

GROUP MUSIC THERAPY VERSUS INDIVIDUAL VERBAL THERAPY  
FOR MANDATED COLLEGE STUDENTS

A Thesis  
by  
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## **Abstract**

### **GROUP MUSIC THERAPY VERSUS INDIVIDUAL VERBAL THERAPY FOR MANDATED COLLEGE STUDENTS**

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College drinking has many implications for not only the student engaging in the drinking, but also for the college and public community as a whole. The purpose of this study was to examine two interventions conducted with students who had violated a campus alcohol policy for the first time. This study compared a single individual verbal therapy session with a single group music therapy session. Students' drinking levels were assessed prior to the session as well as six weeks after the intervention. For a portion of the subjects, the Office of Student Conduct was contacted six months following the intervention to ascertain whether the student had been reported for an additional violation. No significant differences between the verbal therapy and music therapy groups were found in number of drinking days per month, drinks per occasion, peak blood alcohol content (BAC), typical BAC, or receiving second violations; therefore, music therapy may be an effective way to treat college alcohol use. More research is needed.

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## **Chapter 1**

### **Introduction**

Alcohol use in adolescents and young adults is a prevalent issue in American society, and this is particularly true for college students. According to the 2008 National Survey on Drug Use and Health conducted by the Substance Abuse and Mental Health Service Administration (SAMHSA, 2009), full time college students were more likely to have used alcohol, engaged in binge drinking, and had a heavy drinking episode in the past month than their non-college student peers. They reported that 61% of full time college students are current drinkers, 40.5% binge drinkers, and 16.3% heavy drinkers. Furthermore, the study estimated that 22.2 million people over the age of 12 were classified with substance dependence or abuse in the past year, with 3.1 million being dependent on or abusing both alcohol and drugs, and 15.2 million dependent on or abusing only alcohol. In the year 2008 alone, 18.3 million people over the age of 12 were diagnosed with dependence on or abuse of alcohol.

Schulenberg and Patrick (2012) used data from the Monitoring the Future study (an ongoing study of adults and adolescents initiated in 1975 that surveys 17,000 high school seniors annually and follows up with 2,400 participants every other year) to explore the patterns of use among college-aged young adults. They noted that despite the prevalence of substance use among college students, alcohol use in this age group as a whole has steadily declined over the last three decades, with a strong decline from the early 1980s to mid-1990s. This decline is consistent for both students and their non-student peers, and is revealed in

reports of both use in past 30 days and incidences of binge drinking in the last two weeks. Through analysis of the data from senior year cohorts from 1976 to 2000, Schulenberg and Patrick found that in the senior year of high school, college bound students engaged in lower levels of binge drinking than those who were not college bound. However, when these students arrived at college, their rate of binge drinking escalated to a higher level than non-student peers'. Then from ages 21 to 25, students' binge drinking decreased at a faster rate than non-students, and by age 25 no significant difference in level of binge drinking was evident between the two groups.

The Schulenberg and Patrick (2012) study also investigated drop-out rates related to drinking. Whether or not a student remained in college is paradoxically correlated negatively with alcohol use, with students who eventually dropped out of college tending to have a more gradual rate of increase in use than those who graduated. In other words, a rapid increase in binge drinking within the first few years of college was actually related to staying in college, a phenomenon which is perhaps related to peer bonding and engaging in the stereotypical college experience.

### **Risk Factors for Alcohol Use**

Several authors have looked at potential risk factors for or indicators of future substance use in this age group (Leeman, Patock-Peckham, & Potenza, 2012; Rose & Bond, 2008; Windle & Windle, 2006; Zhou, King, & Chassin, 2006). Leeman and colleagues examined impaired control over alcohol use, noting impaired control and impulsivity tend to relate to problem drinking in young adults. Impaired control is frequently one of the earliest symptoms to develop in problem drinkers; therefore, identifying young drinkers who have difficulty with control can help to identify potential at risk drinkers before drinking escalates

to a full substance use disorder. In a longitudinal community cohort study of 760 participants transitioning from adolescence to young adulthood (Windle & Windle, 2006), a connection was noted between temperament and substance use. Inflexibility was associated with alcohol use, and lower task orientation was associated with alcohol and other substance abuse disorders.

Also examining risk factors, Rose and Bond (2008) surveyed 179 young adults between the ages of 18 and 25 and found that life event stress and perceived stress were associated with substance abuse and identity diffusion in young adults in Australia. Coping and mastery protected the subjects from developing substance abuse disorders. Another study based on interviews with 732 participants from 393 families found higher density of alcoholism within a family was related to lower family harmony in adolescence, which was related to an increased probability of a young adult being diagnosed with drug dependence. The more alcoholism within a family, the higher the risk for substance use problems, to the point that harmonious family environments seemed to be cancelled out by high levels of familial alcoholism (Zhou, King, & Chassin, 2006).

Palmer et al. (2009) conducted a community-based, longitudinal twin study of 1,733 adolescents and young adults from Colorado through survey and structured psychiatric interviews. They examined the group twice, first with an age range of 11.5-18.49 years and again approximately five years later. This study found alcohol was the substance with which respondents most commonly experimented, repeatedly used, and abused. Tobacco had the highest rate of dependence. No significant gender differences were noted in the first assessment; however, in the second assessment, males were significantly more involved with substances than females, specifically in experimentation with tobacco and marijuana,

repeated use of marijuana, abuse of alcohol and marijuana, dependence on alcohol, and substance use disorders related to alcohol and cannabis. Alcohol, tobacco, and marijuana use and substance use disorders increased gradually with age. Being exposed to a substance in adolescence indicated an increased risk for problems with that substance in young adulthood. An additional risk factor for increased likelihood of problematic use was using multiple substances. The gender gap in substance use tended to increase with age.

Risk factors can therefore present in a variety of ways. For some substance users, the risk factors come from external factors, such as stress (Rose & Bond, 2008), family history, level of family harmony (Zhou, King, & Chassin, 2006), or being exposed to a substance in adolescence (Palmer et al., 2009). For others, these risk factors are tied to internal qualities or personal actions, such as impaired control (Leeman, Patock-Peckham, & Potenza, 2012), temperament (Windle & Windle, 2006), or use of multiple substances. Furthermore, risk can also be tied to factors such as age and gender (Palmer et al., 2009).

### **Effects of College Student Alcohol Use**

Poor scholastic performance, high-risk sexual behaviors, intoxicated driving, legal problems, alcohol poisoning, and other negative health consequences have all been associated with hazardous drinking in college-aged young adults (Bates & Buckman, 2012; Fromme & Quinn, 2012; Hingson, Heeren, Winter, and Wechsler, 2005; Latvala et al., 2009; Rose & Bond, 2008). The effects related to heavy drinking at this age can go beyond immediate effects and stay with the person well into their future (Bates & Buckman, 2012). Due to the dorm environment in which many college students live and the social manner in which they drink, the actions of college drinkers often have effects beyond the person who is drinking. Beyond risky behaviors which lead to events such as Driving Under the Influence

charges (DUIs) and unplanned pregnancies, aggression, risky sexual behaviors, sexual assault, and illicit drug use are often linked to alcohol use in this population (Fromme & Quinn, 2012).

Hingson et al. (2005) examined data from the National Highway Traffic Safety Administration, the Centers for Disease Control and Prevention, national coroner studies, census and college enrollment data, the National Household Survey on Drug Abuse, and the Harvard College Alcohol Survey to calculate alcohol related unintentional injury deaths and health problems that students aged 18 to 24 sustained in 1998 and 2001. From 1998 to 2001, alcohol-related unintentional injury deaths increased 6%, students who reported driving under the influence increased from 26.5% to 31.4%, more than 500,000 students were unintentionally injured due to drinking in each year, and each year more than 600,000 were hit or assaulted by another student who had been drinking. College students drove under the influence more frequently than non-college students in both years, and the number of college students drinking and driving in the past year significantly increased between the two years. In both 1998 and 2001, 51% of deaths in the United States of people aged 18–24 were alcohol related. In 2001, 10.5% of college students were injured due to drinking, 8% had unprotected sex due to drinking, 12% reported being assaulted or hit by another drinking student, and 2% were victims of alcohol related sexual assault or date rape.

In a study of 466 Finnish young adults aged 21–35, participants engaged in diagnostic assessments and psychiatric interviews, and researchers examined their medical records. The authors found that substance use disorders were related to poorer verbal intellectual ability and slower psychomotor processing. They also found that Axis I diagnoses and personality disorders were more common in people with substance use disorders (Latvala et al., 2009).

While substance use can be seen by some young adults as an escape from life's problems, it can also lead to a failure to form a firm sense of personal identity (Rose & Bond, 2008). Although a poorly formed identity seemed to be a risk factor for substance abuse, a well-formed identity was not necessarily a protective factor. A well-formed identity did not predict a lower likelihood of substance use (Rose & Bond, 2008).

Effects of college drinking can be varied and far reaching. For the individual student engaging in drinking, poor scholastic performance, high risk sexual behaviors, intoxicated driving, legal problems, alcohol poisoning, and other health consequences are a stark reality (Bates & Buckman, 2012; Rose & Bond, 2008). For students cohabitating with drinking students in the dorm environment, loud behavior can lead to difficulty sleeping and poor scholastic performance, as well. Aggressive behavior in the drinking student also can affect all in proximity of the student. Far-reaching effects for drinking students can include DUIs and other legal issues, unplanned pregnancies and other health issues, and even death (Fromme & Quinn, 2012; Hingson, et al., 2005). Beyond these more apparent effects, drinking at this age can be related to poorer verbal intellectual ability, slower psychomotor processing, axis I and personality disorders, or poorly formed identity (Latvala, et al., 2009; Rose & Bond, 2008).

As discussed previously, college students tend to drink more and more heavily than their non-college student peers. There are a variety of risk factors that could lead to heavy drinking in college, including impaired control over alcohol use, an inflexible personality, lower task orientation, perceived stress, life event stress, identity diffusion, family history of alcoholism, and lower family harmony. Coping and mastery may serve as protective factors from alcohol abuse. The effects of college student drinking can be far reaching and long

lasting, and may affect not only the student, but also his or her peers (Leeman et al., 2012; Rose & Bond, 2008; Schulenberg & Patrick, 2012; Windle & Windle, 2006; Zhou, King, & Chassin, 2006).

## **Chapter 2**

### **Review of Literature**

#### **Treatment of Alcohol Use in College Students**

Despite the widespread prevalence and negative effects of adolescent, young adult, and college student drinking, very few of these people actually seek or obtain treatment. Gayman, Cuddeback, and Morrissey (2011) analyzed data from 672 young adults aged 18–23 with a history of substance use disorders in Miami-Dade county, Florida to examine help-seeking behaviors. This sample represented a subset of a larger longitudinal study. They found 68% of these subjects had never sought help for their substance use problems, and those who did seek help delayed 1–7 years (mean of 2.3 years) between the onset of their substance use problem and actually seeking help. In this study, the mean age of onset for the substance use disorder was 17 years. For the 32% of subjects who did seek help, the mean age for initial help seeking was 17.6 years suggesting that younger subjects were more likely to seek help. The study also found differences in help seeking based on race-ethnicity, such that non-Hispanic whites had the highest rates of help seeking and African Americans had the lowest rates. Another significant observation was that subjects with a history of arrest were more likely to seek help, perhaps due to legal requirements to do so.

