remitters did so.

4.2. Post-remission health-related functioning

Overall, untreated remitters appeared to be in better health than treated remitters, but in worse health than lifetime nonproblem drinkers. Compared to treated remitters, and even after controlling for group differences in severity of drinking history, untreated remitters had fewer chronic health conditions, less depressive symptomatology, and were less likely to smoke and use psychoactive medication. This latter finding regarding psychoactive medications also could not be accounted for by untreated remitters' relatively better health or less severe depressive symptomatology, thereby supporting the notion that there is something specifically about not getting treatment for drinking problems that decreases the chance that psychoactive medications will be used. One possibility is that problem drinkers not in treatment for their drinking problems are less likely to be presented with information about pharmacologic treatment options (e.g., for co-occurring psychiatric conditions for which psychoactive medications are available and appropriate).

Although untreated remitters used fewer psychoactive medications than did treated remitters, they were more likely to continue drinking and to combine nonabstinence with psychoactive medication use. In contrast, treated remitters used more psychoactive medications but were more likely to be abstinent. This pattern of results, and the results of directed post-hoc analyses indicating that heavier use of psychoactive medications is a significant predictor of abstinence, is consistent with the idea that psychoactive medication use may act as a substitute for drinking

among some older former problem drinkers, perhaps especially treated remitters. This suggestion is concordant with prior work indicating that substitution of one substance for another is common among successfully remitted problem drinkers (Breslau et al., 1996), and that untreated are less likely than treated remitters to report having a substitute for drinking (Blomqvist, 2002).

Although untreated remitters appeared to be in better health when compared to treated remitters, comparison to lifetime nonproblem drinkers revealed several health-related deficits, including encountering more health-related negative events. Our finding that untreated and treated remitters experienced more depressive symptomatology than lifetime nonproblem drinkers is consistent with research demonstrating that prior alcohol dependence is associated with an increased risk of later depression (Hasin and Grant, 2002). In addition, even after accounting for remitters' poorer health and elevated depressive symptomatology, untreated and treated remitters were found to use more psychoactive medications, and were more likely to combine this medication use with drinking, than were lifetime nonproblem drinkers.

4.3. Post-remission life contexts

It has been proposed that problem drinkers who achieve remission without treatment have more available social support (Blomqvist, 2002) and, more generally, more social capital (Granfield and Cloud, 2001) than do those who obtain remission with treatment. If true, untreated remitters might be expected to continue to exhibit more resources than treated remitters in the post-remission period. However, we found no differences between untreated and treated remitters on spouse or friend resources. In addition, although initial analyses indicated more financial resources available to untreated remitters, follow-up analyses accounting for untreated remitters' less severe drinking histories demonstrated that untreated remitters' financial situation was no better than that of treated remitters.

Compared to lifetime nonproblem drinkers, untreated (and treated) remitters were experiencing more stressful spousal relationships and a less attractive financial situation at the four-year follow-up. With extended remission, remitters became indistinguishable from lifetime nonproblem drinkers on interpersonal stressors, but differences in financial status persisted. This contrasts with results from an earlier study of generally younger treated remitters in which former problem drinkers, with prolonged remission, were able to attain a level of financial functioning undistinguishable from that of nonproblem drinking controls (Moos and Finney et al., 1990). These apparently conflicting results may be associated with differences in the age of the study participants. In late-life, when individuals are more likely to be retired and less likely to be embarking on new career paths, there are generally fewer opportunities to dramatically alter one's financial situation than are available earlier in life.

4.4. Post-remission coping and help-seeking

As expected, untreated remitters were less likely than treated remitters to seek post-remission help for personal or interpersonal issues, even after accounting for untreated remitters' generally better health and less severe depressive symptoms and drinking histories. Although beyond the scope of the current study to evaluate, this finding could reflect a heightened tendency among individuals who achieve remission without treatment to attribute their attainment and maintenance of remission to internal changes (Blomqvist, 2002). Some have speculated that such attributions may increase self-confidence in post-remission problem solving and reduce the likelihood of thinking that outside help is needed (Blomqvist, 2002).

