



Published in final edited form as:

*Alcohol Treat Q.* 2010 October ; 28(4): 417–436. doi:10.1080/07347324.2010.511076.

## Developing a Group Motivational Interviewing Intervention for Adolescents At-Risk for Developing an Alcohol or Drug use Disorder

Elizabeth J. D'Amico, Ph.D., Karen Chan Osilla, Ph.D., and Sarah B. Hunter, Ph.D.

### Abstract

This study examined how teens who had committed a first-time alcohol or other drug (AOD) offense responded to a motivational interviewing (MI) group intervention. Participants were 101 first-time AOD adolescent offenders ( $M=15.88$ ; 63% male, 54% Hispanic). We developed and tested a six-session curriculum called Free Talk and solicited feedback from different teens after each session. Groups were recorded and transcribed. Feedback was categorized using the Motivational Interviewing Treatment Integrity scale (MITI 3.0). Feedback indicated high levels of evocation, collaboration, autonomy/support, and empathy. The current study highlights that utilizing group MI can be an acceptable approach for at-risk youth.

### Keywords

adolescents; motivational interviewing; group; alcohol and drug use

---

Youth who are beginning to experience problems from their alcohol or drug use are at significant risk of experiencing serious negative consequences (Johnston, O'Malley, Bachman, & Schulenberg, 2009). Teens who begin to use alcohol more heavily during adolescence are more likely to report unsafe sex (Yan, Chiu, Stoesen, & Wang, 2007; Zimmer-Gembeck & Helfand, 2008), which can lead to high rates of both sexually transmitted diseases and HIV among this population (Kaiser Foundation, 2006). Regular alcohol use during this period is also associated with an increased likelihood of engaging in violence (Felson, Teasdale, & Burchfield, 2008); and regular marijuana use during adolescence is related to poorer physical and mental health, using other illicit drugs, experiencing drug-related problems (Ellickson, D'Amico, Collins, & Klein, 2005; Green & Ritter, 2000; Kandel & Chen, 2000; Morojele & Brook, 2001) and juvenile offending (D'Amico, Edelen, Miles, & Morral, 2008; Fergusson, Lynskey, & Horwood, 1996). In addition, heavy alcohol and marijuana use during this developmental period may affect normal brain maturation and cognitive development (Manzar, Cervellione, Cottone, Ardekani, & Kumra, 2009; Medina et al., 2007; Tapert & Schweinsburg, 2005), and can lead to a higher likelihood of developing a substance abuse or dependence disorder in adulthood (D'Amico, Ellickson, Collins, Martino, & Klein, 2005; Hingson, Heeren, & Winter, 2006; Merline, Jager, & Schulenberg, 2008). The presence of an alcohol use disorder in adulthood is also a strong predictor of morbidity and premature mortality (Laatikainen, Poikolainen, & Vartiainen, 2003; Rehm, Greenfield, & Rogers, 2001).

Recent work with at-risk adolescents has shown that individual interventions that utilize a motivational interviewing (MI) style (Miller & Rollnick, 2002) can be an effective way to reach these youth as it offers a collaborative, non-judgmental and non-confrontational communication approach. This may be particularly important for youth that are just starting to experience negative consequences from their use, such as a misdemeanor alcohol or other drug (AOD) offense, as they may be reluctant to recognize that their use is a problem. In fact, most youth that present for treatment are mandated to attend by the criminal justice system or by their parents (Dennis, Titus, Diamond, & et al., 2002) and therefore may be naturally resistant to such efforts. MI has demonstrated effectiveness for oppositional clients (Project MATCH Research Group, 1997) and mandated populations (Barnett, Murphy, Colby, & Monti, 2007; Barnett et al., 2004; Borsari, Tevyaw, Barnett, Kahler, & Monti, 2007; Lincourt, Kuettel, & Bombardier, 2002); and may also be helpful as a treatment adjunct for juvenile justice settings (Feldstein & Ginsburg, 2007; Ginsburg, Mann, Rotgers, & Weekes, 2002).

MI approaches have typically been delivered in one-on-one (i.e., individualized) interventions. These interventions tend to be brief (1–4 sessions) and range from 15–45 minutes per session. The acceptance of the MI approach with at-risk youth has enabled these types of interventions to be adapted across a variety of settings, including the emergency room (Barnett, Monti, & Wood, 2001; Monti et al., 2007), primary care (D'Amico, Miles, Stern, & Meredith, 2008), juvenile justice (Stein, Colby, Barnett, Monti, Golembeske, & Lebeau-Craven, 2006), school settings (Grenard et al., 2007), and with homeless youth (Baer, Garrett, Beadnell, Wells, & Peterson, 2007; Peterson, Baer, Wells, Ginzler, & Garrett, 2006). Findings have been positive, with youth who received the MI interventions reporting reductions in both AOD use (D'Amico et al., 2008; Grenard et al., 2007; Monti et al., 2007; Peterson et al., 2006) and consequences from AOD use (Monti et al., 2007; Stein, Colby, Barnett, Monti, Golembeske, & Lebeau-Craven, 2006) up to 12-months after the intervention.