Diagnosis also made a difference in help seeking. Subjects who met criteria for both substance abuse and dependence had the highest rates of help seeking. Age of onset made a difference as well, with earlier onset increasing the likelihood of help seeking compared to onset in young adulthood. Subjects with a co-occurring diagnosis such as depression or

post traumatic stress disorder along with substance use disorders were more likely to seek help. Regarding when these subjects sought help, approximately one third sought help at or prior to the age of substance use disorder onset. For those who waited at least one year, the mean time between onset and help seeking was 2.3 years. African American subjects, those with no history of involvement with the legal system, and subjects with co-occurring post traumatic stress disorder tended to have longer delays in help seeking.

With the prevalence of drug and alcohol use on college campuses, many college-aged people in recovery from substance use disorders struggle to maintain their sobriety on campus, with some choosing to not attend college in order to avoid this risk. As of 2012, there were 15 campus recovery programs in the United States, the oldest being Brown's, which was established in 1977. These programs typically involve housing and counseling for students who are in recovery (Laitman & Stewart, 2012).

Hides et al. (2010) used cognitive behavioral therapy (CBT) with 60 subjects aged 15 to 25 who were diagnosed with major depressive disorder and substance misuse or substance use disorder. These subjects participated in up to ten sessions of individual CBT treatment and case management over 20 weeks. This intervention was associated with significant improvements in depression, anxiety, substance use, coping skills, depressive and substance use cognitions, and overall functioning at 10, 20, and 44 weeks. The researchers concluded that CBT may be an effective intervention for people in this age range with depression and substance misuse or substance use disorders.

### **Motivational Interviewing and Harm Reduction**

Motivational Interviewing (MI) is a method being used with college age substance abusers with generally positive results (Cloud, 2010; Harris, Aldea, & Kirkley, 2006; LaBrie,

Thompson, Hutching, Lac, & Buckley 2007; LaBrie, Cail, Pedersen, & Migliuri, 2011; McNally, Palfai, & Kahler, 2005; Scholl & Schmitt, 2009; Whiteside, Cronce, Pedersen, & Larimer, 2010). Miller and Rollnick (2013) provided the following definition of this approach:

[MI] is a collaborative, goal-oriented style of communication with particular attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion. (p. 29)

MI is a gentle, person centered, guiding approach that helps clients examine the arguments for and against change. It recognizes ambivalence as a natural part of the change process. MI involves asking open questions, affirming the client, utilizing reflective listening, summarizing, and informing and advising. MI is a collaborative approach; the therapist does not take on an expert role and avoids labeling. A key point in MI is developing discrepancy, in which the difference between the client's values and his or her actions are brought to light.

Harm reduction is another treatment model that shifts the focus of treatment to decreasing the number of harmful effects experienced by the client. As with MI, this treatment model does not necessarily require abstinence from drugs and/or alcohol. In a harm reduction approach, addiction is seen as a biopsychosocial phenomenon, and the initial use of drugs is viewed as adaptive. Harm reduction practitioners do not see the progression from use to dependence as inevitable. This treatment philosophy acknowledges that clients can participate in treatment even when they are still using drugs and/or alcohol. Success is seen as any step that reduces harm related to drug and/or alcohol use. Services related to harm reduction include needle exchanges, smoking cessation programs, methadone maintenance,

family planning, and therapy. The goals set forth by harm reduction practitioners are often controversial, such as encouraging drug users to switch from intravenous drug use to oral drug use. While this action may not move the user toward abstinence, it does decrease the risk of contracting or spreading diseases, or having other problems related to use (Denning, 2000).

Despite its prevalence, college student drinking often goes untreated. Even when an adolescent may notice problematic behavior related to his or her drinking, it may be years before the student actually initiates help seeking behavior. CBT, MI, and harm reduction techniques are frequently used in the treatment of college student drinking, with generally positive results (Cloud, 2010; Denning, 2000; Harris, Aldea, & Kirkley, 2006; LaBrie et al., 2007; LaBrie, Cail, Pedersen, & Migliuri, 2011; McNally, Palfai, & Kahler, 2005; Scholl & Schmitt, 2009; Whiteside, Crouce, Pedersen, & Larimer, 2010).

### **Brief Alcohol Screening and Intervention in College Students (BASICS)**

Dimeff, Baer, Kivlahan, and Marlatt (1999) designed the Brief Alcohol Screening and Intervention in College Students (BASICS) tool for undergraduate college students who currently drink and have experienced or are at risk for experiencing alcohol related problems. The focus in this intervention is on high risk students who may be at the very beginning stages of developing a problem with alcohol. Most of the research completed by the authors was with participants who met DSM-III-R and DSM-IV criteria for alcohol abuse or mild alcohol dependence. This intervention is not intended for clients with moderate to severe alcohol dependence. BASICS is a model based on MI and cognitive behavioral techniques combined with education related to basic information about alcohol.

In the BASICS manual, Dimeff and colleagues (1999) presented the intervention as a two 50-minute brief intervention sessions based on a harm reduction approach designed for college students who abuse alcohol. The sessions are interview based, with an additional 50 minutes allotted before or after the first interview for the student to complete self-report questionnaires. In the first interview, the therapist gets an overview of the student's drinking patterns and looks at negative consequences the student has experienced related to his/her drinking. After the questionnaire is completed, the therapist provides the student with personalized feedback and specific advice on how to reduce future risks. These are reviewed in the second session. Some students may pursue additional services to initiate or maintain changes after these sessions are completed. Additional services could range from an additional single BASICS session to outpatient or inpatient treatment.

It is assumed that many of the students do not have the information or coping skills to drink moderately, that developmental milestones that college students are experiencing contribute to heavy drinking, and that personal and environmental factors also contribute to heavy drinking. The goal of this intervention is to help the student reduce risky behaviors and harmful effects from drinking. The focus is not on specific drinking goals such as abstinence or reduction in drinking. In this model, success is seen as any steps taken that reduce harmful or hazardous behavior (Dimeff et al., 1999).

There are several assumptions from a harm reduction model that inform BASICS. Goals should be realistic and achievable, with goals articulated by the student being more important than goals articulated by someone else. Risk reduction is a sufficiently specific goal. Factors that contribute to heavy drinking in college students are different than the factors that contribute to heavy drinking in other age groups, so interventions must address

these unique factors. “Slips” are a normal part of the change process and successful achievement of goals is more important than complete elimination of risk. This process of risk reduction can continue indefinitely. Moderate drinking can be as enjoyable as heavy drinking. The least intensive intervention is used first, with interventions becoming more intensive as needed. BASICS is a non-confrontational, non-judgmental, non-authoritarian, and non-labeling approach (Dimeff et al., 1999).

A variety of studies have been completed examining the efficacy of the BASICS program. Fachini, Aliane, Martinez, and Furtado (2012) completed a meta-analysis of 18 randomized controlled trials of the BASICS program. In order to be considered for this meta-analysis, studies must have used MI techniques, personalized feedback, face to face intervention, and compare with another condition. Sample sizes from 54 to 1275 participants. The review found that at one year follow-up students who participated in BASICS showed a significant reduction in alcohol consumption and alcohol related negative consequences. The analysis also noted that gender and peer factors often played a role in moderating behavior change related to college drinking. Students rated BASICS programs as more favorable and acceptable than other interventions or control conditions.

Seigers and Carey (2010) reviewed studies surrounding brief interventions for alcohol use in college health centers. They found 12 studies that suggested that screening and brief intervention are acceptable, feasible, and promote risk reduction. The authors concluded that the existing research supports the use of brief single session interventions with MI and feedback.

Borsari and Carey (2000) randomly assigned 60 students to a control group or brief intervention group. The intervention group received personalized feedback regarding their

alcohol consumption, perceived drinking norms, alcohol related negative consequences and situations, and alcohol expectancies. Follow-up was completed at 6 weeks and showed the intervention group exhibited a significant decrease in number of drinks per week, number of drinking occasions in the past month, and frequency of binge drinking in the past month. Participants in this study were recruited from a psychology class and were eligible to participate in the study if they reported drinking five or more drinks for males and four or more for females on one occasion two or more times in the past month. The intervention used was an adapted form of the BASICS protocol.

In another study by Borsari and Carey (2005), 64 students mandated to a substance use prevention program were randomly assigned to either a brief MI session or an alcohol education session. Students who participated in the brief motivational interview reported fewer alcohol related problems than the other group at 3- and 6-month follow-up. Both groups showed a decrease in the number of binge drinking occasions and typical blood alcohol levels. Despite decreases in drinking in both groups, students who participated in the brief motivational interview intervention showed a greater decrease in alcohol-related problems.

DiFulvio, Linowski, Mazziotti, and Puleo (2012) compared 1,390 mandated students who participated in a two-session BASICS program to a group of 508 randomly selected high risk drinkers who acted as a control group. In this study, there was a significant decrease in drinking over a 6-month period in male students in the intervention group. There was a decrease in drinking for females in both groups. This study showed the greatest decreases in drinking in moderate and high risk drinkers.

In a 2013 study by Kulesza, McVay, Larimer, and Copeland 278 high risk drinking (five drinks for men and four drinks for women within a 2-hour period on at least one occasion in the past month or had experienced three or more alcohol related negative consequences in the past month) students from a psychology course were randomly assigned to a 10-minute brief intervention, a 50-minute brief intervention, or an attention-control group. The active interventions were provided by graduate students who had been trained in BASICS. While students in both active conditions significantly reduced their alcohol consumption, there were no significant differences in negative consequences at 4-week follow-up between the active and control conditions.

Marlatt et al. (1998) conducted a randomized controlled study of 248 at risk high school seniors. Students were assigned to either an individualized motivational brief intervention or a no treatment control during their freshman year of college. A group of students who were not considered high risk were also followed. Follow-up assessments were conducted over a two-year period. A significant decrease in drinking rates and consequences was noted, particularly for students who received the intervention. High-risk students experienced more alcohol related problems than the students who were not considered high risk; however, they did show a decrease in problems over time. All high-risk students showed significant decreases in drinking and negative consequences, with students who participated in the brief intervention showing a significantly greater deceleration of drinking rates and problems compared to the control group.

McNally and Palfai (2003) conducted a study of brief interventions with 76 participants recruited from psychology courses who were put into groups of drinking and non-drinking students. Students were randomly assigned to an intervention focused either on

enhancing actual-versus-ideal drinking behavior discrepancy in a structured group discussion or on self-versus-norm drinking behavior discrepancy through education. At 4-week follow-up, at risk drinkers showed significant reductions in heavy drinking episodes in the self-versus-norm group and reductions in alcohol problems were exhibited in both groups.

Murphy et al. (2001) reported a study of 99 participants who were randomly assigned to either a BASICS intervention, an educational intervention, or an assessment only control group. Pretests, 3-, and 9-month follow-ups were completed. There were no significant differences between the groups at 3-month follow-up; however, clients in the BASICS group who were initially heavier drinkers exhibited greater reductions in weekly alcohol use and binge drinking occasions than heavier drinkers in the other groups. At 9-month follow-up, this trend persisted. Furthermore, participants in the BASICS group had a more positive response to the intervention than the other groups.

Turrisi et al. (2009) completed a multisite randomized study by using BASICS with a high risk population of students who were former high school athletes. In this study, 1275 students completed baseline surveys the summer before beginning college and a follow-up at 10 months. Students were randomly assigned to one of four conditions: parent intervention only, BASICS only, parent and BASICS, or assessment-only control. The combined-intervention group showed significantly lower alcohol consumption, high risk drinking, and consequences at follow-up compared to the control group. These results suggest that combining parent intervention with BASICS may increase the efficacy of the BASICS program for first-year college students.

