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Baseline Health Status and Quality of Life After Alcohol Treatment for Women with Alcohol Dependence

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Abstract

Background—Research suggests that women with alcohol use disorders (AUDs) experience more severe medical and social consequences from alcohol use compared to men, but little is known about health improvements following alcohol treatment.

Methods—This study sought to characterize the pre-treatment health status of 138 alcohol dependent women enrolled in 12 sessions of female-specific group or individual outpatient treatment and examine the degree to which alcohol treatment might promote positive quality of life changes. Quality of life was assessed using the World Health Organization Quality of Life measure at baseline and 3 months later at the end of treatment.

Results—The most common health problems at baseline were: smoking cigarettes (34.1%), hypertension (31.2%), obesity (27.5%), arthritis (21.0%), high cholesterol (17.4%), heart problems (8.7%), and a history of cancer (7.2%). Significant improvements across physical, $t(117)=4.67$, $p<.001$, $d=.42$; psychological, $t(117)=7.31$, $p<.001$, $d=.62$; social, $t(117)=3.18$, $p=.002$, $d=.28$; and environmental, $t(117)=2.39$, $p=.018$, $d=.17$; quality of life domains were seen after treatment. Percent days abstinent during treatment was positively associated with overall health satisfaction and psychological health at the end of treatment.

Conclusions—Women presenting for outpatient treatment for alcohol use disorders report many comorbid negative health problems. Thus, it is important for both substance use and health care

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providers to consider the overlap of alcohol use problems and health domains. Furthermore, female-specific cognitive behavioral treatment for alcohol use disorders positively impacted multiple health domains for women, suggesting a potential transdiagnostic intervention to target co-occurring health and substance use problems.

Keywords

alcohol; drinking; health; quality of life; female; treatment

1 Introduction

Alcohol use disorders (AUDs) are a serious public health problem affecting an estimated 16.6 million adults in the United States (SAMHSA, 2014). AUDs are related to high rates of morbidity and mortality due to associated severe and chronic medical problems such as liver disease, cardiovascular disease, endocrine diseases, obesity, diabetes, osteoporosis, and cancers (Kay et al., 2010).

Research findings on gender differences in the initiation of alcohol use and development and course of alcohol-related problems highlight the importance of understanding unique risk factors and treatment considerations for women (e.g., Diehl et al., 2007; Greenfield et al., 2007; Nolen-Hoeksema, 2004). In particular, women are more likely to experience severe problems and health-related consequences from comparable (weight and gender adjusted) alcohol use compared to men (Bradley et al., 1998; Eagon, 2010; Rehm et al., 2009). Compared to men, women with AUDs have higher rates of cancer and cirrhosis, cardiovascular disease, diabetes, osteoporosis and hip fracture, and greater susceptibility to lung cancer from smoking (Rehm et al., 2009; see Kay et al., 2010 for a review). Of particular concern, a number of studies indicate that medical problems worsen more quickly in women with AUDs, and women with AUDs have higher rates of premature death from alcohol-related problems than men (Epstein & Menges, 2013; Johnson et al., 2005; Kay et al., 2010; Mann et al., 2005).

Despite a growing body of research on women and alcohol use, little is known about the rates of comorbid medical conditions in women presenting for alcohol treatment. Much of the extant research has examined the relative risk for specific alcohol-related diseases for women compared to men (e.g., cardiovascular disease, Ikehara et al., 2008; see Kay et al., 2010 for review). Women often cite health concerns as a reason for seeking alcohol treatment (Grosso et al., 2013), so understanding the constellation of health problems in a population of women seeking alcohol treatment may suggest opportunities to target and engage at-risk women in treatment for other health issues.