In contrast to the MI research conducted with youth in individual settings, there is limited research examining acceptability and feasibility of interventions that use MI in group settings (D'Amico et al., in press; Feldstein Ewing, Walters, & Baer, in press). In addition, we are not aware of any published work that has incorporated MI into a selective curriculum targeting youth who have committed a first-time offense related to alcohol or marijuana. The current paper aims to fill this gap by examining the acceptability of group MI for misdemeanor offending youth.

The group format is commonly used with teens in AOD treatment settings (Kaminer, 2005). Group work with youth is cost-effective (French, Zavala, McCollister, Waldron, & Ozechowski, 2008) and may be a more practical and less intimidating approach for youth compared to individual interventions as it is similar to their day-to-day experiences and peer interactions (Feldstein Ewing et al., in press). Although some research has found that group work for youth is ineffective and may be iatrogenic—that is—it may increase risk behaviors (Dishion, McCord, & Poulin, 1999; Dodge, Dishion, & Lansford, 2006), a recent meta-analytic review of over 66 studies in which adolescents received group AOD treatment from either professional or paraprofessional providers found little evidence to support the iatrogenic hypothesis (Weiss et al., 2005). Other researchers have concluded that working with at-risk youth in a group setting is safe, effective and comparable to working with these youth individually (e.g., Burlison, Kaminer, & Dennis, 2006; Kaminer, 2005; Vaughn & Howard, 2004; Waldron & Turner, 2008).

MI is ideal for working with groups as it encourages group communication and collaboration, two components that are strongly related to successful outcomes (Ennett et al.,

2003; Tobler et al., 2000; Tobler & Stratton, 1997). Feldstein Ewing and colleagues (in press) have summarized two important considerations that differentiate group from individual MI such as: 1) working with the interpersonal dynamics of the group (e.g., monitoring between-client conversations; group cohesion; peer influence); and 2) dealing with the different experiences and potential needs of the youth (e.g., different substance use experiences) that require a simultaneous response to different individual needs (e.g., rolling with the resistance of one youth, while trying to maintain the commitment language of another).

To date, few studies address the process, format, and outcomes of group MI with at-risk adolescents (D'Amico et al., in press). Currently, three studies have examined how MI may work in a group setting with at-risk youth. The first (Bailey, Baker, Webster, & Lewin, 2004) was a small pilot study (n = 34) that randomized youth to receive either a MI-style alcohol intervention or no treatment. Although reports at 1- and 2-month follow-ups showed increases in the intervention group participants' readiness to reduce or quit drinking, there was no longer term follow-up. In addition, little is known about the MI approach that was used in this study as measurements of fidelity were not reported. Thus, it is difficult to evaluate the extent to which MI took place during these group sessions.

The second study (Engle, Macgowan, Wagner, & Amrhein, 2009) examined the influence of commitment language and peer group responses during the delivery of an intervention on marijuana use twelve months after treatment. All group discussions were audio recorded, transcribed, and coded using the Motivational Interviewing Treatment Integrity (MITI) scale Version 2.0 (Moyers, Martin, Manuel, & Miller, 2003). Results indicated that the more positive and less negative the peer responses, the greater the reduction in marijuana use. In addition, group leader empathy was associated with more positive commitment language and peer responses to commitment language (Engle et al., 2009). Results from this study suggest that MI can be effective in a group setting, but the study is limited by a lack of a control group.

The third study we identified included a single-session of group motivational enhancement therapy (MET) to augment an intervention targeting risky sexual behavior among youth in detention centers (Schmiege et al., 2009). MET is an adaptation of MI and includes one or more client feedback sessions in which normative feedback is presented 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 and a discussion followed using MET procedures. Fidelity checks were conducted throughout the study to ensure that 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).

In this paper we describe the development of a six-session group curriculum, Free Talk, for first-time alcohol or drug offending teens. This curriculum adds to the small body of literature on utilizing MI in a group setting in a number of ways. First, it incorporates MI into a selective curriculum specifically designed for recent AOD offending youth. Although many innovative treatments have been designed for high-risk youth (Barnowski, 2002; Dembo & Walters, 2003; Henggeler, 1998; Liddle et al., 2001), few interventions are designed for youth who are just beginning to experience problems from their AOD use. Second, it addresses *both* alcohol and other drug use (versus focusing on one substance) in the group setting where youth may range from 14 to 18 years old (versus targeting one age

group). This is relevant because the combined use of alcohol and marijuana is associated with greater impairment (Chait & Perry, 1994) and more external behavioral problems than use of either alone (Kessler, McGonagle, Zhao, & Nelson, 1994; Shillington & Clapp, 2002). Finally, the curriculum is designed so that teens can enter the program at any session because each session can stand alone without teens having to complete a previous session. Thus, unlike other programs, teens do not have to wait to enter the program and can begin at anytime.