Michael, Curtin, Kirkley, Jones, and Harris (2006) randomly assigned 91 college freshmen to either a brief classroom-based MI intervention or an assessment only control

group. Drinking levels were assessed at the end of the semester. The experimental group was found to have fewer drinks per occasion and fewer drinking occasions compared to the control.

In a study of the use of BASICS and electronic surveys in a university primary care setting with 449 undergraduates who self-referred as meeting criteria for problematic use, Amaro et al. (2010) found a decrease in drinking and drug use between baseline and 6-month follow-up. Students were seen for two sessions, each 45–60 minutes in length, and sessions were facilitated by nurses trained in BASICS. Participants also reported an increase in protective factors and readiness to change drinking behaviors and a decrease in negative consequences and distress symptoms related to alcohol.

Martens et al. (2007) conducted a study of 175 at-risk student drinkers in a university-based primary health and mental health care setting. In this study students participated in a BASICS intervention. At 6-week follow-up, students reported decreased alcohol use, more accurate perceptions of other students' drinking, and increased use of protective strategies.

Larimer et al. (2001) examined the use of brief interventions with fraternities by randomly assigning 12 fraternities to either a motivational enhancement intervention similar to BASICS with individual and fraternity wide components or a control condition. Participants were in their first year of house membership and researchers excluded from the study those who appeared to have alcohol dependence or psychiatric symptoms. The group who received the brief intervention reported significant reductions in weekly alcohol use as measured by total average consumption and typical peak blood alcohol concentrations, compared to the control group at one-year follow-up. The number of drinking-related consequences did not seem to be related to the interventions. The treatment group received

their feedback from either peer interviewers or professional research staff; however, this source of feedback did not seem to affect the results of the study.

Despite generally positive results in studies related to BASICS, McCambridge and Strang (2004) did not have similar findings. They randomly assigned 200 peer-recruited participants ages 16–20 who were current illegal drug users in London to either a MI group related to alcohol, drug, and illicit drug use or an assessment only control condition. The intervention group was a single one-hour discussion session. While the treatment group initially showed positive changes with significant between group differences in use of cigarettes, alcohol, and cannabis at 3-month follow-up, these changes had disappeared by 12-month follow-up. The researchers speculated that this deterioration could be due to degradation of effect, reactivity to the 3-month assessment, or a late Hawthorne effect. This divergence in findings may be related to the fact that many of the positive findings surrounding BASICS have been related to alcohol rather than drug use and to participants who are at risk, but are not diagnosed with a major substance abuse disorder. Furthermore, much of the positive research surrounding BASICS is college based, not community based.

Morgan, White, and Mun (2008) examined the change that happens in college student drinking in between receiving a violation and participating in a mandated brief intervention. In this study, 175 mandated students' alcohol consumption was measured for the 30 days prior to receiving a violation and the 30 days prior to the intake assessment. It was found that peak blood alcohol content (BAC), total weekly drinks, and frequency of alcohol use all reduced prior to the intervention. If a student had received a legal or medical referral, the peak BAC and total drinks showed significantly greater decreases than if they had been referred through another source. This study indicated that the violation itself may contribute

to reduction in alcohol use. This study was unable to determine whether the decrease in drinking was due to the drinking event, getting into trouble, or being referred for the intervention.

Terlecki, Buckner, Larimer, and Copeland (2011) examined how social anxiety may affect brief alcohol interventions in heavy drinking college students. In this study, 26 high socially anxious and 44 low socially anxious heavy drinking undergraduates were randomly assigned to either a BASICS session or assessment-only control group. Students were recruited from the psychology department and Office of Judicial Affairs. Baseline data were collected followed by the brief intervention and a 4-week follow-up for the experimental group and 6-week follow-up for the control group. Participants with higher social anxiety reported higher baseline drinking as exhibited by number of drinks, number of drinking occasions per week, and frequency of drinking. The BASICS group significantly decreased weekly alcohol consumption and alcohol-related problems compared to the control group; however, this result did not carry over to the participants with higher anxiety. These participants reported heavier drinking at posttest in the BASICS group, but not in the control group. At posttest, high social anxiety participants in the BASICS group drank two to three more drinks per occasion than their low social anxiety counterparts. One of the conclusions that may be drawn from this research is that BASICS may not be as effective for clients with high social anxiety. The authors recommend attempting to create anxiety-specific interventions for mandated students with higher social anxiety.

Terlecki, Buckner, Larimer, and Copeland (2012) revisited how social anxiety may affect BASICS outcomes. In this study, 52 undergraduates participated in BASICS and completed drinking, social anxiety, and perceived norms measures. These measures were

taken at baseline and at 4 weeks. The researchers found that higher social anxiety was related to less change in perceived norms following BASICS. Furthermore, participants with higher social anxiety and smaller changes in perceptions of social norms showed heavier follow-up drinking than other participants. Social anxiety had less effect on participants who had greater changes in their perceptions of norms. High social anxiety participants reported thinking peers drank more and drank more themselves at both baseline and follow-up. In this study, participants with higher social anxiety and less change in normative beliefs were drinking the heaviest at follow-up. The fact that BASICS may be less effective for these clients is particularly concerning, as these clients tend to drink more than their counterparts even at baseline. Developing adapted interventions for these clients may be an important aim of future studies.

The existing research on BASICS generally shows this model to be effective for college student drinkers. The research shows that BASICS can be used with a variety of students, including fraternities (Larimer et al., 2001), former high school athletes (Turrisi et al., 2009), voluntary (Borsari & Carey, 2000; Kulesza, McVay, Larimer, & Copeland, 2013; McNally & Palfai, 2003), or mandated students (Borsari & Carey, 2005). BASICS may also be effective in a variety of settings, including in primary health care (Amaro et al., 2010; Martens et al., 2007), mental health care (Martens et al., 2007), or classrooms (Michael et al., 2006). BASICS may be administered by a variety of different providers, including nurses (Amaro et al., 2010), graduate students (Kulesza et al., 2013), or peers (Larimer et al., 2001). BASICS has been shown to be the most effective for students who are moderate or high risk drinkers (DiFulvio et al., 2012; Dimeff et al., 1999; Murphy et al., 2001) and can lead to decreases in drinking and problems related to drinking (Amaro et al., 2010; Borsari & Carey,

2000; Borsari & Carey, 2005; DiFulvio et al., 2012; Fachini et al., 2012; Marlatt et al., 1998; Martens et al., 2007; McNally & Palfai, 2003). Furthermore, BASICS has been shown to contribute to an increase in protective factors and readiness to change drinking behaviors (Amaro et al., 2010; Martens et al., 2007). Within the BASICS intervention, it may be important to focus on self versus norm education, as this area appears particularly important to motivate students to change (McNally & Palfai, 2003). Students appear to respond positively to BASICS, providing researchers with positive feedback regarding the intervention (Fachini et al., 2012; Murphy et al., 2001). It may be particularly effective to combine BASICS with additional interventions, such as parental intervention (Turrisi et al., 2009). One study found less favorable results when using this technique with drug users in the community (McCambridge & Strang, 2005), and an additional study demonstrated significant change in drinking behavior simply from receiving a drinking violation (Morgan, White, & Munn, 2008). BASICS may be less effective with students with high social anxiety or students who exhibit a smaller change in perceived norms surrounding peer drinking (Terlecki et al., 2011; Terlecki et al., 2012). Many of the studies are shorter term, and it would be beneficial to explore the longer term effects of BASICS, in addition to exploring alternatives or adaptations for students with high social anxiety.

### **Music Therapy in the Treatment of Substance Use Disorders**

Despite the prevalence of substance use in adolescents, young adults, and college students and the need for treatment within this population, there is minimal research on music therapy with these clients. Silverman (2009a) examined the membership of the American Music Therapy Association in 2007 and found 4.6% (149) of the members were identified as working with the substance abuse population. He surveyed these members and

found that most music therapists who work in substance abuse did not complete internships in settings that treat this population. Moreover, these clinicians did not take practicum or internship students, although they did present at conferences and in-services for staff at their facilities. Most of these music therapists (84%) reported that their supervisor was not a music therapist. More than half of the participants reported having master's degrees in music therapy or a related field. Most services were provided in a group setting. The most commonly addressed goals by these music therapists included communication, coping skills, emotional expression, self-esteem, insight, and socialization. The substances most frequently used by these music therapists' clients included alcohol, cocaine/crack, and marijuana. Interventions used most frequently included lyric analysis, music assisted relaxation, improvisation, and music and art. In an earlier study Silverman (2003) reviewed 23 studies related to music and music therapy and its effect on substance abuse or chemical dependency and found only seven (30%) included quantitative data, showing a need for this type of research in this field.

### **Music and Drug and Alcohol Use**

In a discussion of how the way music related to altered states, Fachner (2005) noted that emotional processing in the limbic system is similar with both music and intoxication. The combination of drugs, particularly alcohol, and music is found throughout documented history.

A survey conducted by Forsyth, Barnard, and McKeganey (1997) examined musical preference as an indicator of adolescent drug use in Scotland. The sample of 1523 participants aged 12–15 was randomly selected from multiple schools and a comparison was made between lifetime measures of drug use and current favorite style of music. This study

found fans of rave music were most likely to have taken MDMA; however, not many of the children had used this drug. It may be beneficial to replicate this study with an older sample, who would likely have more experience with drug use.

Doak (2003) explored the connection between adolescent psychiatric diagnoses, music preferences, and drug preferences. The author surveyed 58 adolescents regarding music and drug preferences and obtained mental health diagnoses from medical records. The researcher found statistically significant correlations between music preference and diagnosis, drug preference and diagnosis, and diagnosis and reason for using drugs. The reasons reported for using both music and drugs were similar, including to relax, to elevate mood, to focus, and to escape reality. Marijuana was the most frequently used substance in this study, followed by alcohol, cocaine, LSD, mushrooms, methamphetamine, and ecstasy in that order. Preferred music was rap, hard rock, heavy metal, hip hop, techno, and classic rock in that order. There was a statistically significant relationship between music preference and diagnosis. Adolescents diagnosed with depression most often preferred rap, heavy metal, and techno music. Participants with mood disorders tended to prefer rap, classic rock, hard rock, heavy metal, and alternative music. Participants diagnosed with oppositional defiant disorder tended to prefer rap and techno. There was a significant relationship between diagnosis and reasons for using drugs. Participants who were diagnosed with depression used drugs to relax or escape reality.

### **Clinical Applications**

Horesh (2005) described her work with clients in a year-long inpatient therapeutic community in Israel. The clients reported having used music interchangeably with drugs by listening continuously while not using drugs. For many of these clients, music was associated

with using and could therefore be triggering. The author discussed what she called “dangerous music,” that is, music that could be triggering, with her clients as a part of their treatment. Unfortunately for many of these clients there is overlap between their preferred music and music that could be triggering.

Music therapy with this population has been documented for decades. Miller (1970) described his experience providing music therapy services for people with alcoholism at a Salvation Army center, in which a band was begun with harmonicas, guitars, xylophone, woodwinds, and an electronic organ. The group had the opportunity to perform in many settings outside of the center. A technique called “instant music” was developed to encourage group activity; however, there is no description of how this technique was implemented.

A description of the use of music in a community drug abuse prevention program by Brooks (1973) discussed the importance of music in the lives of young people, as well as the parallels between music and drugs. The author noted that the connection between drugs and music can create a stigma around music in the conversation around drug use. He also noted, however, that many of the young people he worked with in a prevention setting listed music as an alternative to drug use. The author discussed the value of live music over recorded music, particularly in creating a sense of camaraderie.