Although untreated remitters relied more on approach coping strategies than did treated remitters, follow-up analyses indicated that this difference could be attributed to untreated remitters' generally less severe drinking problem histories. However, differences on drinking

to cope were more robust and reflected less use of this coping motive among untreated remitters. Although drinking to cope has been associated with less favorable outcomes among current problem drinkers and remitted problem drinkers, we know of no prior studies examining whether retaining a coping motive for drinking during long-term remission portends worse drinking or non-drinking outcomes.

Both untreated and treated remitters were more likely to drink to forget when compared to lifetime nonproblem drinkers. Whereas less than 3% of lifetime nonproblem drinkers at age 71 were drinking to forget, 14% of untreated and 29% of treated remitters were doing so. This finding is consistent with prior research implicating drinking to cope with problem drinking (Moos and Finney et al., 1990), and it suggests the potential utility of including questions about drinking to cope in screening tools aimed at identifying older current or former problem drinkers.

4.5. Study limitations

All participants had had recent (in the last three years) contact with an outpatient medical facility. Although we confirmed that the sample was comparable to similarly aged community samples with regard to hospitalization and health characteristics (Brennan et al., 1990), it was not selected to be representative of the entire population of older adults. For example, our sample did not include older adults who viewed themselves as not needing outpatient services or those financially or physically unable or unwilling to access outpatient healthcare. The generalizability of findings to the general population of older adults is therefore uncertain. Furthermore, although reflective of the demographic characteristics of the current U.S. population of older adults, the ethnic homogeneity characterizing our sample limits generalization to other ethnic groups. Studies of mixed-aged samples demonstrating that minority status is often associated with encountering more life stressors, lower socioeconomic status, and increased barriers for obtaining alcohol-related treatment (Watson & Sher, 1998) suggest that caution must be taken in generalizing our results to other ethnic and racial groups.

We utilized a low threshold for defining problem drinking in order to encompass the wide range of drinking problems observed in the community. Research has confirmed that milder drinking problems are more common than is alcohol dependence by a ratio of about 4:1 (Institute of Medicine, 1990), and is therefore in need of study. However, the extent to which our results are generalizable to individuals with more severe drinking problems is not known.

Differences between untreated and treated remitters on two indices of severity of drinking problem history could not account for most study findings. However, our quantitative (number of lifetime drinking problems) and qualitative (dependence vs. abuse) severity measures did not assess the duration of problems experienced, which might be expected to influence longer term outcomes associated with drinking problem remission. In addition, although untreated and treated remitters did not differ significantly on our measure of time since drinking problem remission, having a more exact measure of this construct would have aided our ability to interpret findings.

Since we did not assess participants' life history of help-seeking until our most recent follow-ups, we were unable to determine whether the rate or time to death varied for treated and untreated remitted problem drinkers. Furthermore, we had no information about the amount, type, or duration of treatment that individuals in our treated remitters group received, thereby precluding finer-grained distinctions between untreated and treated remitter groups. Related to this is the lack of consensus in the literature for how to define untreated versus treated remitters. For example, in contrast to our operationalization of untreated remission, which required individuals to have no lifetime history of any formal or mutual self-help group treatment for drinking problems, some researchers have described natural remitters as

including individuals who have received “minor formal help” comprising up to nine self-help group meetings or more than two counseling sessions with a physician (Bischof et al., 2004). In addition, since very few remitted older problem drinkers in our sample received help only from self- or mutual-help groups such as Alcoholics Anonymous, we were unable to identify differences and similarities between older untreated remitters and older adults who achieve and maintain remission with the help of such groups.

4.6. Summary and conclusions

In contrast to what has been observed among younger remitted problem drinkers, comparisons of older untreated and treated remitters to lifetime nonproblem drinkers revealed deficits in both untreated and treated remitters’ health-related functioning and life contexts. Our results suggest that obtaining basic information from older adults about their drinking problem and treatment history may aid care providers as they evaluate and address older adults’ risk for health problems, depressive symptoms, and adverse medication-alcohol interactions.