## Method

### Setting

The study was conducted in collaboration with the Council on Alcoholism and Drug Abuse, a nonprofit community based organization in Santa Barbara County, California. This organization operates a diversion program called Santa Barbara Teen Court (SBTC) for first-time offending youth. Adolescents who commit a first-time misdemeanor offense are offered the opportunity to participate in a Teen Court program operated by the Council in lieu of formal processing in the juvenile justice system. As part of this program, youth who commit an alcohol or drug (AOD) offense are sentenced to receive six AOD education groups, along with other sanctions (e.g., community service, peer groups, serve on the Teen Court jury, and fees). Adolescents who successfully complete their Teen Court sentence have this AOD offense expunged from their juvenile probation record.

### Sample

Participants were 101 first-time AOD offenders age 14–18 enrolled in one of two Teen Courts operated in Santa Barbara county (either in Santa Barbara, CA or Santa Maria, CA) between February and December of 2008 who were participating in the six-session AOD education groups. Examples of offenses included possession of alcohol or marijuana, driving under the influence, or driving with an open container. The mean age was 15.88 years old ( $SD = 1.59$ ); 63% were male, and 54% were Hispanic. This sample is representative of the AOD offender population that participates in the Teen Court programs in Santa Barbara County.

### Procedure

Teens referred to the SBTC who were participating in the AOD education groups were asked to participate in a two-hour discussion group focused on AOD use. Attendance was voluntary and not part of their Teen Court sentence. Interested teens signed up and were contacted by research staff who obtained parental consent and scheduled teens for one of the discussion groups. Of 151 teens who signed up to participate in one of the discussion groups, a total of 101 (67%) attended. An average of six teens attended each group. Each of the six sessions was tested two to four times with different groups of teens, as well as tested at least once in each of the two teen court settings. There were a total of 16 groups: four groups for Session 1, three groups for Session 2, two groups for Session 3, three groups for Session 4, two groups for Session 5, and two groups for Session 6. The number of times each session was piloted depended upon feedback we received from the teens. We piloted each session in an iterative fashion until content was acceptable to teens and they reported no problems understanding the material. Light refreshments were provided and teens were paid \$40 for the group discussion.

For the first hour of the group, teens participated in an AOD intervention session. This part of the group was led by the first author, who is a licensed clinical psychologist and a member of the Motivational Interviewing Network of Trainers (MINT). MINT membership is limited to trainers who have completed a training workshop for new MI trainers

recognized by the MINT. For the second hour of the group, teens first completed a short pen and pencil satisfaction survey individually. Next, teens provided feedback in a group format on the content of the session, the materials that were provided, and their comfort level with the session. This hour of the group was led by the third author. All sessions were digitally recorded.

### Intervention content

Intervention content was developed as part of a Stage 1 study (Rounsaville, Carroll, & Onken, 2001). Stage 1a focuses on the development and iterative testing of the intervention content. Similar to other intervention work with youth (e.g., D'Amico et al., 2008; Ellickson, McCaffrey, Ghosh-Dastidar, & Longshore, 2003; Feldstein Ewing et al., in press), we utilized a conceptual framework to develop this intervention that was based on Social Learning Theory (SLT), Decision Making Theory (DMT), and Self-Efficacy Theory (SET). These theories suggest that 1) AOD use is related to both modeling of others' behavior and perceptions about the AOD use of others (SLT) (Bandura, 1977; Maisto, Carey, & Bradizza, 1999), 2) decisions about using substances are often emotional and therefore problem focused coping skills are needed (DMT) (Kahneman, Slovic, & Tversky, 1992; Kahneman & Tversky, 2000), and 3) by building confidence through skills training, youth will be able to make healthier choices and therefore resist using AOD (SET) (Bandura, 1997; DeVellis & DeVellis, 2001). Using this conceptual framework, we developed a six session intervention because it matched the number of sessions that AOD offender youth currently receive as part of their Teen Court sentence. Our six-session intervention utilized a motivational interviewing approach (Miller & Rollnick, 2002). For example, session content emphasized asking permission throughout each session as we discussed different issues, and the protocol also focused on eliciting change talk and providing reflective statements throughout each session. Content of the sessions was developed from our previous work with at-risk populations (D'Amico, Barnes, Gilbert, Ryan, & Wenzel, 2009; D'Amico et al., 2008) and the work of two consultants on the project (Dr. Sarah Feldstein-Ewing and Dr. Angela Bryan) (Feldstein Ewing et al., in press; Feldstein & Ginsburg, 2007; Schmiede et al., 2009).

In Session 1, teens were provided with personalized feedback about their AOD use and how it compared to national data (i.e., normative feedback). Teens were also given information about the stages of behavioral change (e.g., precontemplation, contemplation, preparation, action, maintenance and relapse) (Prochaska, DiClemente, & Norcross, 1992) using a handout called the "Wheel of Change" and were asked to think about where they might be on the wheel. Finally, teens completed a decisional balance exercise in which they listed the short-term and long-term pros and cons of continuing versus stopping use (Ingersoll, Wagner, & Gharib, 2006).

Session 2 focused on teens' willingness to change and their confidence to change by using rulers that ranged from zero (not at all willing/confident) to 10 (completely willing/confident). It also focused on the myths versus the realities of AOD use by discussing the balanced placebo design (Rohsenow & Marlatt, 1981) and the difference between actual and expected AOD effects.