In the short term intensive detoxification and rehabilitation program of a private psychiatric hospital, clients were seen for music therapy in the second phase of treatment. This phase began when the client was physiologically stabilized. The basis for treatment in this phase was self-help groups, with professional services augmenting these sessions. Music therapy provided a non-verbal environment to confront addiction. For many clients, this was an environment in which they could do this for the first time. Music therapy was also used to

decrease inhibition, release tension, and decrease isolation. Songwriting and improvisation were the main techniques used. A number of therapeutic opportunities presented themselves in improvisation groups, including addressing low frustration tolerance, conformity through a creative experience, interaction to combat isolation, validation of self-esteem, and release of tension to support treatment in rehabilitation. Additional issues addressed included fear of failure, reluctance to play, lack of awareness of resources, avoidance of frustration, a need for conformity, reluctance to let go, reluctance to lead, sensory dullness, and impoverished emotional life (Murphy, 1983).

In writing about the use of music therapy in the treatment of clients with alcoholism, Dougherty (1984) pointed out one of the most important reasons for using music therapy in this setting was to help the client learn alternative ways of coping with emotions. Music therapy also provided an outlet for self-expression in this particular facility, in which weekly group music therapy sessions were held. Techniques used included song choice and discussion, and sing-alongs.

Freed (1987) described the use of songwriting with clients who had chemical dependency. The goals in songwriting for this population included expression of feelings related to the client's situation. This provided an opportunity for the client to be validated by peers and the therapist. Increasing self-awareness was an additional goal, completed through lyric analysis of the songs after they were written. It is important for the songwriting experience to be as open and accepting as possible as these clients frequently experience low self-esteem and fear of failure. Freed suggested that preliminary activities such as lyric analysis, fill-in-the-blank songwriting, and new words to pre-existing melodies may make songwriting less threatening and more accessible to these clients.

## **Co-Occurring Disorders**

Co-occurring disorders (or dual diagnoses) frequently occur in clients who abuse substances, and this is a topic that has been explored in music therapy. In a study of 30 subjects age 18–40 with dual diagnoses who received intensive case management and music therapy (Berdnarz & Nikkel, 1992), participants noted through a post-treatment survey that music therapy helped increase group cohesion, self-awareness, stress reduction, and attitudinal change. The researchers also used music therapy to help explore attitudes and feelings regarding recovery and described how music therapy can be helpful at various stages of treatment. In the early stages of addiction treatment, music therapy can help to deal with resistance, build rapport, and increase engagement. During crisis intervention, music therapy can be used to assess crisis conditions, to relieve tension, and for discussion regarding the event. In the stabilization stage of treatment, music therapy can be used to assist clients in developing a sober support network, group cohesion, and self-esteem

Gallagher and Steele (2002) described their use of music therapy with clients with dual diagnosis who were also criminal offenders. Treatment of these clients focused on symptom management, relapse prevention, development of life skills, and substance abuse recovery. This was an abstinence-based program with incorporation of 12-step principles. Cognitive behavioral theories informed the music therapist's work. Sessions were 45 minutes long and began with a check-in through which the clients chose a face from an assessment tool to represent how they were feeling. Interventions included instrument playing, lyric analysis, music assisted relaxation, music games, songwriting, music listening and rating, setting feelings to music, and production of music videos.

## **Interventions**

A variety of interventions have been documented in work with this population. Silverman (2003) conducted a pilot study with clients who had chemical dependence. Women in a residential treatment center participated in four different types of music therapy interventions, including music games, relaxation training, lyric analysis, and songwriting. Following the session, clients were asked to rate the effectiveness and their enjoyment of the session. Although the participants did not seem to enjoy any specific intervention over another, they did report enjoying music therapy, and they found all of the interventions to be effective. They also reported feeling it was helpful in more consistently addressing treatment areas than other groups. Of these clients, 62.5% reported feeling energized and 50% reported feeling relaxed after music therapy. Furthermore, 62.5% of participants reported music therapy was the most effective intervention for decreasing impulsiveness.

Music therapy was used in the Tehran Therapeutic Community, a 6-month program with space for 60 clients. In this article, the effects of lyric analysis and song sharing were examined. The author described 25 sessions that were completed related to this topic. Additionally, 30 sessions were held using relaxing music before bed with questionnaires that assessed how long it took clients to fall asleep, frequency of nightmares, and mood the following day. This study showed lyric analysis and song sharing helped clients to express thoughts and feelings and relaxing music helped to shorten the amount of time it took to fall asleep and improved mood the next day. The study also found that continued listening to the music that clients listened to while using was related to relapse and aggressive use (Abdollahnejad, 2006).

The effect of movement to music, rhythm activities, and competitive games on depression, stress, anxiety, and anger in 10 women who were enrolled in outpatient substance abuse treatment were compared. Although they did not find significant differences between the interventions, clients did report through surveys that they experienced decreases in depression, stress, anxiety, and anger, regardless of the intervention, immediately before and after the music therapy sessions (Cevasco, Kennedy, and Generally, 2005).

Jones (2005) compared a songwriting group with 13 participants to a lyric analysis group with 13 participants with a goal of evoking emotional change in single sessions. Despite no significant differences between the interventions, she did find significant emotional changes before and after the sessions. Music therapy increased feelings of acceptance and joy/happiness and reduced feelings of guilt/regret/blame, and fear/distrust.

In a study of 60 adolescents in inpatient addiction treatment, participants attended four one-hour music therapy discussion groups focused on values clarification. A control group received alternate activities. The study showed lyric analysis helped to influence the client's perceived locus of control. In one part of this study, James assigned either an experimental or control condition to each of 20 adolescent clients being treated for substance abuse or dependency. Those in the experimental group attended four one-hour music therapy discussion groups that consisted of lyric analysis. James found a significantly greater pre-post increase in internal locus of control in those who participated in the lyric analysis groups (James, 1988b).

Silverman (2009b) conducted a study of 66 clients in a detoxification setting. Clients participated in a single lyric analysis music therapy session focused on relapse prevention. The therapist's perception of working alliance did reach statistical significance, indicating the

therapist perceived a stronger working alliance with clients in the experimental group than the control; however, therapist bias must be considered in cautiously interpreting these results.

A randomized, controlled trial on improvisational music therapy on depression in 24 adolescents and adults with substance abuse diagnoses was conducted in Venezuela. Following obtaining baseline data, Albornoz (2011) randomly assigned either an experimental or control group to each participant. The experimental group received 12 improvisational music therapy sessions over a 3-month period in addition to typical treatment. The control group received only typical treatment. Significant differences were found between groups on the depression inventory rated by a psychologist, but not on the self-report inventory. The fact that the psychologist's inventory measured anxiety and somatic distress, while the self-report measured subjective distress and issues with daily living may have contributed to the divergence.

Silverman (2010) randomly assigned 118 participants in a detoxification unit to either a music therapy group using lyric analysis or a verbal therapy control group. There were no significant differences between groups on a posttest measure of withdrawal symptoms and locus of control. Client report indicated participants felt there was more positive change in the experimental group. However, this should be interpreted with caution, since experimenter demand and the desire to please the researcher may have influenced these reports.

The application of drumming as a complementary treatment for clients with addiction was described in a variety of contexts. These contexts included different drum circles in addiction treatment programs, interviews with counselors and participants, and a pilot program based on shamanic drumming. The author suggested that through drumming,

relaxation, theta-wave production, brain-wave synchronization, pleasurable experiences, awareness of preconscious dynamics, release of emotional trauma, and reintegration of self could be increased. Furthermore, self-centeredness, isolation, and alienation could be decreased. Connection with self, others, and a higher power could be increased. Most of these variables have yet to be explored through systematic research on drumming (Winkelman, 2003).

Baker, Dingle, and Gleadhill (2012) discussed the use of rap music in music therapy for clients with substance use disorders. This genre can be particularly important for clients in the adolescent or young adult age range when it is more likely to be the clients' preferred music. The glamorization of drug and alcohol use in rap music can be used to begin discussions looking at the reality behind these statements, and to address unhealthy views of drugs and alcohol.

### **Goals**

In addition to the multitude of music therapy interventions documented with this population, music therapists report addressing a wide variety of goals in their work with clients with substance related issues. Punkanen (2005) pointed out that beyond music being triggering for relapse, it could also trigger traumatic memories for clients in treatment. Many clients with addiction have histories of trauma, and drug use is often a way to avoid these memories. In early sobriety it is possible for these memories to come back to the client very quickly. Music can help clients to access these emotions with or without realizing it, and music therapists must be prepared for this to happen. While drug use can serve as one way to cope with these emotions, it is important for these clients to find new ways to cope, if they are to reduce substance use. Soshensky (2001) discussed the importance of creativity in

recovery and the need for clients to find new ways to navigate their lives. Music therapy can provide an outlet to nurture this creative process.

James (1988a) discussed potential goals for music therapists working with clients with alcoholism. For a music therapy program within a treatment facility, the first goal should be to work within the overall treatment approach used by the facility, with music therapists participating in treatment teams and related staff meetings. Individual goals to be addressed could include increased peer interaction, group cohesion, improved self-awareness and values clarification, movement toward an internal locus of control, education regarding options for coping with stress, emotional expression, assertiveness skill development, improved communication skills, improved leisure skills, increased problem solving skills, development of a healthy self-image, increased impulse control, and an ability to work cooperatively.

Treder-Wolff (1990a) discussed the way music therapy can complement different areas of treatment, including education, self-diagnosis, involvement in effective recovery programs, and taking responsibility for recovery. Lyric analysis, song choice, songwriting, research and presentations on musicians affected by addiction, and improvisation were techniques discussed. Treder-Wolff (1990b) described goals and interventions. Goals included using music therapy to increase participation in the group, verbal communication around knowledge of the disease of addiction, interpersonal relationships within the group, and 12-step participation. She suggested music therapy interventions to work toward each of these goals. To increase group participation, the author suggested song choice, vocal blues improvisation, and guitar improvisation. To increase verbal communication around awareness of the disease, its implications, and changes needed for recovery and to develop

interpersonal relationships, the author suggested song choice and songwriting. To increase 12-step participation, the author suggested songwriting.

Heiderscheit (2009) presented an overview of music therapy with clients with substance abuse disorders. Addressing issues that have led a client to begin using substances as well as the issues that have resulted from this use are important goals in music therapy. Interpersonal, mental, and physical health issues must be addressed. The author identified the flexibility of music as an important therapeutic tool and also discussed the fact that in early recovery music may offer an ability to express emotions that may be fragmented, elusive, and/or inaccessible to language. She identified improvisation, the Bonny Method of Guided Imagery and Music, song sharing, lyric analysis, songwriting, active music making, and drumming as effective interventions for this population.

### **Cognitive Behavioral Approaches and Music Therapy**

As noted previously, cognitive behavioral approaches can be effective for this population. Lesiuk (2010) described the use of music-based cognitive rehabilitation toward relapse prevention. This included consideration of neurocognitive impairments seen in people with addiction and the possible ways these can be addressed through the use of music therapy. Although she found minimal research looking specifically at the use of music therapy for cognitive impairments seen in people with drug addiction, Lesiuk pulled from traumatic brain injury, schizophrenia, age-related cognitive deficits, and dementia research to support the use of music therapy for people with addiction who have similar brain impairments. Further research in this area is needed; however, this does appear to have potential for clients with addiction, especially those with long-term use.

