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Impact of an exercise intervention on methamphetamine use outcomes post-residential treatment care

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Abstract

Background—We examined the efficacy of an 8-week exercise intervention on posttreatment methamphetamine (MA) use among MA-dependent individuals following residential treatment.

Methods—135 individuals newly enrolled in treatment were randomly assigned to a structured 8-week exercise intervention or health education control group. Approximately 1 week after completion of the intervention, participants were discharged to the community. Interview data and urine samples were collected at 1-, 3-, and 6-months post-residential care. Of the sample, 54.8% were classified as higher severity users (using MA more than 18 days in the month before admission) and 45.2% as lower severity users (using MA for up to 18 days in the month before admission). Group differences in MA use outcomes were examined over the 3 timepoints using mixed-multivariate modeling.

Results—While fewer exercise participants returned to MA use compared to education participants at 1-, 3- and 6-months post-discharge, differences were not statistically significant. A significant interaction for self-reported MA use and MA urine drug test results by condition and MA severity was found: lower severity users in the exercise group reported using MA significantly fewer days at the three post-discharge timepoints than lower severity users in the

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Contributors

Authors RAR, LM, and CBC were involved with the design the study. Authors RG, JC, BAS managed literature searches and summaries of previous related work. Authors JP, DD, and BD undertook behavioral and clinical data collection. AA and RG undertook the statistical analysis. All authors contributed to the writing of the manuscript, including the review and final approval of it for publication.

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education group. Lower severity users in the exercise group also had a lower percentage of positive urine results at the three timepoints than lower severity users in the education group. These relationships were not present in the comparison of the higher severity conditions.

Conclusion—Results support the value of exercise as a treatment component for individuals using MA 18 or fewer days/month.

Keywords

Methamphetamine; Exercise; Treatment; Outcomes

1. INTRODUCTION

Methamphetamine (MA) has been identified as one of the most widely used illicit drugs in the world (Maxwell and Brecht, 2011). The United Nations (2013) estimated that in 2011, 33 million people around the world had consumed an amphetamine-type stimulant in the preceding year. National population estimates tracking MA past-year prevalence trends among Americans 12 years and older indicate that use has slightly increased over the past 5 years (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014) and emergency room data show that MA (and/or amphetamines) was involved in 93,562 of the one million visits that involved an illicit drug, either alone or in combination with other drugs (SAMHSA Center for Behavioral Health Statistics and Quality [CBHSQ], 2010). A recent epidemiological study found that MA treatment admissions have remained consistently high in several states over the past years, with steady increases in western states (Maxwell and Brecht, 2011). In California alone, MA accounted for 26.3% of treatment admissions in 2011, compared to 7.8% in 1992 (SAMHSA, 2011; SAMHSA CBHSQ, 2013).

Several studies have documented a high posttreatment rate of relapse among MA-dependent individuals, showing that the benefits of treatment quickly diminish within the post-discharge period, starting as early as 3 months (Brecht et al., 2005, 2008; Brecht and Herbeck, 2014; Gonzales et al., 2010; Hser et al., 2003, 2005; Rawson et al., 2002, 2004; Roll et al., 2006). Consequently, there is considerable interest in identifying interventions that can help reduce relapse to MA use, particularly among subgroups of MA-dependent users. Medication studies, for example, have demonstrated that MA-dependent participants with lower baseline levels of MA use tend to have better outcomes (fewer MA-positive urine samples than those with higher baseline MA use (Elkashef et al., 2008; Heinzerling et al., 2014; Shoptaw et al., 2008). Similarly, in longitudinal outcome studies of MA-dependent users (Brecht and Herbeck, 2014), lower MA severity at treatment admission serves as a strong predictor of posttreatment abstinence. Findings from these studies suggest that current clinical trial outcome studies for MA-dependence should consider the differential efficacy of experimental treatment regimens by MA use severity at treatment admission.