Equally important is identifying effective strategies for addressing alcohol use to improve health outcomes. A substantial body of research has documented treatment strategies that are effective at reducing alcohol use, including cognitive behavioral therapy (CBT) (e.g., Anton et al., 2006; Marlatt & Witkiewitz, 2005; McCrady, Epstein, Cook, Jensen, Hildebrandt, 2009). Given the unique patterns of alcohol use problems in women, researchers have suggested gender-sensitive or gender-specific treatments may be ideal for engaging and treating women with AUDs (Ashley, Marsden, & Brady, 2003; Epstein & Menges, 2013;

Greenfield et al., 2008; Greenfield & Grella, 2009; McCrady et al., 2009). Evidence suggests that women are successful at reducing alcohol use with these interventions (e.g., McCrady et al., 2009; McHugh & Greenfield, 2010; Walitzer & Connors, 2007), but data for improvement in other physical and psychological domains as a result of treatment are limited.

One relevant meta-analysis by Orwin and colleagues (2001) identified patterns of significant improvements in psychological well-being and specific health behaviors, like reductions in HIV-risk behavior, in studies of female-specific treatments for substance use disorders (SUDs). This suggests there are collateral improvements for women from substance use treatment that warrant further examination, but prior work has not examined other domains of health improvement or quality of life. Identifying possible health benefits from receiving alcohol treatment for women may inform integrated treatment approaches to health and substance use.

The current study addresses these gaps in the literature via two study aims: (a) documenting baseline health status and comorbid health conditions for a sample of women entering outpatient alcohol treatment, and (b) examining changes in women's quality of life status during a 12-session female-specific CBT intervention for alcohol use. This treatment added female-specific components to a standard approach to CBT for AUDs to help women deal with unique risk factors such as depression and anxiety, poor social support, low assertiveness, and need for better self-care. We expected women would show improvements across physical, psychological, social, and environmental quality of life domains (WHOQOL-BREF; WHO, 1996) from baseline to end-of-treatment three months later. We also expected that improvements in quality of life would be predicted by within treatment alcohol use, such that those who reduced their alcohol use during treatment would have greater improvements in their quality of life. Health benefits from a coping-skills-based alcohol treatment could inform intervention efforts to improve women's health overall.

2 Method

2.1 Participants

Participants were 138 women from a randomized clinical trial evaluating a 12-session group versus individual female-specific CBT treatment (FSCBT). Women were recruited in central New Jersey via media advertisements for alcohol treatment research participants. Eligibility criteria for participation included: being at least 18 years old, meeting DSM-IV-TR criteria for current alcohol dependence, consuming alcohol in the past 60 days, no physiological dependence on drugs other than nicotine or cannabis, no psychotic symptoms in the last 6 months, no gross cognitive deficits (measured by the Mini Mental Status Exam), and no concurrent group therapy alcohol treatment (not including self-help meetings).

2.2 Procedure

Interested participants initially were screened over the telephone (n=341) and those who met preliminary eligibility criteria (n=325) were invited for an individual intake appointment that included explaining the treatment and research procedures, obtaining informed consent, and

conducting a structured clinical interview to verify eligibility criteria. At the baseline assessment, participants completed self-report measures and semi-structured interviews, and specific measures included in the present analyses are described below. In total, 155 participants completed the baseline assessment and were assigned to 12 sessions of either individual or group female-specific treatment using a block randomization procedure (Rosenberber & Lachin, 2002). The majority of participants were lost during screening due to no show or no contact with research staff (n=143); others were ineligible (n=7), or were eligible but dropped out prior to the baseline interview (n=20) or prior to beginning treatment (n=17). The most common reasons for drop out prior to treatment were lost contact (n=14), practical barriers such as inability to make scheduled appointment times (n=11), and not interested (n=10). Follow-up appointments were completed at the end of treatment and 6 and 12 months later. Participants received compensation up to \$345 for completion of all study activities including intake, within-treatment assessments, and follow-up appointments.