References

- Adams WL, Cox NS. Epidemiology of problem drinking among elderly people. *Int J Addict* 1995;30:1693–1716. [PubMed: 8751316]
- Adams WL. Potential for adverse drug-alcohol interactions among retirement community residents. *J Am Geriatr Soc* 1995;43:1021. [PubMed: 7657918]
- American Geriatric Society (AGS). Clinical Guidelines for Alcohol Use Disorders in Older Adults. 2003 [Last accessed 9/13/2007]. <http://www.americangeriatrics.org/products/positionpapers/alcohol.shtml>
- American Psychiatric Association (APA). Diagnostic and Statistical Manual of Mental Disorders. Vol. 3. American Psychiatric Association; Washington, D.C.: 1987.
- Babor TF, Stephens RS, Marlatt A. Verbal report methods in clinical research on alcoholism: Response bias and its minimization. *J Stud Alcohol* 1987;48:410–424. [PubMed: 3312821]
- Bischof, G.; Rumpf, HJ.; Meyer, C.; Hapke, U.; John, U. What triggers remission without formal help from alcohol dependence? Findings from the TACOS-Study. In: Rosenqvist, P.; Blomqvist, J.; Koski-Jännes, A.; Öjesjö, L., editors. *Addiction and Life Course*. Nordic Council for Alcohol and Drug Research. Helsinki, Finland: 2004. p. 85-101. (Available at <http://www.nad.fi/pdf/44/Gallus%20Bischof.pdf>)
- Bischof G, Rumpf HJ, Hapke U, Meyer C, John U. Maintenance factors of recovery from alcohol dependence in treated and untreated individuals. *Alcohol Clin Exp Res* 2000;24:1773–1777. [PubMed: 11141035]
- Blomqvist J. Recovery with and without treatment: A comparison of resolutions of alcohol and drug problems. *Addiction Research and Theory* 2002;10:119–158.
- Brennan PL, Moos RH. Life stressors, social resources, and late-life problem drinking. *Psychol Aging* 1990;5:491–501. [PubMed: 2278671]
- Breslau N, Peterson E, Schultz L, Andreski P, Clicoat H. Are smokers with alcohol disorders less likely to quit? *Am J Public Health* 1996;186:985–990. [PubMed: 8669523]
- Chermack ST, Blow FC, Gomberg ES, Mudd SA, Hill EM. Older adult controlled drinkers and abstainers. *J Stud Alcohol* 1996;8:453–462.
- Cohen E, Feinn R, Arias A, Kranzler HR. Alcohol treatment utilization: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions. *Drug Alcohol Depend* 2007;86:214–221. [PubMed: 16919401]
- Cook AE. Strategies for containing drug costs: Implications for a Medicare benefit. *Health Care Finance Review* 1999;20:265–277.
- Dawson DA. Correlates of past-year status among treated and untreated persons with former alcohol dependence: United States. *Alcohol Clin Exp Res* 1996;20:771–779. [PubMed: 8800398]
- Dawson DA, Grant BF, Li TK. Quantifying the risks associated with exceeding recommended drinking limits. *Alcohol Clin Exp Res* 2005;29:902–908. [PubMed: 15897737]