Growing evidence supports the therapeutic use of exercise for a variety of medical and psychiatric disorders. Studies have shown that regular or routine exercise at moderate levels results in lowered risk of early death, heart disease, stroke, type 2 diabetes, high blood

pressure, adverse blood lipid profile, metabolic syndrome, colon cancer, and breast cancer (Leavitt, 2008). Exercise also has been shown to improve cardiovascular and muscular fitness, to reduce depression, and to produce better cognitive functioning (Blumenthal et al., 1999; Craft and Landers, 1998; Dunn et al., 2005; North et al., 1990; Trivedi et al., 2006). Basic research has demonstrated that exercise promotes brain plasticity, influences brain monoamine levels by altering their synthesis and metabolism (Foley and Fleshner, 2008), influences dopamine release (Snider, 1983) and metabolism (Meeusen, 2005), and enhances the survival of dopaminergic neurons in rodent models (Yoon et al., 2007). Though literature on the use of exercise in substance using populations is limited, prior studies have demonstrated positive effects of aerobic exercise on tobacco cravings, withdrawal symptoms, and smoking-related behaviors (Bock et al., 1999; Taylor et al., 2007), as well as cocaine cravings (Lynch et al., 2010). Benefits of exercise also have been demonstrated regarding cannabis use and craving in non-treatment-seeking cannabis users (Buchowski et al., 2011).

To date, limited research has investigated the potential utility of exercise as a therapeutic intervention for MA use disorder; one recent study compared an exercise intervention to health education in stimulant users who were recruited during inpatient treatment and then transitioned to an outpatient setting (Trivedi et al., 2011). Research from the present study authors has shown that an 8-week structured aerobic exercise intervention administered during residential treatment is effective in improving psychosocial and health outcomes in MA-dependent individuals, relative to health education. Dolezal et al. (2013, 2014) observed significant improvements in MA users assigned to the exercise intervention across a battery of fitness measures, including aerobic performance, muscle strength and endurance, body composition (reduced weight, percent body fat and fat weight), and heart rate variability. In addition, participation in the exercise program led to improved mood symptoms, including reduced anxiety and depression symptoms over the 8-week study period (Rawson et al., 2015) and improvement in mood functioning among clients with greater medical and psychiatric impairment (Haglund et al., 2014).

While all of the beneficial effects of exercise for MA-dependent users are encouraging, there remains the question of whether a period of exercise during residential treatment for a group of MA-dependent individuals produces a reduction in post-discharge return to MA use. This paper describes the efficacy of the 8-week exercise intervention on reducing post-discharge MA use among a sample of 135 MA-dependent participants admitted to and subsequently discharged from a publicly funded residential treatment program.

2. METHODS

2.1 Participants

One-hundred and thirty five (135) MA-dependent adults were recruited to participate in an 8-week randomized, controlled trial of an exercise intervention versus a health education control while receiving residential treatment for MA dependence between 2010 and 2013 in Southern California. For a detailed description of study procedures, see Mooney et al., 2013. Inclusion criteria were MA dependence per DSM-IV, age 18–45 years for men and age 18–55 years for women (per American College of Sports Medicine [ACSM, 2000] guidelines

for supervision of exercise with non-physicians), vital sign stability, and ability to comply with study procedures. Individuals were excluded if they met criteria for opiate dependence or had clinically significant cardiac or pulmonary disease, musculoskeletal disease that would prevent participation in an exercise regimen, psychiatric impairment that warranted hospitalization or primary treatment, or other medical conditions, ECG findings, or clinical laboratory results that would compromise their safety as a study participant.

2.2 Procedures

Participants were recruited to the study using various methods, including word of mouth and IRB-approved flyers posted throughout the treatment facility. On-site study staff screened MA-dependent clients in a private study office and reviewed the informed consent protocol. After completion of informed consent procedures, participants entered a 1–2 week screening phase to determine eligibility, consisting of medical history, physical exam, laboratory studies, and ECG. Eligible clients were taken through study baseline assessments to inform randomization to study conditions, either an exercise intervention or health education control, using a computerized urn randomization program that stratified clients to conditions based on gender (male/female) and severity of baseline MA use (higher vs. lower severity). The cut-off point for determining lower severity MA use versus higher severity use was identified using data from previous clinical outcome studies that show the median number of days of MA use ranges from 16 to 20 days at treatment entry. Hence, we defined “lower severity” as using MA for 18 or fewer days in the previous month, and “higher severity” as using for 19 or more days in the past month. The study’s data management center (DMC) maintained the urn randomization program and the records that linked participant identification numbers to study condition. See Figure 1, a Consort Diagram, for study flow. Study interventions were conducted on-site while participants were enrolled in usual care at the residential treatment facility; cases of early discharge from the facility resulted in premature termination from the study.