Session 3 focused on the progression from nonuse to addiction. A discussion about how people make decisions about their AOD use was facilitated, including strategies to exit the path to addiction.

Similar to Session 2, Session 4 began with the willingness-confidence rulers. The session next focused on triggers for AOD use and how emotions and problems with communication

may contribute to substance use. Strategies to cope with negative emotions and how to utilize more effective communication styles were discussed.

Session 5 focused on a discussion of how AOD use can affect the brain. Several different drugs were discussed and teens were provided with brain activity pictures (i.e., PET and CAT scans) with descriptions of affected brain areas, a brochure that summarized effects of drugs on the brain and body, and links to websites where teens could obtain additional information.

In Session 6, teens were encouraged to consider things that can happen when they use AOD, such as driving under the influence or having unprotected sex. Teens also played the “Wheel of the Future” game (Schmiege et al., 2009) in which they wrote down short- and long-term goals they wanted to achieve in the next three years and next ten years, respectively. They spun the “Wheel of the Future” and discussed how certain decisions related to AOD use (e.g., I had too much to drink and had sex with someone and think I am pregnant/I got a girl pregnant) could affect goal attainment (e.g., going to college).

Finally, in several of the sessions, role-plays were conducted so that teens could act out different situations and practice making healthy choices. These were typically conducted at the end of the session and emphasized the material that had been discussed during the session.

## Feedback

Prior to eliciting group feedback about the intervention session, a 4-item satisfaction survey was distributed that assessed general (i.e., today’s discussion was helpful; I could use this information; I liked this type/style of meeting; the group leader was helpful). Teens rated these statements on a 1 (“completely”) to 5 (“not at all”) Likert scale. The survey took less than five minutes to complete. Afterwards teens were asked to provide additional feedback on that session. A discussion group protocol was used with open-ended questions that assessed general reactions to the intervention (e.g., what did you like/dislike, what was comfortable/uncomfortable, what was and wasn’t useful, what was the most important part?) and specific feedback about the session content (e.g., what did you think about the balanced placebo design; what did you think about the words on the handout?).

## Results

### Qualitative analysis

All discussion groups were digitally recorded and transcribed. Collection and interpretation of these qualitative data followed approaches we have used in developing interventions for teens in school, shelter, and clinic settings (D'Amico et al., 2009; D'Amico, Ellickson, Wagner et al., 2005; Stern, Meredith, Gholson, Gore, & D'Amico, 2007). Classic content analysis was used to systematically code the data, allowing us to identify key recurring themes and patterns across the different participants (Krippendorff, 1980; Weber, 1990). Five team members came to a consensus about how to best sort the quotes into categories and identify the recurring themes (e.g., collaboration, support). Themes were determined to be key if they were mentioned by several teens across different discussion groups.

### Motivational interviewing

Our classic content analysis found that the teens’ feedback emphasized themes related to motivational interviewing, such as collaboration and empathy, which are part of the Motivational Interviewing Treatment Integrity scale (MITI 3.0) (Moyers, Martin, Manuel, & Miller, 2004). We therefore used the four global scales on the MITI to categorize the

feedback: evocation, collaboration, autonomy/support, and empathy. Evocation occurs when the counselor encourages clients to brainstorm reasons and ideas for how to change. Collaboration occurs when there is little power differential, there is agreement on goals, and the facilitator encourages clients to share the talking. Autonomy/support occurs when the facilitator emphasizes and supports youth's personal choice for changing. Empathy occurs when the facilitator expresses understanding of the youth and attempts to understand their point of view.

Teen feedback was coded independently by two PhD graduate students and a clinical psychologist (second author) who were instructed to categorize quotes into one of the four MITI categories (see Table 1). Each coder was extensively trained (more than 40 hours) on the MITI fidelity scale. In order for a quote to be put into a category, at least two coders had to agree on the category. The percentage of quotes agreed upon by at least two coders was 91%.

Overall, feedback indicated high levels of evocation across the six sessions. For example, teens in several different discussion groups reported that they could openly discuss their opinions during the group. Across the majority of groups, teens said that the facilitator was empathic and that she was "open and nonjudgmental", caring and attempted to understand the teen's point of view through reflective statements. Teens also expressed that they felt that the facilitator provided autonomy and support throughout the different sessions. Specifically, teens commented that during the intervention delivery, they were provided with information, but "the rest was up to them" in regards to making any behavioral changes. Teens also emphasized the collaborative spirit of the group, reporting that the sessions were interactive and inclusive of all group members. Across all 16 discussion groups, teens reported that they felt comfortable discussing alcohol and drug use information with the facilitator.

### Session content

We also asked teens specific questions (likes/dislikes/recommended changes) during the feedback session. Table 2 summarizes this feedback. For Session 1, regarding the personalized normative feedback component, teens reported across all four Session 1 groups that they had significantly overestimated peer use and were surprised by how infrequently teens their aged drank and used. They also realized how their social networks influenced their overestimates of teen use. Regarding the "Wheel of Change", teens responded positively to the concept that people could easily move from one part of the circle to the next and that mistakes and relapse could be part of the process. A teen also commented that the "Wheel of Change" was helpful to know that she could change so she could "get a fresh start."