- Finney JW, Moos RH, Brennan PL. The Drinking Problems Index: A measure to assess alcohol-related problems among older adults. *J Stud Alcohol* 1991;3:395–404.
- Gladso JA, Tucker JA, Hawkins JL, Vuchinich RE. Adequacy of recall of drinking patterns and event occurrences associated with untreated recovery from alcohol problems. *Addict Behav* 1992;17:347–358. [PubMed: 1502968]
- Granfield R, Cloud W. The elephant that no one sees: Natural recovery among middle-class addicts. *Journal of Drug Issues* 1996;26:45–61.
- Granfield R, Cloud W. Social context and “untreated recovery”: The role of social capital in the resolution of drug-associated problems. *Subst Use Misuse* 2001;36:1543–1570. [PubMed: 11693955]
- Greenfield TK. Evaluating competing models of alcohol-related harm. *Alcohol Clin Exp Res* 1998;(suppl 2):52S–62S. [PubMed: 9603307]
- Hasin DS, Grant BF. Major depression in 6050 former drinkers: Association with past alcohol dependence. *Arch Gen Psychiatry* 2002;59:794–800. [PubMed: 12215078]
- Ilgen MA, Wilbourne PL, Moos BS, Moos RH. Problem-free drinking over 16 years among individuals with alcohol use disorders. *Drug Alcohol Depend*. in press
- Institute of Medicine (IOM). Broadening the Base of Treatment for Alcohol Problems. National Academy Press; Washington, D.C.: 1990.
- Kessler RC, Aguilar-Gaxiola S, Berglund PA, Caraveo-Anduaga JJ, DeWit DJ, Greenfield SF, Kolody B, Olfson M, Vega WA. Patterns and predictors of treatment seeking after onset of a substance use disorder. *Arch Gen Psychiat* 2001;58:1065–1071. [PubMed: 11695954]
- Korper, SP.; Council, CL., editors. Substance Abuse and Mental Health Services Administration. Office of Applied Studies; Rockville, MD: 2002. Substance Use by Older Adults: Estimates of Future Impact on the Treatment System. DHHS Publication No. SMA 03–3763, Analytic Series A-21
- Moos, RH. Coping Responses Inventory: Adult Form manual. Psychological Assessment Resources; Odessa, FL: 1993.
- Moos, R.; Moos, B. Life Stressors and Social Resources Inventory: Adult Form Manual. Psychological Assessment Resources; Odessa, FL: 1994.
- Moos RH, Moos BS. Rates and Predictors of Relapse after Natural and Treated Remission. *Addiction* 2006;101:212–222. [PubMed: 16445550]
- Moos, RH.; Cronkite, RC.; Finney, JW. Health and Daily Living Form Manual. Vol. 2. Mind Garden; Palo Alto, CA: 1990.
- Moos, RH.; Finney, JW.; Cronkite, RC. Alcoholism Treatment: Context, Process, and Outcome. Oxford University Press; New York: 1990.
- National Institute on Alcohol Abuse and Alcoholism. Helping patients who drink too much. A clinician’s guide. Updated 2005 edition. Washington, DC: U.S. Government Printing Office; 2007. (U. S. Department of Health and Human Services, National Institutes of Health Publication No. 07–3769 Reprinted May 2007)(Retrieved 4/15/2008 from www.niaaa.nih.gov/guide/.)
- Peirce RM, Chan AW, Wiczorek WF, Moscato BS, Nochajsk TH. Natural recovery in a community-based sample of alcoholics: study design and descriptive data. *Subst Use Misuse* 2001;36:1417–1441. [PubMed: 11693950]
- Pringle KE, Ahern FM, Heller DA, Gold CH, Brown TV. Potential for alcohol and prescription drug interactions in older people. *J Am Geriatr Soc* 2005;53:1930–1936. [PubMed: 16274374]
- Rumpf HJ, Bischof G, Hapke U, Meyer C, John U. Stability of remission from alcohol dependence without formal help. *Alcohol Alcohol* 2006;41:311–314. [PubMed: 16490790]
- Schutte K, Byrne F, Brennan P, Moos R. Successful remission of late-life drinking problems: A 10-year follow-up. *J Stud Alcohol* 2001;62:322–334. [PubMed: 11414342]
- Skinner HA, Allen BA. Alcohol dependence syndrome: Measurement and validation. *J Abnorm Psychol* 1982;91:199–209. [PubMed: 7096790]
- Sobell LC, Cunningham JA, Sobell MB. Recovery from alcohol problems with and without treatment: Prevalence in two population surveys. *Am J Public Health* 1996;86:966–972. [PubMed: 8669520]
- Sobell LC, Ellingstad TP, Sobell MB. Natural recovery from alcohol and drug problems: Methodological review of the research with suggestions for future directions. *Addiction* 2000;95:749–764. [PubMed: 10885050]