The baseline battery of assessments included urine drug screens (UDS); the Mini Neurodiagnostic Interview (MINI) to characterize DSM-IV diagnoses; a visual analog scale (VAS) to measure MA craving severity; the Beck Depression Inventory (BDI) to measure depression symptom severity (Beck et al., 1961); the Profile of Mood States (POMS; McNair et al., 1971); the Beck Anxiety Inventory (BAI) to determine anxiety symptom severity (Beck and Steer, 1993); the Snaith Hamilton Pleasure Scale (SHAPS) to measure anhedonia (Snaith et al., 1995); the Short Form 36 (SF-36) to assess health status (Ware and Sherbourne, 1992); the Choice Reaction Time, Stroop Color Naming Task (Stroop, 1935), Stop Signal Task, Memory Search Test, Logical Relations Test, and Matching to Sample Test to rate cognitive performance; the International Physical Activity Questionnaire (IPAQ) to gauge physical activity (Gauthier et al., 2009); as well as physiological measures including maximum oxygen uptake, muscle strength, endurance, weight, percent body fat, blood pressure, lipid profile, and heart-rate variability (HRV; computation of beat-to-beat interval variation on the ECG). A similar data collection protocol also occurred weekly during the 8-week study period, at termination of the study period, and at 1-month, 3-months, and 6-months posttreatment from the residential program (approximately 7 to 10

days following completion of the intervention period). Participants were compensated \$40 per data collection session.

2.2.1 Exercise Intervention—Participants (n = 69) randomized to this condition received a structured exercise program 3 times a week for 8 weeks. Exercise sessions consisted of a 5-minute warm-up, 30 minutes of aerobic activity on a treadmill, followed by 15 minutes of weight training and a 5-minute cool-down/stretching period. Each session was monitored by a staff exercise physiologist who guided one to two participants at a time. Using heart rate monitors, the exercise physiologist worked closely with each individual participant on exercise days to increase treadmill speed/slope to maintain a heart rate between 60% and 85% of maximum for 30 minutes. Once a participant was able to complete two sets of 15 repetitions of any given exercise, weight was incrementally increased.

2.2.1.1. Maximal exercise performance test: Participants completed a maximal incremental exercise test (XT) on a treadmill at baseline conducted by an exercise physiologist using a standardized protocol incorporating continuous ECG monitoring (Cooper, 2001). Aerobic capacity ($\dot{V}O_{2\max}$) was $\dot{V}O_2$ measured using indirect calorimetry with a portable automated metabolic measurement system (OxyCon Mobile®) and was used to develop individualized aerobic exercise interventions for each participant, with a goal of maintaining the target heart rate for 30 minutes. Testing was repeated at Week 5 and at termination of study intervention.

2.2.1.2 Health education control: Participants (n = 66) randomized to this group received a structured health education protocol delivered by a trained health educator 3 days a week for 8 weeks. Like the exercise sessions, health education sessions were 55 minutes in length and consisted of various health topics, including stress reduction, health screening, healthy relationships, and sexually transmitted diseases. Materials were delivered via facilitator discussion, handouts, and incorporation of media.

2.3 Study measures

The primary aim of this study was to characterize the effects of an 8-week exercise intervention on MA use outcomes at 1-month, 3-months, and 6-months post-discharge from residential treatment, compared to a health education control group. Primary outcome measures included MA use as measured by both urine drug screens (UDS) and self-report using the Substance Use Inventory (SUI; Weiss et al., 1995).

2.4 Statistical analyses

A modified intent-to-treat model was used for analyses that included all participants who were randomized and received at least one session of the 8-week study protocol. Though a sensitivity analysis was planned to compare the entire randomized sample to those who were randomized and attended at least one treatment session, this analysis was not necessary because the entire randomized sample had at least one treatment session. Mixed-effects repeated measures were used to examine follow-up differences in MA use abstinence (measured by both urine tests and self-reports) by study condition (exercise intervention vs. health education control) and by MA use subgroups, including MA severity (i.e., lower vs.

higher) and treatment adherence, defined as *highly adherent* (attending 16 or more of the 24-session regimen) or *non-adherent* (attending fewer than 16 sessions of the 24-session regimen). Analyses controlled for baseline MA use and demographic characteristics (age, gender, education, employment). Lastly, we examined the extent to which continued exercise posttreatment (defined as number of minutes reporting exercise in the past week at 1-month, 3-months, and 6-months post-discharge) affected MA use outcomes. No assumptions about missing data were made. Concordance procedures using Cohen's Kappa and correlations between urine data and self-reports were performed.