Baker, Gleadhill, and Dingle (2007) used music therapy in a 7-week trial to assist in emotional exploration with 24 clients who were in a drug and alcohol rehabilitation unit in a hospital in Australia. This was of a cognitive behaviorally-informed approach. Single music therapy sessions were completed with a self-report questionnaire following the session. Clients reported that they experienced predominantly positive emotions to a moderate or high degree in the music therapy groups and that music therapy allowed them to experience these emotions without the need for substance use. Interventions used included lyric analysis, songwriting, improvisation, and song singing/listening.

In a subsequent article, Dingle, Gleadhill, and Baker (2008) discussed the engagement of 24 participants in cognitive behavior therapy with music therapy in substance abuse treatment. Clients participated in a 7-week trial of music therapy, in addition to cognitive behavior therapy. Attendance and perceptions of the music therapy sessions were measured via surveys completed after the sessions. They noted that engagement in treatment is important, as it increases participation and an establishment of the therapeutic relationship, which leads to positive outcomes and treatment completion. In this report, 83% of participants reported that they would attend music therapy again, and 46% endorsed the survey item that music therapy would help them to feel more a part of the group. Participants engaged in the sessions regardless of age or substance of use. The authors also observed an increase in emotional expression and group identity.

### **Music Therapy to Increase Motivation in Treatment**

As previously noted, many younger people who abuse substances do not seek treatment or see the need for it. Music therapy can assist in increasing motivation in treatment. Ross et al. (2008) examined how music therapy affected treatment outcomes for

80 participants with co-occurring mental illness and addiction and found that participants who attended more music therapy sessions stayed in treatment longer. Clients who attended more music therapy sessions were also more likely to adhere to aftercare appointments. As this study did not have a control group and was not a randomized study, there is the question of whether those clients who attended the music therapy groups would have attended more groups in general. The results do not show that music therapy caused the difference in attendance in the aftercare sessions.

Silverman (2011) examined motivation as well, framing it as change readiness. His study of 141 patients on a detoxification unit found that following a single session, contemplation scores were higher in a “rockumentary” group than a recreational music group, and also higher in the recreational music group than in the verbal groups. However, this study did not randomize participants to condition and utilized only a posttest evaluation. Without a pretest, it is impossible to know whether the groups were equivalent prior to their group assignment or to state whether the group affected the clients’ contemplation scores.

In an additional study Silverman (2012) randomly assigned 99 participants in a detoxification setting to either a posttest only experimental group or pretest only wait-list control group. The experimental intervention consisted of a songwriting process. Those who participated in the experimental group reported significantly higher levels of motivation and readiness than the control.

### **Music Therapy Within Harm Reduction and MI Models**

As described previously, harm reduction approaches have been shown to be effective with people who use substances. Ghatti (2004) described her use of music therapy in a harm reduction model. Music therapy can be used to improve awareness of factors that contribute

to substance use while helping clients to recognize and possibly modify harm causing behaviors. Due to the accessibility of music therapy, it can serve as a “gateway therapy,” an initial contact through which further treatment (e.g., medical) can be facilitated. Music therapy can empower clients to be as active in their treatment and goal setting as possible. Ghetti indicated that goals within this method can include (a) increasing awareness of problematic behavior, (b) increasing motivation for change, (c) maintaining new coping skills, (d) developing rapport and group cohesion, (e) identifying helpful and harmful results of substance use (taking personal responsibility for both), (f) expressing ambivalence, (f) facilitating emotional reactions, and (g) increasing self-esteem. Interventions discussed include improvisation, songwriting, lyric analysis, and relaxation techniques. Smith (2007) also described harm reduction in a music therapy context, noting that offering music therapy to people who are actively using drugs or alcohol increased accessibility to populations who would not typically seek services.

To date, there is only one published study on using music therapy with college student drinkers and MI. Cloud’s (2010) master’s thesis described the use of music therapy informed by MI with 16 college student drinkers randomized among 45 college student volunteers to either a verbal-only MI condition or MI-informed music therapy condition. These single session interventions involved either verbal discussion or lyric analysis and fill-in-the-blank songwriting. Both conditions focused on developing discrepancies between their desired behavior and current behavior. Analyzing pre-post change scores between groups, she found that those in the experimental condition were significantly more likely to report an increase in recognition of the need to change their risky drinking behavior after the intervention than those in the verbal-only group.

Music therapy with clients who abuse substances has been documented for several decades. It has been shown to be effective with clients with substance use disorders and dual diagnoses on a variety of levels. While a minority of music therapists are actually working with these clients (Silverman, 2009a), it has been found that music therapy can be effective in increasing group cohesion (James, 1988a; Treder-Wolff, 1990b), self-awareness (James, 1988a), stress reduction (Berdnarz & Nikkel, 1992; Cevasco et al., 2005; James, 1988a), attitudinal change, exploration of feelings surrounding recovery, working through resistance (Berdnarz & Nikkel, 1992), building rapport (Berdnarz & Nikkel, 1992; Ghetti, 2004), increasing engagement (Berdnarz & Nikkel, 1992; Dingle et al., 2008), and increasing self-esteem (James, 1988a), among many other goals at a variety of points in treatment. In addition to addressing a multitude of goals, many different interventions have been used with this population, including songwriting (Jones, 2005; Silverman, 2003), lyric analysis (Abdollahnejad, 2006; James, 1988b; Silverman, 2003; Silverman, 2009b; Silverman, 2010), and improvisation (Albornoz, 2011), among others. Music therapy can assist in increasing motivation for therapy, which is a strong need in this population (Ross et al., 2008; Silverman, 2011; Silverman, 2012). It may also fit well with harm reduction (Cloud, 2010; Ghetti, 2004; Smith, 2007) or CBT (Baker et al., 2007; Dingle et al., 2008; Lesiuk, 2010), which are approaches that may be effective with this population.

With the high prevalence of drinking and drug use among college students, as well as the far-reaching consequences of this use, it is clear that services are needed for these students. The literature demonstrates that college students engage in riskier use behaviors than their non-student peers, creating an opportunity for intervention on college campuses. Some of the benefits gained from use, such as risk-taking, socialization, and identity

formation can also be addressed through music therapy. Music therapy has been found to help to increase motivation and help-seeking behaviors, since it is an enjoyable form of therapy. While the literature shows that MI, harm reduction, BASICS, and music therapy are effective treatments for college drinking, there is no literature examining how these techniques may fit together and the effect of such a synthesis. The purpose of this study is to examine how a group music therapy intervention informed by MI, harm reduction, and BASICS may affect drinking levels and second violations in mandated college students.

The hypothesis of this study was that both group music therapy and individual verbal therapy will lead to decreases in alcohol consumption and second violations of this campus's alcohol policy in mandated college students. The research questions were as follows:

1. Is there a change in alcohol consumption in mandated college students following a single-session BASICS intervention?
  - a. Does a group music therapy session lead to decreased alcohol consumption in mandated college drinkers?
  - b. Does an individual verbal therapy session lead to decreased alcohol consumption in mandated college drinkers?
  - c. Is there a between group difference in change following a single session of group music therapy compared to a single session of individual counseling?
  - d. Is there a between group difference in the number of students who receive second violations reported to the Student Conduct Board?

## **Chapter 3**

### **Method**

#### **Participants**

Undergraduate students, ages 18–20, who had been referred for a required visit to the Student Wellness Center after having received their first alcohol violation were invited to participate in the study. Students were excluded from the study if (a) they had committed a previous violation, (b) their offense involved a drug other than alcohol, (c) they had received a traffic citation for Driving While Intoxicated or Driving Under the Influence, (d) they had required medical attention due to alcohol poisoning, (e) their behavior was determined to be particularly risky, as determined by high BAC or reported risky drinking habits, or (f) schedule conflicts with when the groups were offered. Although 28 participants completed pretest measures, posttest data were available for only 20 participants. Of the 8 missing posttest data, 3 were in the music condition and 5 were in the verbal condition. Of the 20 participants, 11 were freshmen, 7 were sophomores, and 2 were juniors. There were 7 men and 13 women. Ages ranged from 18–20 with a mean age of 19.0.

#### **Instruments**

**Brief Alcohol Screening and Intervention of College Students (BASICS).** The main instrument used in this study is the Brief Alcohol Screening and Intervention of College Students (BASICS) survey. The BASICS survey is a self-report instrument that asks students about a variety of behaviors. In addition to demographics including gender

and weight for BAC calculation, it asks the student for three college goals. The instrument asks the student about his or her drug and alcohol behavior.

The student is presented with a list of 15 substances and is asked to choose between *never used*, *have used but not in the last 30 days*, or *have used in the last 30 days*. The student also indicates the number of times each substance was used in the last 30 days and completes a 2-week drink and/or marijuana calendar, in which the number of drinks, number of hours spent drinking, and the number of hours under the influence of marijuana are explored. The student is also asked to report his or her highest drinking occasion in the last 30 days, including how many drinks were consumed over how many hours. Additionally, the student is asked how much money is spent on marijuana, number of hours spent studying and in class, and number of hours of sleep per night. Expectancies also are explored for marijuana. The expectancy section includes items such as “My thinking would be slowed,” “I’d feel anxious or panicky,” and “I would feel calm.” For marijuana, 15 expectancy items are identified, which the student is to rate as *unlikely*, *somewhat unlikely*, *somewhat likely*, or *likely*. The student also rates these expectancies as *desirable*, *undesirable*, or *neither*. Alcohol related consequences are explored by having the student respond *yes* or *no* to 24 potential consequences and then asking about the frequency of the events the student answered *yes* to. Students are also asked about blood relatives with alcohol or drug problems, how often they use nine harm reduction strategies (with space to write in their own), and 12 items regarding their feelings about drinking. Finally, the student is presented with importance and confidence rulers related to alcohol and marijuana use where they are asked to rate on a scale of 1 to 10 how important it is for them to make a change and how confident they are in their ability to make a change. The student report information is synthesized into a feedback report

presented to the student at his or her session. For the purposes of this study, information gathered from this report included number of drinking occasions per month, number of drinks on a typical occasion, peak BAC, and typical BAC.

**Alcohol Use Disorders Identification Test (AUDIT).** The AUDIT was also completed upon intake. The AUDIT is a brief, ten question screening device completed independently by the participant. Questions are related to the diagnosis of alcohol use disorders and are scored on a three or five point Likert scale. Questions include the frequency and amount consumed, how often the person has difficulty stopping drinking once they have started, how often the person has failed to complete what is expected of them due to drinking, how often they have felt like they needed a drink first thing in the morning, how often they have felt guilt or remorse after drinking, frequency of inability to remember what happened while drinking, if the participant or someone else has been injured due to their drinking, and if a relative, friend, doctor, or other healthcare worker has expressed concern about the person's drinking. In this study, the AUDIT was used for corroboration with reported amount consumed on the BASICS.

### **Procedure**

This study spanned two academic semesters. Students adjudicated by the Office of Student Conduct due to a violation in the University's alcohol policy were required to go to the Student Wellness Center. There the students completed intake paperwork and met with a graduate counseling student to review the procedure for completion of the student's requirement. The graduate student also reviewed the informed consent packet for the study and left the student alone to make a decision regarding participation in the study. The packet included the Introduction to the Study (Appendix A) and the informed consent. The informed

consent varied slightly between the first semester (Appendix B), which also included the Release of Student Disciplinary Records (Appendix C), and the second semester (Appendix D). The student also completed additional paperwork at this time, including the Alcohol Use Disorders Identification Test (AUDIT).