For Session 2, teens responded well to the balanced placebo design. Teens commented that the information was new and they thought it was "cool" and realistic. Teens said it was helpful to distinguish between the actual effects of drinking or using drugs from what they "expected" to happen. Teens also liked the decisional balance exercise in which they were asked to think about the short and long-term pros and cons to drinking and using. They felt this provided perspective of why teens may choose to use alcohol and drugs and also helped them understand that there were few long-term benefits to continued use. Most teens liked the confidence and willingness rulers and said they were 'important and necessary' as it helped them visualize their own change process. However, some teens stated that people might be influenced by where other people in the group stood along the ruler (e.g., teens not wanting to be "singled out" or younger teens wanting to stand next to older teens). Teens also indicated that they wanted to have a chance to do the ruler again, so we incorporated it into Session 4.

Across both of the Session 3 groups, teens felt the discussion on external and internal triggers to AOD use helped increase their awareness of their own use. Teens thought the discussion helped them better understand that people have different triggers and what triggers may lead them to use (e.g., because of stress).

For Session 4, across the three groups, teens thought it was helpful to learn about ways to express emotions and to communicate. Teens indicated that they wanted to talk specifically about “how (emotions and communication) are affected by drugs and alcohol.” One teen stated that the coping with emotions discussion “was one of the most helpful things in the class.”

For Session 5, teens across both groups reported that they valued the information about how alcohol and drugs can affect different parts of the brain (e.g., how marijuana affects memory). Teens thought the information was very helpful (e.g., “the handout taught me things I didn’t know”).

For Session 6, teens in both groups reported that they found it helpful and important to discuss specific risky situations that may be associated with AOD use, such as unsafe sex and driving after drinking, and ways to prevent these types of situations. One teen said “I liked how she brought up how people drive under the influence after parties and stuff and how they feel pressured to drive” because teens agreed that this situation “comes up a lot.” The teens also felt the “Wheel of Future” game was “fun” and the topics related to being pressured to have unprotected sex and weekend activities were “realistic.”

Across all sessions that include role plays, some teens stated that doing role-plays in front of others was “embarrassing” or “hard”, but other teens thought the role-plays were fun, useful, interactive, and realistic of common stressful situations.

### Content changes

Table 3 summarizes the feedback teens provided for suggested changes to the intervention sessions, which were integrated into subsequent versions of the sessions. For example, teens indicated that they wanted more information on the effects of AOD use. Teens also helped us re-design handouts that they felt were unclear. Based on feedback, we developed a brochure that was presented in subsequent sessions that focused on the effects of alcohol and several drugs on the brain and body, including marijuana, cocaine, inhalants, opiates, hallucinogens, benzodiazepines, and methamphetamine.

### 3.5 Satisfaction Survey

Teens completed a satisfaction survey before the feedback part of each discussion group. Out of the 101 participants, we received feedback from 99% ( $n = 100$ ). Overall ratings were high (with a score of 1 being highest and 5 being lowest), indicating that teens liked the style of the group ( $M = 2.18$ ;  $SD = 1.09$ ), they felt the discussion was helpful ( $M = 2.56$ ;  $SD = 1.18$ ), and they would use the information from the group ( $M = 2.44$ ;  $SD = 1.17$ ). They also indicated that the facilitator was helpful ( $M = 1.66$ ,  $SD = 0.98$ ).

### Discussion

Early intervention with first-time juvenile alcohol or drug offenders is crucial as adolescent offenders are at high risk for continuing criminal and drug use behavior (Ramchand, Morral, & Becker, 2009). The current study is the first study to examine how teens who have committed a first-time AOD offense respond to a group intervention that utilized a MI style. Data were collected on how these at-risk teens felt about the process, content, and format of a group intervention. Both males and females participated in this study, with slightly more



males (64%) participating, as is typical of juvenile justice populations (U.S. Department of Justice, 2003). Approximately half of the teens who participated were Hispanic (54%), which represents the population that the Santa Barbara Teen Court serves. Because of the high percentage of minority youth and the fairly even representation of males and females in this study, we believe that our results may also be applicable to at-risk teens in other settings.

Overall, results support the viability of using MI in a group setting with at-risk youth who may be mandated to receive services. In fact, quotes related to MI were post hoc, consistent across each session, and in response to general questions asking what adolescents liked most about the group. Interestingly, we did not specifically solicit feedback about the style of the group, suggesting that the MI style in which the group was presented was very important and apparent to adolescents. Youth expressed that they enjoyed the collaborative spirit of the intervention; they felt that the facilitator listened to them and was empathic and that their points of views were supported. Adolescents in the groups consistently brought up MI-related themes (e.g., collaboration) in their feedback about the intervention, emphasizing that they did not feel judged and that they were encouraged to “share” the talking in the group setting.