Differences in MA use abstinence were examined using mixed-effects repeated measures analyzed separately using urine tests and self-reports by study condition (exercise intervention vs. health education control), lower versus higher MA severity (using MA for up to and including 18 days vs. using MA for more than 18 days), as well as the interaction between study groups and MA-use severity at treatment admission.

3. RESULTS

3.1 Participant characteristics

Of the 135 study participants, the majority were males (80%); the average age of the sample was 31.7 ± 6.9 years old, ranging from 18 to 47. Most of the participants were Latino (48.1%), followed by non-Latino Caucasian (41.5%). There were fewer African Americans (4.4%), Asians (3.7%), or members of "Other" (2.2%) ethnic/racial groups. In terms of SES factors, 16.3 % of the sample were employed in the month prior to treatment entry, and most (64.7%) had a high school education. There were no statistically significant differences in participant characteristics between the study conditions (see Table 1).

3.2 MA use outcomes by study condition

Fewer exercise intervention participants tested positive for MA use in the previous 30 days compared to health education control participants at 1-month posttreatment (17% vs. 25%), at 3-months posttreatment (29% vs. 36%), and at 6-months posttreatment (28% vs. 37%); however, these differences were not statistically significant ($OR = 1.51, p = 0.13$). Similar to UDS results, self-reported MA use was lower among exercise participants compared to education control participants at 1-month posttreatment ($M_{\text{exercise}} = 3.1$ days vs. $M_{\text{education}} = 4.4$ days), 3-months posttreatment ($M_{\text{exercise}} = 6.6$ days vs. $M_{\text{education}} = 7.5$ days), and 6-months posttreatment ($M_{\text{exercise}} = 7.2$ days vs. $M_{\text{education}} = 9.0$ days); again however, differences were not statistically significant ($\beta = 0.23, p = 0.75$). See Figures 2a and 2b for MA use by treatment condition over the 1-, 3- and 6-month posttreatment period. There is moderately high concordance between urine data and self-report, with 87% agreement and Cohen's Kappa correlation of 0.65.

3.3 Subgroup differences in MA use outcomes at 1-month, 3-months, and 6-months post-discharge

We explored subgroup differences in MA use at 1-month, 3-months, and 6-months post-discharge by study condition, including MA use severity at treatment admission and session attendance (adherence). The number of participants in the lower severity MA group (MA

use ≥ 18) was 61 (45.2%) and the number of participants in the higher severity MA group (MA use > 18) was 74 (54.8%).

3.3.1 MA use severity subgroups—Significant interaction effects between study groups and MA severity were observed for UDS results ($OR = 0.17, P = 0.03$) and self-reported MA use ($\beta = 0.46, P = 0.02$). Specifically, lower severity exercise-group participants were significantly less likely to use MA at 1-month, 3-months, and 6-months post-discharge compared to lower severity health-education group participants. This finding was true for both UDS results and for self-reported days of use. However, for participants with higher severity, the effect was not significant. This group-by-baseline-use interaction suggests that the exercise intervention resulted in a significant reduction of post-discharge MA use with lower severity users. In Figures 3a and 3b, we show MA-use outcome differences by severity groups using UDS and self-reports at 1-month, 3-months, and 6-months post-discharge. Across the 6-month post-discharge period and at each of the time points individually, MA use indicators were significantly lower for the exercise intervention sample than for the education control sample for lower severity MA users.

3.3.2. Study intervention participation and MA use—The effect of differences in participation levels in the two intervention conditions on MA use outcomes at 1-month, 3-months, and 6-months post-discharge were explored. There was no mean difference in sessions attended by study condition, as the exercise group participants averaged 17.4 sessions ($SD = 7.3$) and the health education group participants averaged 18.5 ($SD = 7.0$) sessions. Subgroups were formed by taking the median session attendance among the participants across conditions (i.e., 16 sessions) during the 8-week study period. Sixty-six (48.9%) had session attendance less than the median of 16 sessions, and 69 (51.1%) attended 16 or more sessions. Results showed that participants who attended 16 or more sessions in the exercise group were significantly less likely to self-report MA use at 1-month, 3-months, and 6-months post-discharge compared to those who attended less than the median of 16 sessions during the 8-week period in the exercise group ($\beta = -.304, P < 0.05$). In all analyses, comparisons controlled for baseline participant characteristics. We found similar results with UDS, such that participants who attended more than 16 exercise sessions were more likely to be MA abstinent at 1-month, 3-months, and 6-months post-discharge ($OR = 3.29, P < 0.05$). For participants in the health education group, there was no relationship between session attendance and post-discharge MA status on any measure (self-report or UDS). This finding would suggest that the impact of greater session attendance was specific to the effects of exercise, rather than simply a general adherence effect.

