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The Use of Art and Music Therapy in Substance Abuse Treatment Programs

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Abstract

While the implementation of evidence-based practices (EBPs) in the treatment of substance use disorders (SUD) has attracted substantial research attention, little consideration has been given to parallel implementation of complementary and alternative medical (CAM) practices. Using data from a nationally representative sample (N = 299) of U.S. substance abuse treatment programs, this study modeled organizational factors falling in the domains of patient characteristics, treatment ideologies, and structural characteristics, associated with the use of art therapy and music therapy. We found that 36.8% of treatment programs offered art therapy and 14.7% of programs offered music therapy. Programs with a greater proportion of women were more likely to use both therapies, and programs with larger proportions of adolescents were more likely to offer music therapy. In terms of other treatment ideologies, programs' use of Motivational Enhancement Therapy (MET) was positively related to offering art therapy, while use of Contingency Management (CM) was positively associated with offering music therapy. Finally, our findings showed a significant relationship between requiring 12-step meetings and the use of both art therapy and music therapy. With increasing use of CAM in a diverse range of medical settings, and recent federal legislation likely to reduce barriers in accessing CAM, the inclusion of CAM in addiction treatment is growing in importance. Our findings suggest treatment programs may be utilizing art and music therapies to address unique patient needs of women and adolescents.

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Keywords

art therapy; music therapy; substance abuse treatment; treatment centers; substance use disorder; complementary therapies; alternative therapies

Introduction

While the importance of implementation of evidence-based practices (EBPs)in the treatment of substance use disorders (SUD) has attracted substantial research attention, (Carroll & Rounsaville, 2003; Compton et al., 2005; Institute of Medicine, 2006),little consideration has been given to parallel implementation of complementary and alternative medical (CAM) practices.CAM refers to non-mainstream treatments that are either used in addition to, or in lieu of, conventional treatment (National Center for Complementary and Alternative Medicine, 2013). CAM includes diverse treatments, such as art therapy, music therapy, hypnotherapy, acupuncture, and herbal remedies.

Data from the Centers for Disease Control and Prevention indicate the use of CAM has rapidly increased over time (Su & Li, 2011; Tindle, Davis, Phillips, & Eisenberg, 2005), with a recent estimate that 40% of adults use some form of CAM (Barnes, Bloom, & Nahin, 2008). Importantly, the Patient Protection and Affordable Care Act (PPACA) of 2010 includes specific encouragement of both increased insurance coverage and research concerning effectiveness of CAM techniques (“ PPACA,” 2010), while Section 2706 of the Act expressly forbids insurance companies from discriminating against any healthcare professional with a state recognized license. Further, CAM practitioners are specifically included in the PPACA's description of its patient-centered medical homes. These features of PPACA support suggest future expansion in the use of CAM technology.

A further dimension of CAM's potential importance lies in the fact that traditional approaches to SUD treatment have been criticized for not taking women's unique psychosocial needs, expectations, and social roles into account (Gordon, 2004; B. A. Miller, Wilsnack, & Cunradi, 2000; Tinney, Oser, Johnson, & Roman, 2004). By contrast, CAM has been regarded as being particularly useful for women and others with unique needs (Brady & Ashley, 2005; Feen-Calligan, Washington, & Moxley, 2008)).

In this paper we focus on two forms of CAM: art therapy and music therapy, and explore organizational contexts in which they are used. Understanding the context in which these therapies are utilized is an important component for designing diffusion efforts to enhance the use of art and music therapy, and possibly other CAM techniques, within SUD treatment.

Art Therapy

The use of art therapy in the treatment of SUDs dates back to the 1950s (Moore, 1983).The American Art Therapy Association (AATA) specifically acknowledges the role that art therapy can play in managing addictions (American Art Therapy Association, 2014).Main assumptions underlying art therapy are that the patient will be able to express him/herself through a non-verbal, imaginative, and creative exercise. Art therapy includes an array of

activities, including incident drawings (i.e., a drawing of an incident that occurred while using substances), drawing/painting emotions, stress painting (i.e., painting during times of anxiety and/or stress in order to relieve feelings of stress), creating an art journal, and creating sculptures. The majority of art therapy techniques for patients with SUDs employ a creative process, whereby the patient is creating art, but some select applications include interpretation and contemplation of established works of art (Feen-Calligan et al., 2008).