Teen Court programs are increasing across the nation. As of 2004, more than 900 Teen Courts were operating in 48 states and the District of Columbia (National Youth Court Center, 2004). These programs give an opportunity to provide services to teens who are first-time offenders. Often, youth who are “mandated to change” are resistant to change, and many mandated programs for at-risk youth do not offer youth the opportunity to give voice to why change might be helpful and/or offer practical strategies for approaching change efforts (D'Amico et al., in press). Providing a group intervention that utilizes MI can be an effective way to reach these at-risk youth as the guiding approach of MI gives them an opportunity to reflect on whether they are ready to make a change, to discuss what change might look like for them, and to work collaboratively with the facilitator on what the next steps may be to make this change. This may be an especially useful approach for first-time misdemeanor offenders, who are just starting to experience negative consequences from their use.

Several MI strategies were used across the six sessions in an attempt to evoke change and the results from this study show that these different strategies were well received and elicited change talk. Specifically, for the willingness and confidence ruler and the “Wheel of Change” exercises, adolescents said that they appreciated the opportunity to discuss how making personal changes can be difficult and that it is up to them to make the change. Youth also enjoyed the discussion of the pros and cons of continued AOD use as it clarified for them why teens may choose to use AOD initially, but that there are few long term benefits to continued use. Other components that were successful with these teens were the provision of normative feedback, discussion of the myths versus the realities of AOD use through the explanation of the balanced placebo design, and how to improve communication.

The groups were also helpful in tailoring the intervention to adequately address the needs of first-time misdemeanor adolescent youth. Different youth participated in all the sessions, so that we could ensure that a group MI approach was acceptable to a diverse population of at-risk youth. This also allowed us to obtain feedback from a variety of teens on the content and materials of the sessions. Overall, teens provided us with important feedback that helped us create content that was understandable and valuable to the participants. We think this effort was crucial to design a feasible and acceptable intervention for this population.

One limitation of this study is that the groups were conducted by one facilitator. We currently have a randomized controlled trial underway to test the effectiveness of this intervention and so far, three facilitators have been trained in MI and are conducting the group sessions (D'Amico, Hunter, Osilla, Miles, & Munjas, 2010). Preliminary fidelity data across all facilitators indicate that the intervention is being delivered with high fidelity (Hunter, D'Amico, Osilla, Miles, Munjas, Garcia, Saunders, 2009). In addition, youth who have been randomized to participate in Free Talk report high levels of satisfaction with the group and the three group leaders, indicating that the group leaders respect where they are at with their AOD use and that the group leaders value their opinion.

In sum, developing a group intervention that utilizes MI is an important step towards providing much needed services to first-time AOD misdemeanor offending youth. Findings add to the previous literature that has shown that MI can be very successful in engaging oppositional youth in AOD treatment (Battjes et al., 2004; Feldstein & Ginsburg, 2007; Stein, Colby, Barnett, Monti, Golembeske, Lebeau-Craven et al., 2006). The current study highlights that utilizing a group MI approach may be an acceptable approach for at-risk youth. This is an exciting new area of research and there is a great deal of work to be done. Future studies should examine how group MI delivered by multiple facilitators may be associated with AOD use outcomes. Further research is also needed to assess both the short- and long-term outcomes of group interventions that utilize MI with at-risk youth.

## Acknowledgments

We would like to thank Dr. Sarah Feldstein-Ewing and Dr. Angela Bryan for their help in developing content for this intervention. We would also like to thank the Council on Alcoholism and Drug Abuse for their support of this project. Finally, we would like to thank Kristen Sullivan and Kristin Ritchey for their help with coding the focus group data. The current study was funded by a grant from the National Institute of Drug Abuse (R01DA019938) to Elizabeth D'Amico.

## References

- Baer JS, Garrett SB, Beadnell B, Wells EA, Peterson PL. Brief motivational intervention with homeless adolescents: Evaluating effects on substance use and service utilization. *Psychology of Addictive Behaviors* 2007;21:582–586. [PubMed: 18072842]
- Bandura, A. *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall; 1977.
- Bandura, A. *Self-efficacy: The exercise of control*. New York, NY: Freeman; 1997.
- Barnett, NP.; Monti, PM.; Wood, MD. Motivational interviewing for alcohol-involved adolescents in the emergency room. In: Wagner, EF.; Waldron, HB., editors. *Innovations in adolescent substance abuse interventions*. Amsterdam, Netherlands: Pergamon/Elsevier Science Inc; 2001. p. 143-168.
- Barnett NP, Murphy JG, Colby SM, Monti PM. Efficacy of counselor vs. computer-delivered intervention with mandated college students. *Addictive Behaviors* 2007;32:2529–2548. [PubMed: 17707594]
- Barnett NP, Tevyaw TOL, Fromme K, Borsari B, Carey KB, Corbin WR, et al. Brief alcohol interventions with mandated or adjudicated college students. *Alcoholism: Clinical and Experimental Research* 2004;28:966–975.
- Barnowski, R. Washington State's implementation of functional family therapy for juvenile offenders: Preliminary findings. 2002. [www.wa.gov/wsipp](http://www.wa.gov/wsipp). Retrieved 8/24/04, August
- Battjes RJ, Gordon MS, O'Grady KE, Kinlock TW, Katz EC, Sears EA. Evaluation of a group-based substance abuse treatment program for adolescents. *Journal of Substance Abuse Treatment* 2004;27:123–134. [PubMed: 15450645]
- Borsari B, Tevyaw TOL, Barnett NP, Kahler CW, Monti PM. Stepped care for mandated college students: A pilot study. *The American Journal on Addictions* 2007;16:131–137. [PubMed: 17453615]