3.3.3. Effect of post-discharge exercise—Participants who were MA abstinent at the 1-month post-discharge follow-up reported significantly more minutes of exercise (i.e., 118.97 minutes per week) via the IPAQ than those who were not MA abstinent (i.e., 90.8 minutes per week) using UDS results ($p = .03$; response rate for the 1-month interview was $N = 102$ [exercise $n = 54$ and health education $n = 48$]). Not surprisingly, we also found that exercise engagement during this initial posttreatment period was more likely to be reported among participants in the 8-week exercise condition (268.42 minutes, or 4.47 hours) than those in the health education condition (98.17 minutes, or 1.64 hours; $p = .01$). In addition,

we found that participants with lower MA-use severity (used MA for up to 18 days) were more likely to report more frequent exercise than participants using MA 18 days or more (i.e., 280.42 minutes, or 4.67 hours per week vs. 98.39 minutes, or 1.56 hours per week, respectively; $p < 0.05$). We did not find significant differences in exercise engagement at 3-months (160 vs. 77 minutes, $p = 0.07$) and 6-months (199 vs. 114 minutes, $p = 0.10$) posttreatment between the exercise and health education group, respectively. Therefore, lower severity individuals in the exercise intervention condition exercised more during the 1-month post-discharge period, and this greater amount of exercise was associated with less MA use.

4. DISCUSSION

This is the first study demonstrating reductions in posttreatment MA use associated with an inpatient exercise intervention. Findings extend emerging literature demonstrating beneficial effects of exercise on substance use outcomes in both preclinical (Thanos et al., 2010) and clinical (Brown et al., 2010; Buchowski et al., 2011) samples. In this study, a carry-over effect of exercise was demonstrated after discharge from residential treatment, as evidenced by reductions in MA use at 1-, 3-, and 6-month follow-up visits; importantly, benefits of exercise in ameliorating relapse were sustained after completion of the intervention itself. Whereas acute benefits of behavioral and pharmacological interventions on substance use are commonly observed during administration of active intervention, carry-over effects are not often demonstrated; sustained benefits have only been reported in association with certain robust interventions, such as cognitive behavioral therapy (Carroll et al., 1994; Rawson et al., 2006).

Findings from this study suggest that exercise may be of greater benefit in reducing MA relapse within certain subgroups of MA users as defined by MA-use severity at treatment admission, number of exercise sessions attended, and continued exercise post-discharge. Findings showed that among lower severity MA users (≤ 18 days), fewer exercise group participants had MA-positive urine samples and reported significantly fewer days of MA use at 1-month, 3-months, and 6-months post-discharge, controlling for baseline participant characteristics. Higher MA abstinence rates at 1-month, 3-months, and 6-months post-discharge were also observed among participants who had attended 16 or more sessions than those who had attended fewer than 16 sessions.

Study results are consistent with prior research demonstrating improved psychosocial and health-related outcomes associated with exercise in MA users, including improved heart rate variability (HRV; Dolezal et al., 2014), physical measures of aerobic performance (Dolezal et al., 2013), and mood symptoms of depression and anxiety (Haglund et al., 2014; Rawson et al., 2015). In addition, the current results add to the growing body of evidence regarding unique subgroup differences in therapeutic responsiveness among drug-dependent individuals. Several studies examining drug-use severity, for example, have identified frequency of use at treatment entry to be an important factor that affects treatment response (Simpson et al., 2002; Vaillant, 1988). Recent studies with clinical samples of MA-dependent users also support the importance of considering MA-severity when examining

posttreatment outcomes, since heavy or daily use is considered to increase one's risk for relapse (Brecht and Herbeck, 2014; Elkashef et al., 2008, 2012; Heinzerling et al., 2014).