Extant research on the benefits of art therapy is widely documented, although the research designs limit conclusive generalization. These findings suggest several benefits for SUD patients, such as decreasing denial (Cox & Price, 1990), reducing opposition to alcoholism treatment (Allen, 1985), providing an outlet for communication (Harms, 1973; Moore, 1983), and lessening shame (Johnson, 1990). Viewing, discussing, and interpreting existing art can help in group discussions (Dewdney & Dewdney, 1970), and can motivate patients to change (Holt & Kaiser, 2009) by moving them away from reflection and into a state of action (Matto, Corcoran, & Fassler, 2003).

Music Therapy

Music therapy is a more recent development in SUD treatment, dating back to the 1970s (Baker, Gleadhill, & Dingle, 2007; A. S. Miller, 1970). Just like art therapy, it is thought to help patients tap into emotions and needs that may be difficult to express through more traditional forms of communication. Furthermore, music therapy also provides a way to motivate patients to receive treatment. The American Music Therapy Association (AMTA) states that music therapy is useful regardless of musical background, and examples of clinical music therapy include lyric analysis, relaxation training, songwriting, musical games, and improvising music based on emotions or other topics relevant to treatment. In these treatments, patients go beyond simply listening to music to engage emotions, motivations, and barriers to recovery through lyrics and melody (American Music Therapy Association, 2014).

Studies on music therapy have found numerous benefits for SUD patients. For example, songwriting and lyric analyses are related to positive emotional change in patients (Baker et al., 2007; Jones, 2005), drumming is associated with relaxation and can be useful for patients who have experienced repeated relapses (Winkelman, 2003), and activities in music therapy (e.g. movement to music) are associated with a decrease in anxiety, depression, anger, and stress, although data suggests that no one activity is more important than another (Cevasco, Kennedy, & Generally, 2005). In addition, music therapy is positively related to a willingness to participate in SUD treatment (Dingle, Gleadhill, & Baker, 2008).While music therapy is growing in popularity, a comprehensive meta-analysis concluded that the overall database is not adequate to establish music therapy as an EBP (Silverman, 2010), with the majority of studies being descriptive (Silverman, 2009).

Patient Characteristics

Conventional treatment approaches have often been criticized for failing to address women's unique needs, and research suggests that CAM could be a useful way to account for such needs (Brady & Ashley, 2005; Feen-Calligan et al., 2008). Research on art therapy suggests

that it is particularly useful when working with women who have experienced sexual assault (Glover, 1999), quite common among women in addiction treatment (Simpson & Miller, 2002; Wadsworth, Spampneto, & Halbrook, 1995). Art therapy is also thought to be an ideal technique for engaging adolescents, since this creative aspect provides an opportunity to take an inner experience to an outer visualization, which in turn can make them more amenable to treatment (Cox & Price, 1990). Indeed, past research has suggested the need for treatment models that are tailored to adolescents' unique needs (Vourakis, 2005). Music therapy is also asserted to be particularly helpful for adolescents and women (American Music Therapy Association, 2014; Cevasco et al., 2005; Feen-Calligan et al., 2008). Furthermore, Doak (2003) finds that adolescents, in particular, use music and drugs for similar objectives (e.g. reduce psychological distress), suggesting particular utility for music therapy in adolescent populations.

