Journal of Substance Abuse Treatment 45 (2013) 400–408

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Regular articles

A randomized controlled trial of a group motivational interviewing intervention for adolescents with a first time alcohol or drug offense

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ARTICLE INFO

Article history:
Received 15 January 2013
Received in revised form 10 June 2013
Accepted 12 June 2013

Keywords:
Adolescents
Group motivational interviewing
Alcohol
Drugs
Delinquency
Recidivism

ABSTRACT

Group motivational interviewing (MI) interventions that target youth at-risk for alcohol and other drug (AOD) use may prevent future negative consequences. Youth in a teen court setting [$n = 193$; 67% male, 45% Hispanic; mean age 16.6 ($SD = 1.05$)] were randomized to receive either a group MI intervention, *Free Talk*, or usual care (UC). We examined client acceptance, and intervention feasibility and conducted a preliminary outcome evaluation. *Free Talk* teens reported higher quality and satisfaction ratings, and MI integrity scores were higher for *Free Talk* groups. AOD use and delinquency decreased for both groups at 3 months, and 12-month recidivism rates were lower but not significantly different for the *Free Talk* group compared to UC. Results contribute to emerging literature on MI in a group setting. A longer term follow-up is warranted.

1. Introduction

An unacceptably high proportion of youth still report using alcohol (33% of 8th graders, 70% of 12th graders) and marijuana (16% of 8th graders, 45% of 12th graders) in their lifetime (Johnston, O'Malley, Bachman, & Schulenberg, 2012). It is well known that regular use of alcohol and other drugs (AOD) during adolescence is associated with serious negative consequences. For example, many youth report having unprotected sex while under the influence of AOD (Levy, Sherritt, Gabrielli, Shrier, & Knight, 2009), and AOD use is associated with poorer physical and mental health and delinquent behavior (D'Amico, Edelen, Miles, & Morral, 2008; Ford, 2005). In addition, AOD use during this developmental period may significantly affect normal brain maturation and cognitive development (Manzar, Cervellione, Cottone, Ardekani, & Kumra, 2009; Tapert & Schweinsburg, 2005), and increase the likelihood of psychosocial, health, emotional, and financial problems in early and late adulthood (Aseltine & Gore, 2005; Brown et al., 2009; Jackson & Sartor, in press; Oesterle, Hill, Hawkins, Guo, & Catalano, 2004; Patton et al., 2007).

Interventions that target at-risk youth who report AOD use may reduce the risk of these consequences by potentially decreasing use before more intensive treatment is required. One approach that has demonstrated particular promise with youth of different ages and races/ethnicities is motivational interviewing (MI) (Miller & Rollnick, 2012; Rollnick, Miller, & Butler, 2008). The transportability of MI has made it ideal in reaching youth across a variety of settings, including juvenile justice, medical clinics, homeless shelters, and schools (Baer, Garrett, Beadnell, Wells, & Peterson, 2007; D'Amico, Miles, Stern, & Meredith, 2008; Feldstein & Ginsburg, 2006; Martin & Copeland, 2008; McCambridge, Slym, & Strang, 2008; Peterson, Baer, Wells, Ginzler, & Garrett, 2006; Spirito et al., 2004; Stein et al., 2011; Walker, Roffman, Stephens, Wakana, & Berghuis, 2006). Not only is this collaborative and strength-based intervention transportable, it has also been shown to be effective across a number of substance use and health risk behaviors (Hettema, Steele, & Miller, 2005; Jofre-Bonet & Sindelar, 2001; Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). Moreover, it appears to be particularly effective at facilitating therapeutic alliance with individuals ambivalent to behavioral change, such as non-treatment-seeking youth who report at-risk AOD use (D'Amico, Miles, et al., 2008; McCambridge et al., 2008; Peterson et al., 2006). Additionally, studies using qualitative methods have suggested that the MI approach resonates with adolescents, with high percentages of youth reporting that they enjoyed the MI intervention and would recommend it to a friend (D'Amico, Osilla, & Hunter, 2010; D'Amico, Osilla, et al., 2012; D'Amico, Tucker, et al., 2012; Martin & Copeland, 2008; Stern, Meredith, Gholson, Gore, & D'Amico, 2007). This is likely due to the non-judgmental, empathic, and collaborative approach of MI (Miller, Villanueva, Tonigan, & Cuzmar, 2007), whereby adolescents' own values, opinions, and arguments for change are emphasized and reflected as part of the therapeutic discussion.

MI approaches have typically been delivered in one-on-one (i.e., individualized) interventions and only recently has this approach been used in group settings with youth (D'Amico, Feldstein, et al.,

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http://dx.doi.org/10.1016/j.jsat.2013.06.005

2010; Wagner & Ingersoll, 2012). Currently, there is only one published randomized controlled trial (RCT) that has examined MI in a group setting with at-risk youth. This study included a single-session of group motivational enhancement therapy (MET) to augment an intervention targeting risky sexual behavior among youth ($n = 484$) in detention centers (Schmiege et al., 2009). MET is an adaptation of MI that includes one or more sessions in which normative feedback is presented to the client and discussed in an explicitly non-confrontational manner (Miller, 2000). In this study, youth randomized to the augmented intervention received an additional component addressing risky alcohol use and its relation to sexual risk-taking behavior. Youth were provided with feedback regarding their alcohol use. Fidelity checks were conducted throughout the study to ensure that the intervention material was covered and that facilitators were using MET. Three-month outcome data revealed that youth who received the session with the MET component showed greater reductions in sexual risk behavior compared to youth in a control group that only received the sexual risk reduction intervention (Schmiege et al., 2009), suggesting the efficacy of group MI to reduce risk behaviors.