2.3

Both individual and group treatments were manual-guided, 12 session outpatient female-specific cognitive behavioral therapies (FSCBT) with an explicit goal of abstinence from alcohol. The female-specific CBT treatment was adapted from a gender-neutral CBT manual used in prior clinical trials (Epstein & McCrady, 2009; McCrady et al., 2009). The gender-neutral CBT manual focused on skill development to achieve and maintain abstinence, including motivational enhancement and relapse prevention components, and was delivered using a non-confrontational and collaborative therapist style. The FSCBT was adapted to include seven modules of female specific content: (a) psychoeducation about women and alcohol use; (b) coping with heavy drinkers in the social network; (c) coping with anxiety; (d) coping with depression; (e) assertiveness; (f) improving social network support; and (g) emotion regulation and coping with anger. Additionally, female-specific treatment included two core themes that were integrated into each session: the woman as active agent in her own life to enhance autonomy and empowerment and reduce reactivity to others, and the woman's right to self-care and self-respect. For group treatment, the FSCBT individual manual was adapted to deliver in an all-female group format with identical content to the individual modality.

2.4 Measures

2.4.1 Health Questionnaire—Rates of medical problems were assessed via clinical interview. Participants were asked to respond “yes/no” about whether they had been diagnosed or treated for 30 specific medical conditions (e.g., hypertension, arthritis, high cholesterol, heart problems, diabetes, or cancer). Participants were also asked about the frequency of contact with medical providers for gender-specific care (e.g., gynecology). This assessment was completed once at baseline and was used to characterize the frequency of current medical problems in the sample. Rates of multiple medical problems for each participant were measured by summing the total number of medical problems.

2.4.2 Quality of Life Index—Self-reported health status was assessed using the World Health Organization Quality of Life measure (WHOQOL-BREF; Szabo, 1996; WHO,

1996). This 26-item measure assesses four broad domains: physical health (e.g., activities of daily living, energy and fatigue, pain and discomfort), psychological health (e.g., self-esteem, positive and negative feelings), social relationships (e.g., personal relationships and social support), and environment (e.g., financial resources, participation in and opportunities for recreation, home environment) with items rated from 1 to 5 with higher scores reflecting better quality of life. Four domain scores (physical health, psychological health, social relationships, environment) were calculated according to standard guidelines (WHO, 1996). Domain scores range from 4–20 with higher scores reflecting better quality of life. Two additional single items assess overall quality of life (1=very poor to 5=very good) and overall health satisfaction (1=very dissatisfied to 5=very satisfied). The WHOQOL was administered at baseline and end-of-treatment.

2.4.3 Alcohol Use—Baseline alcohol use quantity and frequency were assessed using a time-line follow-back interview (Sobell & Sobell, 1992) for the 90 days prior to the last drink before the baseline interview. Within-treatment alcohol use was measured using data from daily drinking diaries where participants were instructed to record alcohol consumed each day in real time. These data were converted to number of standard drinks per day. Daily drinking diaries were collected and reviewed weekly during treatment by the research assistant and study therapist. Time-line follow-back data on daily alcohol use were also gathered at the end of treatment and substituted for any missing daily drinking diary within-treatment data. These data were used to calculate mean drinks per drinking day (i.e., drinking quantity) and percent days abstinent (i.e., drinking frequency) during the pre-treatment baseline period and within the three-month treatment period. Mean drinks per drinking day was coded as ‘0’ for participants who were continuously abstinent during treatment ($n=17$).

2.5 Data Analysis

All analyses were conducted using IBM SPSS version 22.0 software (IBM, SPSS). To address the first study aim, descriptive analyses were used to characterize the sample in terms of demographics, prevalence of comorbid health problems at baseline, rates of use of medical care, and quantity and frequency of alcohol use.

To address the second study aim, we examined (a) differences in alcohol use quantity (mean drinks per drinking day) and frequency (percent days abstinent) during treatment compared to pre-treatment baseline and (b) differences in quality of life domains at the end-of-treatment compared to pre-treatment baseline. We used a modified intent to treat sample (i.e., we included women who completed at least one treatment session and provided within-treatment data) for the analyses of change in alcohol use during treatment. A repeated measures ANOVA was conducted using GLM approach. Time of assessment (pre-treatment baseline vs. end-of-treatment) was specified as a within-subject factor, and treatment condition (individual vs. group) was included as a between-subject factor to examine whether the effects differed by treatment condition. To examine whether changes in quality of life domains at the end of treatment were influenced by alcohol use during treatment, drinking quantity and frequency were added as predictors of quality of life domains at the

end of treatment in a linear regression controlling for baseline quality of life, treatment condition, and number of sessions attended.