Combining Art and Music Therapy with Conventional Treatment Approaches

The use of art and music therapy fits well within specific existing ideological frameworks for treating SUDs that rely on actively engaging and motivating SUD patients (Dean, 2005).Motivational Interviewing (MI) is a therapeutic style that addresses client ambivalence and seeks to enhance clients' intrinsic motivation for change (W. R. Miller & Rollnick, 2002), and Motivational Enhancement Therapy (MET), a specific application of MI, promotes client engagement in treatment (W. R. Miller, Zweben, DiClemente, & Rychtarik, 1999; Polcin, 2002). Art and music therapy can be used toward all of these goals. Research has argued that art therapy employs "active, mind-body strategies" (Holt & Kaiser, 2009: 250) that fit well with the principles of MI/MET (Holt & Kaiser, 2009). Specifically, art therapy complements the MI/MET framework, as it utilizes the same cognitive processes of valuing, choosing, and deciding (Horay, 2006). It can be used to engage clients and enhance internal motivation for change through the creation of imagery (Holt & Kaiser, 2009). Research on music therapy over the past several decades has shown that this type of treatment can also increase client motivation and engagement (Blackett & Payne, 2005; Brooks, 1973; Cevasco et al., 2005; Murphy, 1983), and facilitate the exploration of emotions (Baker et al., 2007; De l'Etoile, 2002; Ghetti, 2004; Jones, 2005; Soshensky, 2001). Moreover, the ideal counselor characteristics for a motivational therapist (see, Rollnick et al., 2002) are congruent with qualities often associated with art therapists (Horay, 2006).

Most examples of scholarly work on art and music therapy and SUD treatment have linked these treatments with use of a 12-step model (Horay, 2006) and suggest complementarity with that approach. For example, past research has suggested that art therapy can facilitate the First Step, since tasks that tap the creative spark can break down resistance and facilitate acceptance of the disease (Cox & Price, 1990; Julliard, 1995).Additional research indicates how art therapy can effectively promote a 12-step model by creating positive images of recovery, which in turn break down resistance to receiving treatment (Feen-Calllgan, 1995; Potocek & Wilder, 1989).Furthermore, treatment centers that provide music therapy are often centers that rely upon a 12-step model (Silverman, 2009), and art therapy and music therapy is often provided by counselors who are trained in the 12-step model (Johnson, 1990; Silverman, 2009).

There is a lack of nationally representative data addressing the organizational settings of art and music therapy. In the current study, we assess the utilization and organizational correlates of art and music therapies in a national sample of SUD treatment centers by addressing three specific aims. First, we document the prevalence of both types of therapies in SUD treatment programs. Second, we examine the association between the use of art and music therapy and patient populations in a treatment program. Art and music therapies are promoted as important and useful types of treatment for specific patient populations; therefore, we examine how the proportion of women and adolescents in a treatment center encourages the use of art and music therapy. Finally, we highlight the relationship between the use of EBPs and implementation of art and music therapies in the treatment center.

Method

Data for this study were collected between June 2009 and January 2012 from a national sample of SUD treatment organizations. Centers for the study were randomly sampled from the Substance Abuse Treatment Facility Locator, a directory supported by the Substance Abuse and Mental Health Services Administration (SAMHSA). Requirements for inclusion in this study focused on treatment programs that were open to the general public and that offered a minimum level of care at least equivalent to structured outpatient services, as defined by the American Society of Addiction Medicine's placement criteria (Mee-Lee, Gartner, Miller, Shulman, & Wilford, 1996). Treatment programs had at least 25% of their patients admitted with alcohol as a primary substance abuse problem. These criteria excluded counselors in private practice, transitional living facilities, Veterans Health Administration facilities, correctional facilities, court-ordered driver education classes or detoxification-only programs, and methadone-only treatment programs. Centers screened as ineligible during a telephone screening were replaced by a random selection of alternate treatment centers. The research procedures were approved by the Institutional Review Board of the University of Georgia.

Data were collected using face-to-face interviews with the administrator and/or clinical director of each treatment program. Interviews were conducted by a team of trained interviewers with at least a bachelor's level of education. The final randomly selected sample resulted in 307 treatment programs, a response rate of 68% among eligible organizations.

Measures

Dependent Variables

We used two dependent variables for our analyses – art therapy and music therapy. Interviewees indicated whether or not these approaches were used in the organization. Treatment programs that used *art therapy* or *music therapy*, respectively, were coded “1” and non-users were coded “0” on the dichotomous variables.