- Stacy AW, Widaman KF, Hays R, DiMatteo MR. Validity of self-reports of alcohol and other drug use: A multitrait-multimethod assessment. *J Pers Soc Psychol* 1985;49:219–232. [PubMed: 4020615]
- Tucker JA, Gladsjo JA. Help-seeking and recovery by problem drinkers: Characteristics of drinkers who attended Alcoholics Anonymous or formal treatment or who recovered without treatment. *Addict Behav* 1993;18:529–542. [PubMed: 8310872]
- Tucker JA, Vuchinich RE, Rippens PD. Different variables are associated with help-seeking patterns and long-term outcomes among problem drinkers. *Addict Behav* 2004;29:433–439. [PubMed: 14732433]
- Walton MA, Mudd SA, Blow FC, Chermack ST, Gombert ESL. Stability in the drinking habits of older problem-drinkers recruited from nontreatment settings. *J Subst Abuse Treat* 2000;18:169–177. [PubMed: 10716100]
- Watson AL, Sher KJ. Resolution of alcohol problems without treatment: Methodological issues and future directions of natural recovery research. *Clin Psychol Sci Pract* 1998;5:1–18.

Table 1
Demographic and Historical Characteristics of Untreated Remitters, Treated Remitters, and Lifetime Nonproblem Drinkers.^{1 2 3}

<i>Variables</i>	Untreated Remitters (<i>n</i> = 330) % / <i>M</i>(<i>SD</i>)	Treated Remitters (<i>n</i> = 120) % / <i>M</i>(<i>SD</i>)	Lifetime Nonproblem Drinkers (<i>n</i> = 232) % / <i>M</i>(<i>SD</i>)	χ^2/F
<u>DEMOGRAPHIC CHARACTERISTICS</u>				
Gender (% Women)	45.5% ^{ab}	32.5% ^{ac}	62.5% ^{bc}	31.65***
Ethnicity (% White)	90.9%	88.3%	93.5%	2.86 (ns)
Married (% Yes)				
4-Year Follow-up	68.8%	62.5% ^c	77.2% ^c	4.59*
10-Year Follow-up	64.6%	57.5%	69.8%	2.70 (ns)
Employed (% Yes) ⁴				
4-Year Follow-up	33.9%	28.3%	30.7%	0.74 (ns)
10-Year Follow-up	16.4%	21.7%	19.4%	0.96 (ns)
Age (Years) ⁵	71.55 (3.20)	71.26 (3.22)	71.60 (3.22)	0.49 (ns)
Education (Years)	14.55 (2.37) ^a	13.85 (2.45) ^{ac}	14.61 (2.17) ^c	4.91**
<u>HISTORICAL CHARACTERISTICS</u>				
Lifetime Drinking Problems (#) ^{6,7}	2.82 (3.81) ^a	10.79 (8.87) ^a	n/a ⁷	171.47***
Alcohol Dependence (% yes)	25% ^a	76% ^a	n/a ⁷	103.09***
Time Since Remission (>12 years) ^{5,6}	39.2%	43.0%	n/a ⁷	0.22 (ns)

¹ ns = not statistically significant;

* $p < .05$;

** $p < .01$;

*** $p < .001$.

² Percentages and means with the same superscript differ significantly ($p < .05$):

^a Untreated Remitters v. Treated Remitters;

^b Untreated Remitters v. Lifetime Nonproblem Drinkers;

^c Treated Remitters v. Lifetime Nonproblem Drinkers.

³ Unadjusted means are reported.

⁴ Employed full- or part-time.

⁵ At the 10-year follow-up.

⁶ Analysis controlled for group differences on gender, marital status, and education.

⁷ n/a = not apply

Table 2

Post-Remission Drinking Behavior, Health-Related Functioning, Life Context, and Coping and Help-Seeking of Untreated Remitters, Treated Remitters, and Lifetime Nonproblem Drinkers.^{1 2 3 4}