Prior to attending their therapy session, participants completed the BASICS survey online based on self-reported drinking levels prior to receiving the violation. This served as baseline data. The client then participated in either a 30 to 60-minute individual verbal therapy session or a 60-minute group music therapy session. Immediately following the session, each student completed a general survey to obtain the subjects' immediate reactions to their intervention (see Appendix E).

Students completed a follow-up BASICS report approximately 6 weeks after the session. At 6-month follow-up for the students who participated in the first semester of the study, the researcher contacted the Office of Student Conduct to see whether the student had received additional substance related violations.

### **Experimental Conditions**

**Verbal therapy session.** Students assigned to the verbal therapy condition met with a graduate student from the Clinical Mental Health Counseling Program for a 30 to 60-minute session. These sessions were client directed and did not have a specific structure. The graduate student used MI techniques to elicit change talk from the student and help to clarify values and desires regarding future alcohol use. A variety of topics might be discussed, including how the student's alcohol use compares to that of peers at the university, Blood Alcohol Concentration (BAC), alcohol poisoning, the ways in which alcohol use may interfere with the student's goals in school, consequences experienced due to drinking, effect

of family history on drinking, protective strategies the client has engaged in, or additional topics as initiated by the client. Clients were given a paper copy of their personalized BASICS feedback report. In some sessions, this report was reviewed in the session.

**Music therapy session.** In the music therapy condition, the music therapist (MT-BC, who also was a graduate student in both the Music Therapy and the Clinical Mental Health Counseling Programs) presented small groups of participants with a variety of both pitched and non-pitched percussion instruments. Sessions began with a free improvisation in which participants were encouraged to “try out” the different instruments while the group arrived and got settled in. Once all of the group members had arrived, the MT-BC introduced herself and the session. Students were then asked to play for the group how they were feeling about being in the session. Following this check-in process, the students were given a paper copy of their personalized BASICS feedback report. They were instructed to go through the report and share anything that stood out to them. Following the review of the report and addressing any questions or concerns regarding the report, the students were asked to think of a time they had an enjoyable drinking experience, which they then expressed musically. They then shared the factors that made this an enjoyable experience, which were written on the whiteboard available in the room. The student was then asked to think of a time they drank too much, which they also expressed musically, and the factors that contributed to drinking too much were written on the board. After each client had completed their improvisation and brainstorm, the group discussed protective strategies. The sessions ended with each client sharing one protective strategy they intended to use if they chose to drink again. (For some students the protective strategy was to discontinue drinking.) They then engaged in a group improvisation during which they were instructed to think about what they would bring back

into their lives from the session. Students in the group sessions also were informed that if they wanted to speak on an individual basis with a counselor, that service was available on request. The researcher referred those who requested an individual counseling session either to the director of the Student Wellness Center or to the campus Counseling Center.

### **Design**

This study had a true pretest-posttest experimental design, with experimental (group music therapy) and control (individual verbal therapy) conditions. The individual verbal sessions were the standard intervention or treatment as usual, which served as the control condition.

### **Variables and Data Analysis**

The control variables in this study will be sex; age; grade point average (GPA); year in school; and pretest levels of drinking occasions per month, drinks per occasion as measured by the BASICS, drinks per occasion as reported at intake, peak BAC at baseline, and typical BAC at baseline. The dependent variables were change in levels of drinking occasions per month, drinks per occasion as measured by the BASICS, peak BAC, and typical BAC.

A chi-squared test was used to determine whether there were group differences in sex and a Mann-Whitney U test was used to determine whether there were group differences by year in school. A series of *t*-tests explored potential difference between groups on all continuous variables. Additional *t*-tests examined pre-post change in each dependent variable. Alpha was .05 for all statistical tests.

## Chapter 4

### Results

This chapter reviews the results of this study, including control variables and dependent variables. Results related to changes in number of drinking days per month, number of drinks per occasion, peak Blood Alcohol Content (BAC), and typical BAC are presented. Furthermore, results from the postintervention survey are presented.

#### Control Variables

The groups were equivalent at pretest on all pretest variables, including gender, year in school, age, and AUDIT score. A chi-squared test showed that there were no between group differences in sex ( $X^2 = .020$ ,  $df = 2$ ,  $p = .630$ ) and those of a Mann-Whitney U test revealed that there were no between group differences in year in school ( $U = 49.5$ ,  $p = 1.00$ ). Grade point average (GPA) data were missing for six participants, four from the verbal group and two from the music group. For the remaining 14 participants, a  $t$ -test showed that there were no between group differences ( $t = -.398$ ,  $df = 12$ ,  $p = .698$ , 95%  $CI = -.917$ ,  $.634$ ). The mean age in the music condition was 19.11 years and in the verbal condition was 19.00 with no difference between groups ( $F = .000$ ,  $p = 1.00$ ).

Means and standard deviations for pretest and posttest scores by group are shown in Table 1. Levene's test of equality of variances showed that all continuous measures at pretest met this assumption (all  $p$ 's  $> .10$ ). Analysis of pretest measures of the dependent variables by  $t$ -tests showed that there were no significant between group differences at pretest in drinks per month, drinks per occasion, peak blood alcohol level, or typical blood alcohol level.

Table 1

*Means, Standard Deviations, and 95% Confidence Intervals for Dependent Variables by Group*

| Variable and Group            | Pretest  |           |               | Posttest |           |               |
|-------------------------------|----------|-----------|---------------|----------|-----------|---------------|
|                               | <i>M</i> | <i>SD</i> | 95% <i>CI</i> | <i>M</i> | <i>SD</i> | 95% <i>CI</i> |
| Drinking days per month       |          |           |               |          |           |               |
| Music                         | 5.09     | 4.93      | [1.78, 8.4]   | 6.18     | 3.84      | [3.60, 8.76]  |
| Verbal                        | 6.89     | 5.21      | [2.89, 10.89] | 4.89     | 5.30      | [-.81, 8.96]  |
| Drinks per occasion           |          |           |               |          |           |               |
| Music                         | 3.09     | 3.02      | [1.07, 5.12]  | 3.27     | 2.69      | [1.47, 5.08]  |
| Verbal                        | 3.22     | 2.86      | [1.02, 5.42]  | 1.89     | 2.21      | [-.19, 3.58]  |
| Peak blood alcohol content    |          |           |               |          |           |               |
| Music                         | .11      | .10       | [.05, .18]    | .13      | .10       | [.06, .20]    |
| Verbal                        | .11      | .10       | [.03, .18]    | .07      | .09       | [.00, .13]    |
| Typical blood alcohol content |          |           |               |          |           |               |
| Music                         | .06      | .06       | [.03, .10]    | .06      | .05       | [.02, .09]    |
| Verbal                        | .07      | .07       | [.01, .12]    | .03      | .03       | [.00, .05]    |

*NOTE:* Music  $n = 11$  and Verbal  $n = 9$ .

### **Dependent Variables**

Pre-post change scores were computed for each dependent variable and *t*-tests were used to identify significant differences between groups. Means and standard deviations for the change scores are shown in Table 2.

Table 2

*Means, Standard Deviations, and 95% Confidence Intervals for Change Scores for*

*Dependent Variables by Group*

| Variable            | Music    |           | Verbal   |           | 95% CI      | <i>t</i> (18)      | <i>p</i> |
|---------------------|----------|-----------|----------|-----------|-------------|--------------------|----------|
|                     | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |             |                    |          |
| Drinking days/month | 1.09     | 4.04      | -2.00    | 5.92      | -1.59, 7.77 | 1.386              | .18      |
| Drinks/occasion     | .18      | 1.66      | -1.33    | 2.00      | -.203, 3.23 | 1.852              | .08      |
| Peak BAC            | .02      | .05       | -.04     | .12       | -.024, .133 | 1.343 <sup>a</sup> | .21      |
| Typical BAC         | -.01     | .02       | -.04     | .06       | -.10, .069  | 1.448 <sup>b</sup> | .18      |

*NOTE:* BAC = Blood Alcohol Content. Music *n* = 11 and Verbal *n* = 9; *df* = 18, except as noted.

<sup>a</sup>*df* = 10.10

<sup>b</sup>*df* = 9.106

Levene's test for equality of variances was used to determine whether the assumption of equal variance was met. For variables that did not meet this assumption (peak BAC and typical BAC), degrees of freedom were adjusted downward. A *t*-test was then used to determine between-group differences for each variable. Estimates of effect size were calculated using an online calculator for *t*-tests (Becker, 2000).

*Drinking days per month.* The data for change in the number of drinking days per month met the assumption of equality of variance. Means and standard deviations by group at pretest and posttest are shown in Table 1 and for change scores by group in Table 2. The *t*-

test revealed there were no significant between group differences in change in the number of days drinking per month.

*Number of drinks per occasion.* The data for change in the number of drinks per occasion met the assumption of equality of variance. Means and standard deviations by group at pretest and posttest are shown in Table 1 and for change scores by group in Table 2. The *t*-test revealed there was a marginally significant between group difference in the number of drinks per occasion. An examination of change scores revealed that participants perceived the individual verbal session to be more likely to reduce the number of drinks per occasion.

*Peak BAC.* The data for change in peak BAC did not meet the assumption of equality of variance. Means and standard deviations by group at pretest and posttest are shown in Table 1 and for change scores by group in Table 2. The *t*-test revealed there were no significant between group differences in change of peak BAC levels.

*Typical BAC.* The data for change in typical BAC did not meet the assumption of equality of variance. Means and standard deviations by group at pretest and posttest are shown in Table 1 and for change scores by group in Table 2. The *t*-test revealed there were no significant between group differences in change of typical BAC levels

*Additional violations.* Additional violation data was obtained for students who participated in the first semester of the study ( $n = 17$ ). Of these participants, three received additional violations, with all three violations being alcohol related. Two of these, one from each group, occurred after the intervention.

*Survey responses.* Participants were asked to fill out anonymous surveys (see Appendix E) immediately following the intervention. This survey was completed by 12

participants from each condition. Table 3 shows percentage of responses by group to yes or no questions.

In addition, the postintervention questionnaire included four open-ended questions. When asked about the most important thing learned or gained from the session, three participants in the verbal condition indicated learning about BAC levels, and two identified expressing themselves as the most important things gained from the session. In the music condition, one participant did not answer this question. Ten participants in the music therapy condition had responses related to safety or responsibility when drinking. In response to the prompt “I intend to make the following changes or adjustments to my substance use decisions as a result of this experience...” Ten participants in the verbal condition discussed cutting down or discontinuing use of alcohol. In the music condition, seven students discussed setting limits for their drinking, decreasing drinking, or pacing their drinking. When asked if there was anything else the participant would like to share about their experience, ten participants from the verbal group responded with responses expressing appreciation for the counselor’s openness and understanding and the benefits of talking about their situation. One student commented that it “wasn’t as scary as I thought it was going to be.” Ten participants from the music therapy group answered this question, with seven of these comments being related to the music helping them to relax, interpret their emotions, make participation easier, and decrease stress. In response to the open-ended question, one student wrote “Music therapy made me have a much nicer outlook on therapy....”