Independent Variables

Two continuous measures of patient characteristics were included: percentage of female patients and percentage of adolescent patients.A series of dichotomous variables indicated whether the following types of EBPs were used in the treatment program: medication-

assisted treatment, motivational enhancement therapy (MET), and contingency management (CM), also known as motivational incentives. We excluded cognitive behavioral therapy (CBT) from our analyses because of its near-universal presence. Treatment orientation was measured by a dichotomous variable denoting whether 12-step meetings were required.We controlled for several organizational variables. Program size was measured by the number of full-time equivalent employees (FTEs); the measure was log-transformed to adjust for skew. Program age was measured as a continuous variable. Accreditation by the Joint Commission or the Commission on Accreditation of Rehabilitation Facilities (CARF), and receipt of revenues from Medicaid were dichotomous variables. Workforce professionalism was measured by the percentage of counselors with a Master's degree or higher.

Analytic Strategy

First, we examined descriptive statistics of the study variables. Next, we performed two logistic regressions to identify patient characteristics, other treatment practices, and organizational characteristics associated with the availability of art therapy and music therapy. Diagnostic tests revealed no evidence of multicollinearity. For this analysis, 8 cases (2.6% of the sample) that were missing on any of the study variables were excluded from analysis, resulting in a sample of 299 treatment programs. Little's test indicated that cases were missing completely at random. Analyses were conducted using STATA 13.

Results

Descriptive statistics are presented in Table 1. Overall, 36.8% of programs used art therapy and 14.7% used music therapy, with 11.7% using both (not shown). We report use of two other forms of CAM – hypnotherapy and acupuncture – to offer a broader perspective on CAM use and to explain our focus on art and music therapy. Just 3.3% of programs offered hypnotherapy and 8% offered acupuncture to their patients. The small number of programs using the latter two forms of alternative therapies precluded further multivariate analyses. The mean for percent female patients and percent adolescent patients was 34.9% and 10.8%, respectively. Turning to the other types of treatments offered, 42.5% of programs used medication-assisted treatment, almost half (47.8%) used MET, and 39.1% used CM. All of the centers using medications also used at least one of the psychosocial therapies. Just over half of the programs (53.1%) required 12-step meetings for their patients. The average logged program size was 2.6, which represented 27.1 FTEs (the median was 12.5 FTEs), while the average age of a treatment program was 28.4 years. Around 37% of programs were accredited by either the Joint Commission or CARF, and more than half of the programs (61.5%) received revenues from Medicaid. Finally, programs reported that, on average, 43.8% of their counselors held at least a Master's degree level of education.

The results of the multivariate logistic regression predicting whether programs offered art therapy are displayed in Table 2. Programs with a higher percentage of female patients were significantly more likely to offer art therapy (OR=1.011). The percentage of adolescent clients was also positively associated with the use of art therapy but this did not reach standard level significance (OR=1.010). Programs that used MET were significantly more likely to offer art therapy (OR=1.682)), while the use of CM or of medication-assisted

treatment was not significant. Centers that required 12-step meetings for their patients were also significantly more likely to use art therapy. More specifically, the odds of providing art therapy were 2.12 higher in programs that required 12-step meetings than in programs that did not have such a requirement. Two organizational characteristics were significant in the model, with size positively associated with the use of art therapy (OR=1.550) and the receipt of Medicaid revenues negatively associated with offering art therapy (OR=.514).

Logistic regression results examining factors associated with offering music therapy are presented in Table 3. Programs with a higher percentage of female patients (OR=1.014) and programs with a higher percentage of adolescent patients were significantly more likely to offer music therapy (OR=1.016). There was also a positive association between offering music therapy and the use of other psychosocial therapies. Specifically, the odds of providing music therapy were 4.47 higher in centers that offered CM compared to centers that did not offer CM, but the use of MET or of medication-assisted treatment was not significant. Finally, the requirement of 12-step meetings was positively associated with the use of music therapy (OR=2.628).