<i>POST-REMISSION STATUS</i>	Untreated Remitters (<i>n</i> = 330) % / <i>M</i> (<i>SD</i>)	Treated Remitters (<i>n</i> = 120) % / <i>M</i> (<i>SD</i>)	Lifetime Nonproblem Drinkers (<i>n</i> = 232) % / <i>M</i> (<i>SD</i>)	Group(<i>G</i>)	Time(<i>T</i>)	<i>G X T</i>
<i>DRINKING BEHAVIOR</i>						
Drink Alcohol (% Yes)				59.44***	6.57*	1.54 (ns)
4-Year Follow-up	83.6% ^{ab}	43.3% ^{ac}	91.8% ^{bc}			
10-Year Follow-up	77.6% ^{ab}	43.3% ^{ac}	87.9% ^{bc}			
Ave. Daily Consumption (oz.) ⁵				3.55*	0.01 (ns)	0.64 (ns)
4-Year Follow-up	0.65 (0.76)	0.60 (0.83)	0.50 (0.50)			
10-Year Follow-up	0.67 (0.68) ^b	0.68 (0.94)	0.50 (0.49) ^b			
Heaviest Consumption (oz.) ⁵				6.77***	11.62***	2.67 (ns)
4-Year Follow-up	2.60 (1.79) ^b	2.69 (2.00) ^c	2.04 (1.16) ^{bc}			
10-Year Follow-up	2.29 (1.57) ^b	2.72 (2.35) ^c	1.77 (1.15) ^{bc}			
Heavy Drinker (% Yes) ^{5,6}				7.79***	12.11***	0.86 (ns)
4-Year Follow-up	51.1% ^b	51.9%	35.3% ^b			
10-Year Follow-up	41.8% ^b	48.1% ^c	25.5% ^{bc}			
<i>HEALTH-RELATED FUNCTIONING</i>						
Negative Health Events						
4-Year Follow-up	1.30 (1.87) ^b	1.59 (2.31) ^c	0.91 (1.40) ^{bc}	3.26*	2.44 (ns)	2.39 (ns)
10-Year Follow-up	1.38 (1.87)	1.53 (1.76)	1.31 (1.66)			
Chronic Health Stressors						
4-Year Follow-up	3.25 (3.02) ^a	4.70 (4.12) ^{ac}	2.71 (2.70) ^c	16.11***	60.57***	0.02 (ns)
10-Year Follow-up	4.13 (3.25) ^a	5.64 (4.22) ^{ac}	3.60 (2.85) ^c			
Depressive Symptoms						
4-Year Follow-up	18.30 (12.15) ^{ab}	23.41 (15.27) ^{ac}	14.85 (10.72) ^{bc}	21.90***	2.78 (ns)	0.92(ns)
10-Year Follow-up	19.02 (12.76) ^{ab}	23.47 (14.96) ^{ac}	16.47 (11.93) ^{bc}			
Smoke Tobacco (% Yes)						
4-Year Follow-up	9.4% ^a	26.7% ^{ac}	11.2% ^c	6.98**	20.72***	3.83*