- Burleson JA, Kaminer Y, Dennis ML. Absence of iatrogenic or contagion effects in adolescent group therapy: Findings from the Cannabis Youth Treatment (CYT) Study. *The American Journal on Addictions* 2006;15:4–15. [PubMed: 17182415]
- Chait LD, Perry JL. Acute and residual effects of alcohol and marijuana, alone and in combination, on mood and performance. *Psychopharmacology* 1994;11:340–349. [PubMed: 7871074]
- D'Amico EJ, Barnes D, Gilbert ML, Ryan G, Wenzel SL. A tripartite prevention program for impoverished young women transitioning to young adulthood: Addressing substance use, HIV risk, and violence and victimization. *Journal of Prevention and Intervention in the Community* 2009;37:1–17. [PubMed: 19197670]
- D'Amico EJ, Ellickson PL, Collins RL, Martino SC, Klein DJ. Processes linking adolescent problems to substance use problems in late young adulthood. *Journal of Studies on Alcohol* 2005;66:766–775. [PubMed: 16459938]
- D'Amico EJ, Ellickson PL, Wagner EF, Turrisi R, Fromme K, Ghosh-Dastidar B, et al. Developmental considerations for substance use interventions from middle school through college. *Alcoholism: Clinical and Experimental Research* 2005;29:474–483.
- D'Amico, EJ.; Feldstein Ewing, SW.; Engle, B.; Hunter, SB.; Osilla, KC.; Bryan, A. Group motivational interviewing for young people at risk for alcohol and other drug use. In: Naar-King, S.; Suarez, M., editors. *Motivational interviewing with adolescents and families*. New York, NY: The Guilford Press; (in press)
- D'Amico, EJ.; Hunter, SB.; Osilla, KC.; Miles, JNV.; Munjas, B. Developing a Group Motivational Intervention for At-Risk Adolescents; Paper presented at the Society for Research on Adolescence; 2010.
- D'Amico EJ, Miles JNV, Stern SA, Meredith LS. Brief motivational interviewing for teens at risk of substance use consequences: A randomized pilot study in a primary care clinic. *Journal of Substance Abuse Treatment* 2008;35:53–61. [PubMed: 18037603]
- D'Amico EJ, Edelen MO, Miles JNV, Morral AR. The longitudinal association between substance use and delinquency among high risk youth. *Drug and Alcohol Dependence* 2008;93:85–92. [PubMed: 17977669]
- Dembo R, Walters W. Innovative approaches to identifying and responding to the needs of high risk youth. *Substance Use & Misuse* 2003;38:1713–1738. [PubMed: 14582575]
- Dennis M, Titus JC, Diamond G, et al. The Cannabis Youth Treatment (CYT) experiment: rationale, study design and analysis plans. *Addiction* 2002;97:16–34. [PubMed: 12460126]
- DeVellis, BM.; DeVellis, RF. Self-efficacy and health. In: Baum, A.; Revenson, TA.; Singer, JE., editors. *Handbook of health psychology*. Mahway, New Jersey: Lawrence Erlbaum Associates; 2001. p. 235–247.
- Dishion TJ, McCord J, Poulin F. When interventions harm: Peer groups and problem behavior. *American Psychologist* 1999;54:755–764. [PubMed: 10510665]
- Dodge, K.; Dishion, TJ.; Lansford, JE. *Deviant peer influences in programs for youth*. New York, NY: The Guilford Press; 2006.
- Ellickson PL, D'Amico EJ, Collins RL, Klein DJ. Marijuana use and later problems: When frequency of recent use explains age of initiation effects (and when it does not). *Substance Use & Misuse* 2005;40:343–359. [PubMed: 15776981]
- Ellickson PL, McCaffrey DF, Ghosh-Dastidar B, Longshore DL. New inroads in preventing adolescent drug use: Results from a large-scale trial of project ALERT in middle schools. *American Journal of Public Health* 2003;93:1830–1836. [PubMed: 14600049]
- Engle B, Macgowan MJ, Wagner E, Amrhein P. Group leader empathy, group commitment and peer responses as markers of adolescent substance abuse group treatment outcomes. Manuscript under review. 2009
- Ennett ST, Ringwalt CL, Thorne J, Rohrbach LA, Vincus A, Simons-Rudolph A, et al. A comparison of current practice in school-based substance use prevention programs with meta-analysis findings. *Prevention Science* 2003;4(1):1–14. [PubMed: 12611415]
- Feldstein Ewing, SW.; Walters, S.; Baer, JS. Approaching group MI with adolescents and young adults: Strengthening the developmental fit. In: Wagner, CCI.; Ingersoll, KS., editors. *Motivational Interviewing in Groups*. New York, NY: The Guilford Press; (in press)