Discussion

We examined the provision of two complementary and alternative treatment practices, art therapy and music therapy, in a nationally representative sample of U.S. substance abuse treatment programs. Art and music therapy have a history of suggested effectiveness with specific patient populations, and our findings extend understanding of how patient characteristics are associated with various types of treatment. The percentage of patients in a program who were adolescents was positively associated with offering music therapy and percentage of patients who were women was positively related to offering both art and music therapies. The governing bodies for art therapy and music therapy (AATA and the AMTA, respectively) both endorse their use for these groups of patients. Women's unique psychosocial needs and social roles suggest that traditional treatment approaches may not be as effective for them (Gordon, 2004; B. A. Miller, Wilsnack, & Cunradi, 2000; Tinney, Oser, Johnson, & Roman, 2004). Further, adolescent patients may find music therapy especially appealing, given their use of music in daily life (Doak, 2003). Recent research suggests that using music therapy with hospitalized youth offers them a safe way to internalize a healthy self-image alongside their patient identity (O Callaghan, Dun, Baron, & Barry, 2013). Our finding that an increase in the percentage of adolescent patients is associated with offering music therapy demonstrates how treatment centers may be accommodating their adolescent population with a treatment model that better serves their needs (Vourakis, 2005).

For many years, scholars have associated art and music therapy with the 12-step model, and assumed that art therapy could supplement and enhance an already successful model of treatment. Our findings showed a positive and significant relationship between requiring 12-step meetings as part of treatment and the use of both art therapy and music therapy. This finding supports previous research that links the use of art and music therapy with a 12-step model (Johnson, 1990), and suggests that treatment centers continue to pair these treatments with a 12-step approach.

Our analyses explored how different categories of psychosocial treatment are related to the use of art and music therapy, and we found differing patterns among the use of psychosocial treatment and the use of these therapies. SUD treatment centers' use of MET was positively related to providing art therapy, a notable finding for those suggesting the evident link between MET and the use of art therapy (Holt & Kaiser, 2009; Horay, 2006). Further, training in MET could be linked to training in art therapy for those interested in expanding and diversifying the purview of specific types of treatment methods. MET was not associated with the use of music therapy; although, CM was positively related to the use of music therapy. Neither the provision of art therapy nor the provision of music therapy was associated with medication-assisted treatment. Just two of the organizational characteristics proved significantly related to the use of art therapy. Organization size had a positive association with the use of therapy while receiving revenues from Medicaid was negatively associated with the use of art therapy. This may suggest that some Medicaid plans are unlikely to reimburse for art therapy, or that barriers exist for centers attempting to claim reimbursement. While some CAM therapies have become increasingly covered under state Medicaid formularies (Steyer, Freed, & Lantz, 2002), the national coverage of art and music therapy is understudied.

Limitations

Several limitations of the current study should be noted. First, the findings cannot be generalized to treatment programs located in Veterans Health Administration facilities or based in correctional facilities, since these were excluded from the study. These data are cross-sectional, restricting our ability to make causal arguments. Finally, our data do not allow us to examine whether these therapies are typically being used as part of a multi-dimensional treatment approach (i.e. complementary) for patients, or as a sole intervention in place of conventional care (e.g. alternative).

Conclusion

The utilization of art and music therapy within SUD treatment centers has been understudied. However, with increasing use of CAM in a diverse range of medical settings, and recent federal legislation likely to reduce barriers in accessing CAM (“ PPACA, ” 2010), the inclusion of CAM in addiction treatment may grow in importance. Our study addressed three specific components of art and music therapy in addiction treatment. We assessed the prevalence of their use, the relationship between treatment centers' patient characteristics and the use of art and music therapy, and the associations between other treatment modalities and art and music therapy.

Patient characteristics were associated with the use of art and music therapies. Previous research highlights the difference between chemically dependent men and women, suggesting a need for different treatments (Brady & Ashley, 2005; Feen-Calligan et al., 2008). Our findings illustrate that centers with a greater proportion of women are more likely to use art and music therapies, suggesting that women are receiving treatment that is effective for their SUD. Further, we found that centers with larger proportions of adolescents

were more likely to use music therapy. Our findings suggest treatment centers may be utilizing art and music therapies to address unique patient needs.