3 Results

3.1 Participants

Of the 138 females who enrolled, signed consent, and completed the baseline assessments, 125 (90.6%) provided within-treatment drinking data, and 119 (86.2%) completed the end-of-treatment follow-up. On average, women were 48.6 years old ($SD=11.8$). The women who dropped out or did not complete the end-of-treatment follow-up were not significantly different from those who completed the assessment in terms of demographics or any baseline variable of interest, including alcohol use severity, health status, number of current health problems, and quality of life ($ps>.05$).

3.2 Treatment Condition

Women were randomized to group ($n=65$) or individual ($n=73$) treatment. Baseline characteristics are presented in Table 1; the two conditions did not differ significantly on baseline characteristics including demographics (i.e., age, race, education, employment, marital status), pre-treatment alcohol use, or pre-treatment quality of life (across global and specific WHOQOL subscales). However, women in the individual treatment condition attended significantly more sessions on average ($M=9.6$, $SD=3.6$) compared to those in the group treatment condition ($M=7.6$, $SD=3.6$), $t(136)=3.40$, $p=.001$. Thus, number of treatment sessions attended was included as a covariate in subsequent analyses.

3.3 Baseline Health Status

Table 2 presents the frequency of current health problems in the sample. On average, women had a reported body mass index value of 27.16 ($SD=5.38$), with $n=39$ (28.3%) in the overweight range (BMI 25–29.9) and $n=38$ (27.5%) in the obese range (BMI >30), according to national health guidelines (CDC, 2015). Co-occurrence of multiple health problems was common; on average, women endorsed 1.7 ($SD=1.6$) current health problems in addition to alcohol dependence. Rates of health problems did not significantly differ between individual and group treatment conditions and were not significantly correlated with baseline drinking characteristics ($rs=-.09-.11$, $ps>.16$).

In terms of medical care, 92 women (66.7%) reported seeing their gynecologist regularly, 105 (76.1%) reported ever having a mammogram, 69 (50.0%) reported getting a mammogram within the last year, 135 (97.8%) reported ever having a PAP test for cervical cancer, and 118 (85.5%) reported having a PAP test within the last 5 years.

3.4 Changes in Alcohol Use During Treatment

Repeated measures ANOVAs were used to examine changes in alcohol use during the within-treatment period compared to the pre-treatment (i.e., prior to baseline) period by treatment condition (individual vs. group), controlling for number of sessions attended. Treatment condition was not a significant moderator of changes in average drinks per

drinking day or percent days abstinent ($\eta^2=.001-.01$, $ps=.56-.88$), so results are presented for the sample as a whole.

Examining within-treatment drinking data, 102 women (81.6%) were abstinent at least 50% of the days during treatment and 17 (13.6%) maintained continuous abstinence throughout treatment. Women were drinking almost three standard drinks less on drinking days during treatment than before treatment ($M=4.2$, $SD=4.3$, vs. baseline $M=7.1$, $SD=4.6$), $t(124)=-7.38$, $p<.001$, $d=.65$. Percent days abstinent during the within-treatment period more than doubled on average ($M=74.6\%$, $SD=26.4$) compared to baseline ($M=34.8\%$, $SD=30.5$), $t(124)=-14.82$, $p<.001$, $d=1.39$.

3.5 Changes in Quality of Life from Baseline to End-of-Treatment

Repeated measures ANOVAs were used to examine changes in quality of life (overall quality of life; health satisfaction; and physical, psychological, social, and environmental domains) from baseline to end-of-treatment by treatment condition (individual vs. group), controlling for number of sessions attended. Treatment condition was not a significant moderator of changes in quality of life domains ($\eta^2=.001-.02$, $ps=.11-.79$), so results are presented for the sample as a whole.