The results of the present report together with the previous reports from the data of this study, will require some additional analyses to examine the relationship of the drug use outcomes at follow-up and some potential mediating variables. Are the individuals who showed greater reductions in depression and anxiety the same individuals who showed lower rates of drug use? Do those participants who showed greatest improvement in heart rate variability show lower rates of MA use post-discharge? How do these variables interact with post-discharge continuation of exercise and relapse to MA use? Future analyses may provide some direction for understanding the variables that mediate the benefits from exercise on relapse to MA use.

4. 1 Limitations

This study was limited to understanding the benefits of exercise performed during an 8-week period in a residential treatment program. Differential effects on methamphetamine use could only be measured after program discharge, reflecting benefits sustained post-intervention. Acute effects on substance use could not be measured during the active intervention phase because it was delivered in an inpatient, abstinence-based treatment setting; it is unknown whether exercise would also yield benefits in an outpatient setting. Findings may also not generalize to less frequent or less intense exercise regimens, and the optimal length of time or frequency of exercise in this population was not explored. In addition, the exercise intervention incorporated both aerobic and resistance training, so effects specific to aerobic or resistance training cannot be determined from this study. Lastly, data on self-initiated physical activity that occurred outside of the supervised exercise sessions was limited to self-report; objective measures of total daily activity (e.g., with fitness monitors or pedometers) were not obtained.

4.2. Conclusion

Findings from this study provide valuable information with regard to the benefits of exercise for subgroups of MA-dependent individuals at risk for posttreatment relapse. Importantly, our results revealed that an 8-week period of exercise, followed by no additional encouragement or support for continued exercise, resulted in a decrease in MA use among lower severity MA users at 1-month, 3-months, and 6-months posttreatment. The fact that this benefit was sustained for 6 months is encouraging, given that the initial purpose of the study was only to detect if an acute period of exercise (8 weeks) would produce even a short-term reduction in MA use post-discharge. Hence, aligned with extant research on the benefits of exercise, our study results reveal that exercise decreases MA use among lower severity MA users, with carryover benefits (with regard to MA-use reduction) over time, even when exercise is discontinued.

Further research would be useful to determine if individuals in outpatient treatment would participate in exercise as a part of treatment and, if so, whether exercise could help MA users reduce or discontinue their MA use. Moreover, additional studies are needed to

investigate the continued impact or benefit of a structured exercise regimen on MA use recovery patterns over time, and its potential for helping MA users sustain abstinence.

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Highlights

- We examine the effect of exercise on posttreatment methamphetamine (MA) use
- We study 8 weeks of exercise vs. health education in residential treatment patients
- Lower severity MA-dependent patients who exercised used MA fewer days posttreatment
- Higher severity MA users did not show these results
- Findings support exercise as a treatment component for lower severity MA users

Fig. 1.
Consort Diagram of study.

Fig. 2.

Fig. 2a. Percent MA-positive urine samples by treatment condition at 1-month, 3-months, and 6-months post-discharge.

Fig. 2b. Self-reported MA use by treatment condition at 1-month, 3-months, and 6-months post-discharge.

Fig. 3.

Fig. 3a. UA test results at 1-month, 3-months, and 6-months post-discharge by MA use severity subgroups.

Fig. 3b. Self-reported days of MA use by severity subgroups at 1-month, 3-months, and 6-months post-discharge.

Table 1

Baseline characteristics by condition

	Education (N = 66)	Exercise (N = 69)	P-value
Age, (years)	31.4 (6.5)	31.9 (7.4)	0.61
Females (%)	28.90%	30.40%	0.83
Education (years)	12.1 (1.9)	12.2 (1.9)	0.76
Race-ethnicity categories: n(%)			
African-Americans	4 (6.1%)	2 (2.9%)	0.70
Asians	2 (3.0%)	3 (4.3%)	
Non-Hispanic Caucasians	30 (45.5%)	26 (37.7%)	
Hispanics	29 (43.9%)	36 (52.1%)	
Other race	1 (1.5%)	2 (2.9%)	
Employed (%)	18.20%	14.50%	0.84
Methamphetamine Use * (days)	16.6 (10.6)	15.9 (9.1)	0.61
Alcohol Consumption * (days)	5.2 (7.6)	5.0 (7.3)	0.86

Values are mean(SD).

* Self-reported for the month prior to enrolment.