Table 3

*Responses Completed Immediately Following Intervention to the Question, “Do you think the services you received today will contribute to . . .*

|  | Music | Verbal | $\chi^2(1)$ | <i>p</i> |
|--|-------|--------|-------------|----------|
| Engaging in safer drinking behaviors?                |       |        | 1.818       | .479     |
| Yes  | 100%  | 83%    |             |          |
| No   | 0%    | 17%    |             |          |
| A decrease in drinking behaviors?                    |       |        | 1.626       | .336     |
| Yes  | 58%   | 75%    |             |          |
| No   | 42%   | 25%    |             |          |
| A decrease in amount consumed on drinking occasions? |       |        | .606        | .617     |
| Yes  | 75%   | 83%    |             |          |
| No   | 25%   | 17%    |             |          |
| Preventing further violations?                       |       |        | .022        | 1.000    |
| Yes  | 92%   | 92%    |             |          |
| No   | 8%    | 8%     |             |          |

## **Chapter 5**

### **Discussion**

No significant between group differences were noted in change in number of drinking days per month, number of drinks per occasion, peak Blood Alcohol Content (BAC), or typical BAC. There was a marginally statistically significant decrease in drinks per occasion in the verbal therapy group. The Office of Student Conduct recorded few additional violations and these were equally distributed between the two groups.

The results of this study suggest that a single group music therapy session informed by motivational interviewing and harm reduction and using the BASICS feedback tool was equally as effective as a single, individual verbal therapy session in terms of number of drinking days per month, number of drinks per occasion, peak BAC, typical BAC, and receiving second substance related violations. Therefore, music therapy could be an effective way to address college campus drinking.

The lack of significant findings could be due to a variety of factors, including small sample size or legitimate lack of between group differences. The changes in drinking levels in the music therapy group could be related to the fact that these sessions were conducted in a group setting rather than an individual setting. This led to a greater variation of topics discussed in the verbal sessions, and the verbal sessions could be more individualized than the group music therapy sessions, which followed a more specific format.

The results of the survey indicated participants generally responded positively to the intervention, regardless of the condition in which they participated. This confirms previous research related to BASICS interventions (Fachini et al., 2012; Murphy et al., 2001), in which the results showed that participants preferred BASICS over other interventions.

As discussed in previous music therapy research, the music therapy intervention in this study provided participants with an outlet for self-expression (Dougherty, 1984), expression of feelings related to their situation, validation, and increased self-awareness (Cloud, 2010; Freed, 1987). While these were discussed specifically in the music therapy literature, these opportunities also were provided in the verbal therapy sessions.

More participants in the music therapy group completed their follow up measures than in the verbal therapy condition. One student commented on the survey that music therapy gave the participant a “nicer outlook on therapy.” This confirms findings by Silverman (2003), who reported that participants enjoyed music therapy and found the interventions to be effective. Additional comments from the participants support Cevasco and colleague’s (2005) findings that participants experienced decreases in depression, stress, anxiety, and anger after music therapy sessions. The present study also found that participants who attended music therapy sessions expressed a positive attitude toward treatment, consistent with previous findings that participants who attended music therapy sessions were more likely to attend aftercare sessions (Ross et al., 2008).

Consistent with the findings of Winkleman (2003), the music therapist noted an increase in connection with others in the music therapy sessions. Participants frequently did not know one another, but connected with one another through the music and discussions.

They frequently related to one another's stories and the feelings of anger and shame related to having received a violation.

The improvisation intervention used in the music therapy condition frequently revealed emotions or facets to the participants' drinking that he or she had not discussed spontaneously. This is consistent with Heiderscheid's (2009) findings that music offers an opportunity to express fragmented, elusive, and/or inaccessible emotions.

Music therapy with Harm Reduction and Motivational Interviewing (MI) has only been minimally explored prior to this study. Ghetti (2004) noted that music therapy may serve as a "gateway therapy." It may be that a positive experience through music therapy may encourage further treatment if and when needed.

This study did not confirm Cloud's (2010) findings that participants in the music therapy condition were more likely to report an increase in the recognition of the need to change their drinking behavior. While more participants in the music group predicted that the session would contribute to engaging in safer drinking behaviors, more participants in the verbal group predicted that the session would contribute to a decrease in drinking behavior and amount consumed on drinking occasions. The results of the study indicated that the music therapy group reported a slightly lower, but statistically insignificant, typical BAC and an equal number of second violations. This indicates there may have been some safer drinking behaviors; however, not to a statistically significant level, at least in this small sample. Similarly with the verbal therapy group, there was a small and not statistically significant decrease in drinking behavior and amount consumed.

## **Limitations**

There were a number of limitations in this study. Controlling for time in this study was very difficult. After receiving a violation, it was up to the student to initiate the Wellness Center process. This led to a wide variation of time elapsed between the violation and intake and pretest BASICS measures. Due to large caseloads, the amount of time between intake and session also varied greatly. Although data collection on follow up measures was attempted 6 weeks after the intervention, it was up to the participant to complete these measures.

This study did not control for any changes that may have happened between receiving the violation and the intervention as discussed by Morgan, White, and Mun (2008). Students were instructed to fill out the pretest measures to reflect the 30 days prior to receiving their violation. As students filled these out independently, there was no way to confirm the accuracy of the report. In some cases, there was a long period of time (up to a semester) in between the violation and intervention. Two factors created this situation: that it was the participant's responsibility to initiate the intervention, and that large caseloads at the Student Wellness Center caused long wait times for sessions.

The study also did not consider social anxiety and how it may relate to outcomes (Terlecki et al, 2011; Terlecki et al., 2012). The lack of control for this and other diagnostic differences may have influenced the results of the study.

There are many motivations for these participants to be untruthful about their alcohol use. The behavior being discussed is illegal and could have major repercussions for the participant. There also are moral and social implications related to drinking behavior. There was no way to confirm the accuracy of the participants' self-reports.

There were some differences between the two semesters that could have influenced the results of this study. There were major staff changes between the two semesters. There were also changes in the Office of Student Conduct policies, such that the BAC at which a student was placed on “specific” probation rather than “general” probation was lowered.

Although many of the sessions were completed by the same person, some of the verbal therapy sessions were completed by a different student therapist. Stylistic differences between the therapists could have affected the results of the study and the study included no measure of treatment fidelity. Furthermore, it is ethically sound practice to individualize sessions to the client, which resulted in a wide variety of topics being discussed. There was no way for the researcher to control for differences of topics discussed and how this related to outcomes.

### **Recommendations for Future Research**

Given the multitude of negative consequences related to college student drinking, this topic is important to explore. Recommendations for future research would include having a larger sample size and more consistent time frames, controlling for decreases in drinking related to simply receiving a violation, controlling for social anxiety, establishing a way to corroborate participants’ drinking levels, having consistent treatment throughout the course of the study, and attempting to control for inconsistencies between counselors. Future studies need to examine a dose response effect to see whether the impact on drinking behavior is positively affected by a series of sessions, rather than a single one. It may also be beneficial to use a control group in a study of this nature in the future.

## **Summary and Conclusion**

This study found that one group music therapy session informed by motivational interviewing and harm reduction may be as effective as a single individual verbal therapy session in decreasing alcohol use in college students. College drinking is an important topic to explore and harm reduction, MI, BASICS, and music therapy appear to be beneficial treatment modalities. Additional research on combining these modalities and exploring other modalities for this population is warranted due to the significant consequences of college drinking.

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## **APPENDICES**

## **Appendix A: Introduction to Study**

Thank you for your interest in participating in this study. If you agree to participate in this study, you will be randomly assigned to either individual verbal therapy or group music therapy. Whichever you are assigned to will satisfy your requirements for the Student Conduct Board. Participation in this study is completely optional and if you decide to not participate, this will not affect your ability to satisfy your Conduct requirements.

### **What is Music Therapy?**

Music therapy provides a non-judgmental, open environment to explore health coping skills and leisure activities among other topics pertinent to living a healthy lifestyle. **No musical training or experience is needed**, and a variety of musical experiences will be used. Sessions will be led by a board certified music therapist.

## **Appendix B: Consent to Participate in Research, Semester One**

### **Consent to Participate in Research**

*Information to Consider About this Research*

#### **Group Music Therapy versus Individual Verbal Therapy for Mandated College Students**

Principal Investigator: Shelby Rosenblum, MT-BC

Departments: Music Therapy and Clinical Mental Health Counseling

Contact Information: [rosenblums@appstate.edu](mailto:rosenblums@appstate.edu)

Faculty Advisor: Dr. Cathy McKinney: [mckinneych@appstate.edu](mailto:mckinneych@appstate.edu)

#### **What is the purpose of this research?**

- The purpose of this study is to explore ways to reduce underage drinking on college campuses.

#### **Why am I being invited to take part in this research?**

##### **Are there reasons I should not take part in this research?**

- You are eligible for participation in this study if you are an Appalachian State University student, at least 18 years old, and have been found for the first time to have violated ASU's alcohol policy.
- People who have multiple alcohol violations, a marijuana violation, a DUI or DWI, or required emergency medical attention due to alcohol poisoning will not be included in this study. Any students who requires more than one session will be excluded from the study.
- If you are not available either Wednesday evenings from 5-6 PM **or** Thursday evenings from 6:30-7:30 PM, you will be excluded from the study as this is when the music therapy groups will be offered.

#### **What will I be asked to do?**

- If you agree to participate in this study, you will be randomly assigned to either a group music therapy session (completed in Broyhill Music Center room 407) or individual verbal therapy session (completed in the Student Wellness Center). These visits will each take one hour. You will not have a choice in whether you participate in music or verbal therapy.
- You will be asked to complete the BASICS survey between today and your session, thinking back to your level of use prior to your violation. We will ask you to complete the BASICS survey again six weeks after the session, reporting your level of use at that time. This survey will ask you questions about your drug and alcohol use. Each time you take the survey it will take approximately fifteen to twenty minutes.
- You will also be asked to complete a brief survey following your session, which will take approximately five to ten minutes. This survey will ask you about your immediate reaction and plans following the session.
- The total time you will spend in this study will be approximately one hour and thirty five minutes to one hour and fifty minutes.

- The primary investigator will follow up with the office of student conduct to see if you have been found responsible for another drug and/or alcohol violation within six months after your session. The information that will be shared by the Office of Student Conduct will include if you have been found responsible for a drug and/or alcohol violation, and if so, what the specific violation(s) were.

**What are possible harms or discomforts that I might experience during the research?**

- To the best of our knowledge, the risk of harm and discomfort from participating in this research study is no more than would be experienced if you were completing your requirement without participating in the study.
- It is impossible to guarantee that the sessions will be without discomfort. You may find intense emotions emerge as a result of these sessions. If you find yourself becoming distressed at any point, we can refer you to someone who can help.
- Due to the nature of group therapy, we cannot guarantee that other group members will maintain your confidentiality. Similarly, we cannot guarantee confidentiality if you are seen coming into or out of one of the therapy rooms.
- You will be asked to discuss personal behavior and issues, but how much you disclose is up to you.

**Are there any reasons you might take me out of the research?**

- You may be removed from the study after consenting if you do not meet the criteria for the study.
- If you do not show up for your session, you will be removed from the study.

**What are possible benefits of this research?**

- These sessions will satisfy your requirement for the Office of Student Conduct.
- These sessions may help you to look at your substance use and identify changes you may be interested in making in your life.
- The information gained by doing this research may help others in the future.
- This research should help us learn more about decreasing drinking and multiple violations of alcohol codes in college student drinkers.

**Will I be paid for taking part in the research?**

- We will not pay you for the time you volunteer while being in this study.

**What will it cost me to take part in this research?**

- The study will not cost you any money. You may owe fees charged by the Office of Student Conduct as a part of your violation. These are not connected with this research.