There were statistically significant improvements seen in all quality of life domains (see Figure 1). From baseline to end-of-treatment, there were significant increases in quality of life, $t(118)=5.33$, $p<.001$, $d=.50$, and health satisfaction, $t(118)=4.58$, $p<.001$, $d=.42$. Additionally, there were significant moderately-sized improvements (based on *Cohen's d* effect size estimates; Cohen, 1992) in physical health, $t(117)=4.67$, $p<.001$, and psychological health, $t(117)=7.31$, $p<.001$, and significant but smaller effects on domains of social relationships, $t(117)=3.18$, $p=.002$, and environment, $t(117)=2.39$, $p=.018$.

3.6 Changes in Quality of Life by Alcohol Abstinence Status

To evaluate the effect of within-treatment drinking on end-of-treatment quality of life, linear regressions were used to predict quality of life at the end of treatment, while controlling for baseline quality of life score, number of sessions attended, treatment condition, and drinking quantity (mean drinks per drinking day) and frequency (percent days abstinent). Greater drinks per drinking day during treatment predicted lower overall quality of life, $B=-.04$, $SE=.02$, $Beta=-.18$, $p=.02$, and lower quality of life in environmental domains, $B=-.11$, $SE=.04$, $Beta=-.16$, $p=.02$, with a trend toward lower quality of life in social domains, $B=-.15$, $SE=.07$, $Beta=-.16$, $p=.06$, at the end of treatment. Greater percent days abstinent during treatment was positively related to overall health satisfaction, $B=.01$, $SE=.004$, $Beta=.19$, $p=.02$, and quality of life in psychological domains, $B=.02$, $SE=.007$, $Beta=.20$, $p=.006$, assessed at the end of treatment. Similar results are observed if alcohol quantity and frequency are included as predictors in separate models. No sociodemographic factors or other baseline health characteristic were significantly related to end-of-treatment quality of life, with the exception that those with more medical problems at baseline had lower health satisfaction at the end of treatment ($B=-.15$, $SE=.06$, $Beta=-.22$, $p=.01$). More medical problems at baseline was also significantly associated with lower health satisfaction at the beginning of treatment ($B=-.14$, $SE=.06$, $Beta=-.20$, $p=.03$).

Because abstinence (rather than moderate drinking) was the treatment goal for these alcohol-dependent women, we plotted quality of life domains at the end of treatment as a function of abstinence status during treatment (Figure 2). On average, women were abstinent 76.4% of days ($SD=26.4$) during the three months of treatment. To plot the effects, women were categorized by abstinence status into: (a) those who reached at least the average percent days abstinent (76% or higher), (b) those within one standard deviation below the mean (51–75% days abstinent), and (c) those at least one standard deviation below the mean (< 50% days abstinent). Statistically significant improvements were seen in psychological, $F(2,116)=5.68$, $p=.004$, and social, $F(2,116)=3.80$, $p=.025$, domains by abstinence status.

4 Discussion

The current study examined health problems and collateral improvements in quality of life following 12 weeks of cognitive behavioral therapy in a sample of treatment-seeking women with alcohol dependence (assessed by DSM-IV-TR criteria). At the end of a 12-week female-specific cognitive behavioral treatment, significant improvements from baseline were seen in alcohol use and all domains of self-rated quality of life (i.e., physical, psychological, social, environmental). These improvements in health were significantly related to alcohol use during treatment such that individuals with greater percent days abstinent during treatment showed greater improvements in health domains. Thus, participating in CBT for AUDs may be associated with a wide range of beneficial health effects for women.