While the use of art and music therapy in U.S. substance abuse treatment programs was relatively uncommon, their use was associated with other treatment modalities. Centers' use of the 12-step approach was positively associated with art and music therapy. Additionally, centers' use of MET was also positively related to art therapy and use of CM was positively associated with music therapy. This could suggest that art and music therapies are being used as complements to other psychosocial treatments, which may ultimately improve patient outcomes by offering more robust treatment options (MW. R. iller et al., 1999).

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Table 1

Descriptive Statistics

Complementary and Alternative Therapies	**% or mean**	**(n) or (SD)**
Offers Art Therapy	36.79	(110)
Offers Music Therapy	14.72	(44)
Offers Acupuncture	8.03	(24)
Offers Hypnotherapy	3.34	(10)
Independent Variables		
Percent female patients	34.87	(23.58)
Percent adolescent patients	10.80	(23.36)
Uses medication-assisted treatment	42.47	(127)
Uses Motivational Enhancement Therapy	47.83	(143)
Uses Contingency Management	39.13	(117)
Requires 12-step meetings	53.18	(159)
Organization size (logged)	2.58	(1.09)
Age	28.45	(16.59)
Accredited	36.79	(110)
Receives revenues from Medicaid	61.54	(184)
Percent counselors with Master's degree or higher	43.80	(35.10)

N=299

Table 2

Logistic Regression of Art Therapy on Patient Characteristics and Evidence-Based Practices (N=299)

	b	(SE)	OR	(95% CI)	
Percent female patients	0.011	(0.005)	1.011	(1.000, 1.022)	*
Percent adolescent patients	0.010	(0.006)	1.010	(.998, 1.022)	†
Uses medication-assisted treatment	0.222	(0.293)	1.248	(.703, 2.216)	
Uses Motivational Enhancement Therapy	0.520	(0.261)	1.682	(1.009, 2.805)	*
Uses Contingency Management	0.453	(0.275)	1.573	(.917, 2.699)	
Requires 12-step meetings	0.753	(0.278)	2.124	(1.231, 3.664)	**
Organization size (logged)	0.438	(0.155)	1.550	(1.144, 2.101)	**
Age	-0.011	(0.009)	0.989	(.971, 1.006)	
Accredited	-0.122	(0.298)	0.885	(.493, 1.587)	
Receives revenues from Medicaid	-0.665	(0.290)	0.514	(.291, .908)	*
Percent counselors with Master's degree or higher	0.000	(0.004)	1.000	(.991, 1.008)	

† p<.1;

* p<.05;

** p<.01;

*** p<.001

Table 3

Logistic Regression of Music Therapy on Patient Characteristics and Evidence-Based Practices (N=299)

	b	(SE)	OR	(95% CI)	
Percent female patients	0.014	(0.007)	1.014	(1.000, 1.027)	*
Percent adolescent patients	0.016	(0.006)	1.016	(1.004, 1.029)	*
Uses medication-assisted treatment	0.295	(0.409)	1.343	(.603, 2.993)	
Uses Motivational Enhancement Therapy	0.442	(0.365)	1.556	(.761, 3.183)	
Uses Contingency Management	1.498	(0.399)	4.471	(2.046, 9.774)	***
Requires 12-step meetings	0.966	(0.419)	2.628	(1.157, 5.971)	*
Organization size (logged)	-0.113	(0.200)	0.893	(.603, 1.321)	
Age	0.000	(0.012)	1.000	(.976, 1.025)	
Accredited	0.619	(0.399)	1.858	(.850, 4.059)	
Receives revenues from Medicaid	-0.565	(0.389)	0.569	(.265, 1.219)	
Percent counselors with Master's degree or higher	-0.004	(0.006)	0.996	(.985, 1.007)	

† p<.1;

* p<.05;

** p<.01;

*** p<.001