**How will you keep my private information confidential?**

- Your private information will be kept confidential. Upon enrollment in the study, you will be assigned a random number. When we collect your data, we will associate them with your random number and not your name.

- Your confidentiality will be protected to the full extent of the law. There are some situations in which we will be required to break confidentiality, such as if you disclose that you are a danger to yourself or others; if you disclose abuse of a child, elderly, or disabled person; or in certain legal situations.
- Your attendance will be reported back to the Student Conduct Board in order to inform them that you have fulfilled your obligations. The content of your conversation in the session will not be disclosed at any point.
- Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about the combined information. You will not be identified in any published or presented materials.
- The Wellness Center records will be kept according to Wellness Center Policy. The anonymized research data will be kept for a minimum of three years.
- We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information or what that information is.

#### **Whom can I contact if I have a question?**

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact Shelby Rosenblum at 828-262-3148 or Dr. Cathy McKinney at 828-262-6444. If you have questions about your rights as someone taking part in research, contact the Appalachian Institutional Review Board Administrator at 828-262-2130 (days), through email at [irb@appstate.edu](mailto:irb@appstate.edu) or at Appalachian State University, Office of Research and Sponsored Programs, IRB Administrator, Boone, NC 28608.

#### **Do I have to participate?**

- Your participation in this research is completely voluntary. If you choose not to volunteer, there is no penalty or consequence. If you decide to take part in the study you can still decide at any time that you no longer want to participate. You will not lose any benefits or rights you would normally have if you do not participate in the study. While participation in this study is voluntary, you **must** complete counseling in order to satisfy your requirement for Student Conduct. If you withdraw from the study, you still must complete the counseling required of you by Student Conduct.

This research project has been approved on February 18, 2013 by the Institutional Review Board (IRB) at Appalachian State University. This approval will expire on February 17, 2014 unless the IRB renews the approval of this research.

#### **I have decided I want to take part in this research. What should I do now?**

If you have read this form, had the opportunity to ask questions about the research and received satisfactory answers, and want to participate, then sign the consent form and keep a copy for your records.

**Summary of what is expected of participants:**

- You must be 18 to 20 years old.
- You will complete your BASICS report.
- You will be randomly assigned to either verbal or music therapy.
- You will complete a survey at the end of the therapy session.
- You will complete a follow up BASICS report at six weeks.
- You will permit release of information to and from the Wellness Center and Office of Student Conduct, which will allow researchers to report your completion or non-completion of your requirement to the Office of Student Conduct and obtain follow up information on you. Specific information related to the release of your student disciplinary record can be found in the attached waiver and release.

**Which of the following times are you available? (Please check all that apply.)**

Wednesdays 5:00-6:00 PM

Thursdays 6:30- 7:30 PM

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Participant's Name (PRINT)

Signature

Date

**Appendix C: Waiver and Release of Student Disciplinary Records**



**WAIVER AND RELEASE OF STUDENT DISCIPLINARY RECORDS FOR STUDY  
“GROUP MUSIC THERAPY VERSUS INDIVIDUAL VERBAL THERAPY FOR  
MANDATED COLLEGE STUDENTS”**

I, \_\_\_\_\_, hereby authorize the Office of Student Conduct to release specific information in my student disciplinary record to Shelby Rosenblum, Principal Investigator, for the purpose of the above-referenced study. This will include (a) confirmation or denial of a finding of responsibility for a subsequent alcohol and/or drug violation and (b) information regarding the specific type of violation.

I waive my right to the confidentiality of my records to the extent that disclosure of them is made to the Principal Investigator pursuant to the “Consent to Participate in Research” and further waive any right I have to complain or pursue legal action against the Office of Student Conduct or Appalachian State University in connection with any discussions between the Office of Student Conduct and the Principal Investigator and/or the release of specific information from my student disciplinary record to the Principal Investigator.

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Printed Name*

## **Appendix D: Consent to Participate in Research, Semester Two**

### **Consent to Participate in Research**

*Information to Consider About this Research*

#### **Group Music Therapy versus Individual Verbal Therapy for Mandated College Students**

Principal Investigator: Shelby Rosenblum, MT-BC

Departments: Music Therapy and Clinical Mental Health Counseling

Contact Information: [rosenblumso@appstate.edu](mailto:rosenblumso@appstate.edu)

Faculty Advisor: Dr. Cathy McKinney: [mckinneych@appstate.edu](mailto:mckinneych@appstate.edu)

#### **What is the purpose of this research?**

- The purpose of this study is to explore ways to reduce underage drinking on college campuses.

#### **Why am I being invited to take part in this research?**

##### **Are there reasons I should not take part in this research?**

- You are eligible for participation in this study if you are an Appalachian State University student, at least 18 years old, and have been found for the first time to have violated ASU's alcohol policy.
- People who have received multiple alcohol violations, a marijuana violation, a DUI or DWI, or required emergency medical attention due to alcohol poisoning will not be included in this study.
- If you are not available either Wednesday evenings from 6-7 PM **or** Thursday evenings from 4-5 PM, you will be excluded from the study as this is when the music therapy groups will be offered.

#### **What will I be asked to do?**

- If you agree to participate in this study, you will be randomly assigned to either group music therapy (completed in Broyhill Music Center room 407) or individual verbal therapy (completed in the Student Wellness Center). These visits will each take one hour. You will not have a choice in whether you participate in music or verbal therapy.
- You will be asked to complete the BASICS survey between today and your session, thinking back to your level of use prior to your violation. We will ask you to complete the BASICS survey again six weeks after the session, reporting your level of use at that time. This survey will ask you questions about your drug and alcohol use. Each time you take the survey it will take approximately fifteen to twenty minutes.

- You will also be asked to complete a brief survey following your session, which will take approximately five to ten minutes. This survey will ask you about your immediate reaction and plans following the session.
- The total time you will spend in this study will be approximately one hour and thirty five minutes to one hour and fifty minutes or two hours and thirty five minutes to two hours and fifty minutes, depending on your specific requirement.

**What are possible harms or discomforts that I might experience during the research?**

- To the best of our knowledge, the risk of harm and discomfort from participating in this research study is no more than would be experienced if you were completing your requirement without participating in the study.
- It is impossible to guarantee that the sessions will be without discomfort. You may find intense emotions emerge as a result of these sessions. If you find yourself becoming distressed at any point, we can refer you to someone who can help.
- Due to the nature of group therapy, we cannot guarantee that other group members will maintain your confidentiality. Similarly, we cannot guarantee confidentiality if you are seen coming into or out of one of the therapy rooms.
- You will be asked to discuss personal behavior and issues, but how much you disclose is up to you.

**Are there any reasons you might take me out of the research?**

- You may be removed from the study after consenting if you do not meet the criteria for the study.
- If you do not show up for your session, you will be removed from the study.

**What are possible benefits of this research?**

- These sessions will satisfy your requirement for the Office of Student Conduct.
- These sessions may help you to look at your substance use and identify changes you may be interested in making in your life.
- The information gained by doing this research may help others in the future.
- This research should help us learn more about decreasing drinking and multiple violations of alcohol codes in college student drinkers.

**Will I be paid for taking part in the research?**

- We will not pay you for the time you volunteer while being in this study.

### **What will it cost me to take part in this research?**

- The study will not cost you any money. You may owe fees charged by the Office of Student Conduct as a part of your violation. These are not connected with this research.

### **How will you keep my private information confidential?**

- Your private information will be kept confidential. Upon enrollment in the study, you will be assigned a random number. When we collect your data, we will associate them with your random number and not your name.
- Your confidentiality will be protected to the full extent of the law. There are some situations in which we will be required to break confidentiality, such as if you disclose that you are a danger to yourself or others; if you disclose abuse of a child, elderly, or disabled person; or in certain legal situations.
- Your attendance will be reported back to the Student Conduct Board in order to inform them that you have fulfilled your obligations. The content of your conversation in the session will not be disclosed at any point.
- Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about the combined information. You will not be identified in any published or presented materials.
- The Wellness Center records will be kept according to Wellness Center Policy. The anonymized research data will be kept for a minimum of three years.
- We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information or what that information is.

### **Whom can I contact if I have a question?**

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact Shelby Rosenblum at 828-262-3148 or Dr. Cathy McKinney at 828-262-6444. If you have questions about your rights as someone taking part in research, contact the Appalachian Institutional Review Board Administrator at 828-262-2130 (days), through email at [irb@appstate.edu](mailto:irb@appstate.edu) or at Appalachian State University, Office of Research and Sponsored Programs, IRB Administrator, Boone, NC 28608.

### **Do I have to participate?**

- Your participation in this research is completely voluntary. If you choose not to volunteer, there is no penalty or consequence. If you decide to take part in the study you can still decide at any time that you no longer want to participate. You will not lose any benefits or rights you would normally have if you do not participate in the study. While participation in this study is voluntary, you **must** complete counseling in order to satisfy your requirement for Student Conduct. If you withdraw from the study, you still must complete the counseling required of you by Student Conduct.

This research project has been approved on February 18, 2013 by the Institutional Review Board (IRB) at Appalachian State University. This approval will expire on February 17, 2014 unless the IRB renews the approval of this research.

**I have decided I want to take part in this research. What should I do now?**

If you have read this form, had the opportunity to ask questions about the research and received satisfactory answers, and want to participate, then sign the consent form and keep a copy for your records.

**Summary of what is expected of participants:**

- You must be 18 to 20 years old.
- You will complete your BASICS report.
- You will be randomly assigned to either verbal or music therapy.
- You will complete a survey at the end of the therapy session.
- You will complete a follow up BASICS report at six weeks.
- You will permit release of information to and from the Wellness Center and Office of Student Conduct, which will allow researchers to report your completion or non-completion of your requirement to the Office of Student Conduct.

**Which of the following times are you available? (Please check all that apply.)**

Wednesdays 6:00-7:00 PM

Thursdays 4:00-5:00 PM

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Participant's Name (PRINT)

Signature

Banner ID

Date

## Appendix E: Follow up Survey

### FOLLOW UP QUESTIONS

Thank you for participating in this session today. Please answer the following questions as honestly as possible.

I participated in a **verbal** / **music** (circle one) therapy session today.

1) The most important thing(s) I have learned or gained from this session is...

2) I intend to make the following changes or adjustments to my substance use decisions as a result of this experience...

3) Do you think the services you received today will contribute to...

- Engaging in safer drinking behavior? YES \_\_\_ NO \_\_\_
- A decrease in drinking occasions? YES \_\_\_ NO \_\_\_
- A decrease in amount consumed on drinking occasions? YES \_\_\_ NO \_\_\_
- Preventing further violations? YES \_\_\_ NO \_\_\_

Comments:

4) What else would you like to share with us about your experience today?

*Thanks again for taking the time to participate in this study!*

## **Vita**

Shelby Oakley Rosenblum, MT-BC was born in Nashua, New Hampshire to Carien Schippers and Ronald Rosenblum. She grew up in Walton, New York and graduated from Walton High School in 2002. She completed her Bachelor of Music in Music Therapy in 2006 from Nazareth College in Rochester, New York and completed her internship in music therapy at River Oaks Hospital in New Orleans, Louisiana. She received her board certification in music therapy in 2007. After spending five years in New Orleans, Ms. Rosenblum moved to Boone, North Carolina to complete Masters Degrees in both Music Therapy and Clinical Mental Health Counseling at Appalachian State University. She also received Graduate Certificates from Appalachian State University in Expressive Arts Therapy and Addiction Counseling.