<i>POST-REMISSION STATUS</i>	Untreated Remitters (<i>n</i> = 330) % / <i>M</i> (<i>SD</i>)	Treated Remitters (<i>n</i> = 120) % / <i>M</i> (<i>SD</i>)	Lifetime Nonproblem Drinkers (<i>n</i> = 232) % / <i>M</i> (<i>SD</i>)	Group(<i>G</i>)	Time(<i>T</i>)	<i>G X T</i>
10-Year Follow-up	7.8% ^a	17.5% ^{ac}	6.9% ^c	17.77 ^{***}	5.81 [*]	0.45 (ns)
Psychoactive R _x (#) ⁷						
4-Year Follow-up	0.55 (0.85) ^{ab}	0.83 (1.15) ^{ac}	0.32 (0.61) ^{bc}			
10-Year Follow-up	0.61 (0.89) ^{ab}	0.92 (1.23) ^{ac}	0.46 (0.80) ^{bc}			
Psychoactive R _x + Alcohol Use (% Yes)						
4-Year Follow-up	33.0% ^{ab}	18.3% ^a	20.8% ^b	6.31 ^{**}	0.04 (ns)	2.36 (ns)
10-Year Follow-up	29.1% ^{ab}	19.2% ^a	27.2% ^b			
<i>LIFE CONTEXT</i>						
Financial Stressors						
4-Year Follow-up	3.67 (3.97) ^{ab}	5.47 (4.33) ^{ac}	2.44 (3.40) ^{bc}	15.80 ^{***}	9.34 ^{**}	1.54 (ns)
10-Year Follow-up	3.12 (3.55) ^{ab}	5.03 (4.01) ^{ac}	2.33 (3.29) ^{bc}			
Spouse Stressors						
4-Year Follow-up	7.41 (3.17) ^b	7.47 (3.35) ^c	6.63 (3.44) ^{bc}	3.28 [*]	1.32 (ns)	2.44 (ns)
10-Year Follow-up	6.77 (3.28)	7.19 (3.45)	6.45 (3.57)			
Friend Stressors						
4-Year Follow-up	4.92 (2.52)	5.43 (3.07) ^c	4.56 (2.30) ^c	6.39 ^{**}	18.06 ^{***}	0.09 (ns)
10-Year Follow-up	4.46 (2.47)	4.99 (2.85) ^c	4.04 (2.22) ^c			
Financial Resources (Income in \$1,000's)						
4-Year Follow-up	40.23 (21.01) ^{ab}	32.75 (19.86) ^{ac}	45.97 (19.07) ^{bc}	6.17 ^{**}	3.18 (ns)	0.70 (ns)
10-Year Follow-up	41.11 (20.55) ^{ab}	34.01 (19.74) ^{ac}	45.83 (19.42) ^{bc}			
Spouse Resources						
4-Year Follow-up	19.22 (4.50)	18.69 (4.64)	19.73 (4.74)	2.53 (ns)	0.02 (ns)	3.00 (ns)
10-Year Follow-up	19.96 (3.96)	18.80 (4.89)	19.63 (4.44)			
Friend Resources						
4-Year Follow-up	15.83 (5.00)	14.93 (5.40)	16.71 (4.39)	1.55 (ns)	0.10 (ns)	0.55 (ns)
10-Year Follow-up	16.13 (4.79)	14.73 (5.24)	16.80 (4.78)			
Friends' Approval Of Drinking ^{5,6}						
4-Year Follow-up	5.16 (1.92)	5.62 (2.20)	4.97 (1.99)	4.58 [*]	0.79 (ns)	0.49 (ns)

POST-REMISSION STATUS	Untreated Remitters (n = 330) % / M(SD)	Treated Remitters (n = 120) % / M(SD)	Lifetime Nonproblem Drinkers (n = 232) % / M(SD)	Group(G)	Time(T)	G X T
10-Year Follow-up	5.13 (1.87)	5.50 (2.19)	4.79 (1.94)			
% Approach Coping		<u>COPING & HELP-SEEKING</u>				
4-Year Follow-up	67.4% ^d	64.9% ^d	67.8%	3.25 [*]	0.38 (ns)	0.74 (ns)
10-Year Follow-up	67.8%	64.1%	67.1%			
Drink to Forget (% Yes) ⁵						
4-Year Follow-up	20.7% ^b	30.8% ^c	9.4% ^{bc}	19.59 ^{***}	6.86 ^{**}	0.64 (ns)
10-Year Follow-up	13.7% ^{ab}	28.9% ^{ac}	2.5% ^{bc}			
Help-Seeking (% Yes)						
4-Year Follow-up	17.6% ^a	40.8% ^{ac}	16.9% ^c	22.96 ^{***}	0.25 (ns)	0.77 (ns)
10-Year Follow-up	21.6% ^a	40.8% ^{ac}	16.8% ^c			

¹ ns = not statistically significant;

^{*} $p < .05$;

^{**} $p < .01$;

^{***} $p < .001$.

² Percentages and means with the same superscript differ significantly ($p < .05$);

^a = Untreated Remitters v. Treated Remitters;

^b = Untreated Remitters v. Lifetime Nonproblem Drinkers;

^c = Treated Remitters v. Lifetime Nonproblem Drinkers.

³ Unadjusted means are reported.

⁴ Analyses control for gender, marital status, and education.

⁵ Analysis includes nonabstinent participants only.

⁶ Heavy Drinking = Drinking 4 or more standard drinks per drinking occasion (AGS, 2003).

⁷R_x = Medication(s).