Another small quasi-experimental study conducted group MI among adolescents and young adults ages 14–20 who were receiving treatment for substance abuse or dependence (Breslin, Li, Sdao-Jarvie, Tupker, & Ittig-Deland, 2002). They compared youth who sought additional help (First Contact program; $n = 22$) and youth who did not seek additional help ($n = 28$). The First Contact program provided four group sessions, including structured feedback, addressing the costs and benefits of change, identifying high-risk situations associated substance use, discussing life goals and how substance use affects the achievement of these life goals, and learning about the "stages of change" concept. They indicated that the intervention was delivered using MI. They found that receiving the First Contact program was associated with reduced use and consequences and increased confidence in high-risk situations up to 6 months after youth started the program (Breslin et al., 2002).

Overall, findings using MI with at-risk youth in an individual format have been mixed (Spas, Ramsey, Paiva, & Stein, 2012). Some studies have shown that MI is effective in reducing AOD use and consequences in the short- and long-term (D'Amico, Miles, et al., 2008; Grenard, Ames, Pentz, & Sussman, 2006; Stein et al., 2011), whereas other studies with at-risk youth have not found any significant effects (Baer et al., 2007; Thush et al., 2009). A recent meta-analysis by Jensen et al. that examined 25 studies utilizing individual MI with adolescents age 12–22 found that 11 of the 25 studies had an effect size (ES) of .30 or less (a small effect) and 7 had an ES of .20 or less. Furthermore, this meta-analysis showed that most adolescent MI studies had samples of youth that were mainly white (Jensen et al., 2011).

The current study adds substantially to the literature in this area by evaluating a group MI intervention, *Free Talk* (D'Amico, Osilla, et al., 2010), for an ethnically diverse group of youth with a first time AOD offense. This stage 1b study (Rounsaville, Carroll, & Onken, 2001) was focused on (a) understanding client acceptance of *Free Talk*; (b) determining the feasibility of training facilitators to deliver MI in the group setting by examining and reporting treatment integrity and adherence; and (c) conducting a preliminary evaluation of *Free Talk's* efficacy. We expected that youth in *Free Talk* would find the intervention acceptable and satisfactory compared to usual care (UC) given the extensive testing we conducted of the MI group protocol (D'Amico, Osilla, et al., 2010). We also expected that facilitators would be able to deliver MI with integrity and adherence in the group setting. We further hypothesized that youth who participated in *Free Talk* would report better outcomes at 3 months compared to a UC group on a variety of measures, including past month alcohol and marijuana use, consequences, delinquency, and AOD use before sex. We also collected recidivism data during the year following their initial offense and expected that the *Free Talk* group would have lower rates of recidivism compared to the UC group.

2. Materials and methods

2.1. Setting

We collaborated with the Council on Alcoholism and Drug Abuse (CADA) in Santa Barbara County. CADA is a nonprofit community-based organization that operates a diversion program called Santa Barbara Teen Court (SBTC) that serves families in south Santa Barbara County. Adolescents who commit a first-time offense and are deemed by the Probation department as not in need of more intensive intervention are offered the opportunity to participate in the Teen Court program in lieu of formal processing in the juvenile justice system. As part of this voluntary program, youth who commit an AOD offense receive six AOD education groups, along with other sanctions (e.g., community service, service on the Teen Court jury, and fees). Adolescents who successfully complete their Teen Court requirements have their AOD offense expunged from their juvenile probation record.

2.2. Design and randomization

Parents and youth who had agreed to participate in the Teen Court program were recruited to be in the study. To be part of the study, they had to consent and assent to (1) complete surveys and (2) to be randomized to either the MI intervention group (*Free Talk*) or the usual care (UC) group based on a permuted block randomization procedure. Each group of five participants was randomized 3:2, with three teens assigned to the *Free Talk* group and two teens to the control group. This unequal randomization procedure ensured that there were always a sufficient number of participants in the *Free Talk* group to allow the group to run successfully. An unequal randomization strategy is appropriate in such circumstances, and has only a small effect on power (Dumville, Hahn, Miles, & Torgerson, 2006). The UC participants in our study attended a group that also included attendees that were not eligible for our study because they did not meet study criteria (e.g., they were under the age of 14; they had a medical marijuana prescription card; or they had a different offense); however, all youth in the usual care group, whether in our study or not reported AOD problems.

2.3. Intervention condition: Free Talk groups

Free Talk was developed over a 1 year period using a stage based approach (Rounsaville et al., 2001) that involved iterative testing of each session to determine feasibility and acceptability of intervention content (D'Amico, Osilla, et al., 2010). From this testing, we developed a protocol for each of the six sessions. All content was delivered using an MI approach (Miller & Rollnick, 2012; Rollnick et al., 2008). *Free Talk* facilitators were four psychology doctoral graduate students at the University of California, Santa Barbara who all had prior experience working with at-risk teens. At the beginning of each session, the facilitator discussed the guidelines and rules for the group (e.g., confidentiality, respect for others in the group) as one would do in any group setting. These guidelines were provided in an MI consistent way (e.g., asking permission to discuss the rules with group members) with the focus on supporting MI adherent actions among the group members (D'Amico, Osilla, et al., 2012). MI strategies were used in every session to deliver content (D'Amico, Feldstein Ewing, et al., 2010; D'Amico, Osilla, et al., 2010). Specifically, the facilitator discussed the pros and cons of continued AOD use versus cutting back or quitting, used willingness and confidence rulers to determine where teens were in terms of wanting to change (or not change) their AOD use, and supported where teens were at in terms of their AOD