The current study provides new information about the frequency of medical problems in women with alcohol dependence and has implications for clinical practice. Notably, the rate of current smokers at baseline (34.1%) was double the national average among women in 2014 (14.8%, Jamal et al., 2015), which is consistent with literature indicating that smoking is more common among those who drink heavily compared to abstainers or moderate drinkers (Dawson, 2000; Falk et al., 2006). In comparison, the national prevalence of smoking is slightly higher among men (18.8%) than women (Jamal et al., 2015), and men are more likely than women to use both alcohol and tobacco (Falk et al., 2006). This may suggest a need for specialized interventions to address tobacco and alcohol use together. Furthermore, the current study provides useful information about the rates of gender-specific healthcare contact in women with alcohol-use disorders. Specifically, just over half of our sample of women with current alcohol use problems reported attending regular medical appointments, which is lower than the national rate of adults who had contact with a health professional in the last year (86.2% women, 72.7% men) (CDC, 2014). Additionally, many women in our sample reported not having a PAP smear in at least the last 5 years (14.4%), slightly worse than national rates (11.4%) (Benard et al., 2014). Given the high rates of medical comorbidities for women with alcohol use disorders documented in this and other studies (e.g., Kay et al., 2010) it may be important for substance use counselors to screen for and encourage appropriate medical care to enhance health outcomes. At the same time, the majority of male and female heavy drinkers do not seek alcohol treatment (e.g., Compton et al., 2007; Khan et al., 2013; Witkiewitz et al., 2014) and national data suggest women are more likely to report social stigmatization as a barrier to alcohol treatment (Khan et al., 2013). Instead, women are more likely to visit physicians or primary care offices (Bertakis et al., 2000; Green, 2006; Weisner & Schmidt, 1992), so it may also be important to provide

screening or interventions to address alcohol use alongside other health interventions in primary care settings.

Importantly, results from the current study suggest that a 12-week course of female-specific treatment for alcohol use disorders either in individual or group format is associated with improved quality of life across multiple domains. This finding is consistent with other studies that show improvements in quality of life domains in general populations following behavioral or pharmacotherapy treatment for alcohol use (e.g., Johnson et al., 2004; LoCastro et al., 2009; Morgan et al., 2003), and provides new information about the positive impact of female-specific alcohol treatment on several domains of health and quality of life. Given the specific health consequences of alcohol use in women (e.g., Greenfield et al., 2007; Greenfield et al., 2008; Rehm et al., 2009), it is especially promising that the greatest areas of improvement after treatment were in physical and psychological domains. Additionally, the magnitude of health improvements was significantly related to alcohol use in treatment, such that there was a positive association between days abstinent from alcohol during treatment and overall health satisfaction and psychological health, even when controlling for number of sessions attended.

These results should be interpreted with the following limitations in mind. The current sample was comprised of alcohol dependent adult women seeking treatment for an AUD, thus the results may not generalize to non-treatment seekers or samples that differ on other characteristics. We do not know how our sample of women in the study differed from those who were initially interested but were unable to be contacted. Additionally, the study lacked a no-treatment-control group, so we are unable to make comparative statements about the effectiveness of this treatment and cannot rule out the possibility that changes in scores post-treatment reflect regression to the mean. However, the observation that greater alcohol abstinence during treatment was significantly related to post-treatment scores on specific health domains is suggestive of a treatment effect. At the same time, it is possible that end of treatment improvements in quality of life also were impacted by other elements of treatment contact or individual-level internal (e.g., motivation) or external factors (e.g., change in financial, social, relationship areas) that were not effects of treatment per se. Future large-scale longitudinal studies will be important to better understand the time-course and magnitude of various health changes and their relation to changes in alcohol use as a result of treatment. Furthermore, the results are limited by the self-report nature of the health assessments and alcohol consumption. Also, frequency of medical visits for non-gender-specific medical problems was not assessed. Future work would benefit from collecting additional sources of information measuring alcohol use or health improvements (e.g., biomarkers) and contact with other medical care providers.

4.1 Conclusions

Despite these limitations, the results have important implications for future research and clinical practice. In particular, identification of health profiles at baseline could be used for tailoring aspects of treatment (e.g., including smoking cessation components) or enhancing motivation to reduce alcohol use (e.g., as a way to promote general health improvements). Additionally, future work studying potential causal mechanisms of AUD treatment that

promote change across health domains will be needed to enhance our understanding of factors related to health promotion and inform possible transdiagnostic treatments for co-occurring health and substance use problems.

In conclusion, this project provides important information about the presentation of health problems in women with alcohol use problems and possible health benefits from receiving alcohol treatment. Research on the relationship between alcohol use and medical problems in women is critical for advancing effective prevention and intervention strategies. The current project suggests there are collateral health benefits from alcohol treatment that could be used to inform the development and delivery of generalized interventions targeting women's health behaviors.

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Highlights

- Women with alcohol use disorders report many comorbid negative health problems
- Quality of life domains improved with 12-session cognitive behavioral therapy
- Reducing alcohol use was associated with greater gains in quality of life domains

Figure 1.

Change in WHOQOL Domain Scores from Baseline to End of Treatment

Note: *** $p < .001$; ** $p < .01$; * $p < .05$. d =Cohen's d values serve as estimates of the effect size.

Scores on items: quality of life and health satisfaction range from 1–5. Domain scores (physical, psychological, social, environmental) range from 4–20.

Figure 2.

End of Treatment WHO Quality of Life Domain Scores by Abstinence Achieved During 12 Weeks of Treatment

Note: * $p < .05$ difference from ≤50% days abstinent based on LSD post-hoc comparisons; + $p < .05$ difference from 51–75% days abstinent based on LSD post-hoc comparisons. Scores on items: quality of life and health satisfaction range from 1–5. Domain scores (physical, psychological, social, environmental) range from 4–20.

Table 1

Sample Demographic Characteristics

Demographics	Individual Treatment (N=73)	Group Treatment (N=65)	Overall
Variable	N (%)	N (%)	N (%)
Race			
White	62 (84.9%)	58 (89.2%)	120 (87.0%)
Non-White	11 (15.1%)	7 (10.8%)	18 (13.0%)
Marital Status			
Married	38 (52.1%)	24 (36.9%)	62 (44.9%)
Divorced/Separated	15 (20.5%)	15 (23.1%)	30 (21.7%)
Single	7 (9.6%)	10 (15.4%)	17 (12.3%)
Committed relationship/Living as married	10 (13.7%)	12 (18.4%)	22 (15.9%)
Widowed	3 (4.1%)	4 (6.2%)	7 (5.1%)
Employment Status			
Full-time	29 (39.7%)	28 (43.1%)	57 (41.3%)
Unemployed	20 (27.4%)	14 (21.5%)	34 (24.6%)
Part-time	11 (15.1%)	10 (15.4%)	21 (15.2%)
Retired	5 (6.8%)	3 (4.6%)	8 (5.8%)
Homemaker	4 (5.5%)	2 (3.1%)	6 (4.3%)
Student	1 (1.4%)	5 (7.7%)	6 (4.3%)
Disability	2 (2.7%)	3 (4.6%)	5 (3.6%)
Other	1 (1.4%)	0 (0.0%)	1 (0.7%)
Highest Degree Earned			
No degree	1 (1.4%)	0 (0.0%)	1 (0.7%)
H.S. diploma or G.E.D.	15 (20.5%)	23 (35.4%)	38 (27.5%)
Technical School/Associates	21 (28.8%)	14 (21.5%)	35 (25.4%)
Bachelors	24 (32.9%)	18 (27.7%)	42 (30.4%)
Graduate school	12 (16.4%)	10 (15.4%)	22 (15.9%)
Alcohol Use			
Drinks per drinking day, M(SD)	6.9 (4.3)	7.6 (5.0)	7.2 (4.6)
Percent days abstinent, M(SD)	32.6 (28.6)	36.7 (32.6)	34.5 (30.5)

Notes: Demographic characteristics did not differ significantly between treatment groups ($p > .05$).

Table 2

Rates of Reported Physical Health Conditions at Baseline (N=138).

Health Condition	N (%)
Current smoker	47 (34.1)
Hypertension	43 (31.2)
Hospitalized in the past two years	34 (24.6)
Arthritis	29 (21.0)
High cholesterol	24 (17.4)
Asthma	20 (14.5)
Heart Problems	12 (8.7)
Osteoporosis	10 (7.2)
History of cancer	10 (7.2)
History of diabetes	Type 1: 1 (0.72) Type 2: 7 (5.07)
Emphysema	6 (5.8)
History of joint replacement	6 (4.3)
History of pancreatitis	3 (2.2)