- Feldstein, SW.; Ginsburg, JID. Sex, drugs, and rock 'n' rolling with resistance: Motivational interviewing in juvenile justice settings. In: Roberts, AR.; Springer, DW., editors. *Handbook of forensic mental health with victims and offenders: Assessment, treatment, and research*. New York, NY: Charles C. Thomas; 2007. p. 247-271.
- Felson RB, Teasdale B, Burchfield KB. The influence of being under the influence: Alcohol effects on adolescent violence. *Journal of Research in Crime and Delinquency* 2008;45:119–141.
- Fergusson DM, Lynskey MT, Horwood LJ. The short-term consequences of early onset cannabis use. *Journal of Abnormal Child Psychology* 1996;24:499–512. [PubMed: 8886945]
- French MT, Zavala SK, McCollister KE, Waldron HB, Ozechowski TJ. Cost-effectiveness analysis of four interventions for adolescents with a substance use disorder. *Journal of Substance Abuse Treatment* 2008;34:272–281. [PubMed: 17600651]
- Ginsburg, JID.; Mann, RE.; Rotgers, F.; Weekes, JR. Motivational interviewing with criminal justice populations. In: Press, G., editor. *Motivational interviewing: Preparing people for change*. New York, NY: 2002. p. 333-346.
- Green BE, Ritter C. Marijuana use and depression. *Journal of Health and Social Behavior* 2000;41:40–49. [PubMed: 10750321]
- Grenard JL, Ames SL, Wiers RW, Thush C, Stacy AW, Sussman S. Brief intervention for substance use among at-risk adolescents: A pilot study. *Journal of Adolescent Health* 2007;40:188–191. [PubMed: 17259065]
- Henggeler, SW. *Multisystemic therapy*. Denver, CO: C & M Press; 1998.
- Hingson RW, Heeren T, Winter MR. Age of alcohol-dependence onset: Associations with severity of dependence and treatment seeking. *Pediatrics* 2006;118:e755–e763. [PubMed: 16950966]
- Ingersoll, KS.; Wagner, CC.; Gharib, S. *Motivational groups for community substance abuse programs*. 3rd edition. Rockville, MD: Substance Abuse Mental Health Services Administration; 2006.
- Johnston, LD.; O'Malley, PM.; Bachman, JG.; Schulenberg, JE. *Monitoring the Future national survey results on drug use, 1975–2008. Volume I: Secondary school students*. Bethesda, MD: National Institute on Drug Abuse; 2009.
- Kahneman, D.; Slovic, P.; Tversky, A. *Judgment under uncertainty: Heuristics and biases*. New York: Cambridge University Press; 1992.
- Kahneman, D.; Tversky, A. *Choices, values, and frames*. New York: Cambridge University Press; 2000.
- Kaiser Foundation. *HIV/AIDS policy fact sheet: Women and HIV/AIDS in the United States*. Washington, D.C: The Henry J. Kaiser Family Foundation; 2006.
- Kaminer Y. Challenges and opportunities of group therapy for adolescent substance abuse: A critical review. *Addictive Behaviors* 2005;30(9):1765–1774. [PubMed: 16051443]
- Kandel DB, Chen K. Types of marijuana users by longitudinal course. *Journal of Studies on Alcohol* 2000;61:367–378. [PubMed: 10807207]
- Kessler RC, McGonagle KA, Zhao S, Nelson CB. Lifetime and 12-month prevalence of DSM-III—R psychiatric disorders in the United States: Results from the National Comorbidity Study. *Archives of General Psychiatry* 1994;51:8–19. [PubMed: 8279933]
- Krippendorff, K. *Content analysis: An introduction to its methodology*. Beverly Hills, CA: Sage Publications; 1980.
- Laatikainen TML, Poikolainen K, Vartiainen E. Increased mortality related to heavy alcohol intake pattern. *Journal of Epidemiology and Community Health* 2003;57:379–384. [PubMed: 12700224]
- Liddle HA, Dakof GA, Parker K, Diamond GS, Barrett K, Tejada M. Multidimensional family therapy for adolescent drug abuse: Results of a randomized clinical trial. *American Journal of Drug and Alcohol Abuse* 2001;27:651–688. [PubMed: 11727882]
- Lincourt P, Kuettel TJ, Bombardier CH. Motivational interviewing in a group setting with mandated clients: A pilot study. *Addictive Behaviors* 2002;27:381–391. [PubMed: 12118626]
- Maisto, SA.; Carey, KB.; Bradizza, CM. Social learning theory. In: Leonard, KE.; Blane, HT., editors. *Psychological theories of drinking and alcoholism*. New York: Guildford Press; 1999. p. 106-163.

- Manzar A, Cervellione K, Cottone J, Ardekani BA, Kumra S. Diffusion abnormalities in adolescents and young adults with a history of heavy cannabis use. *Journal of Psychiatric Research* 2009;43:189–204. [PubMed: 19111160]
- Medina KL, Hanson KL, Schweinsburg AD, Cohen-Zion M, Nagel BJ, Tapert SF. Neuropsychological functioning in adolescent marijuana users: Subtle deficits detectable after a month of abstinence. *Journal of the International Neuropsychological Society* 2007;13:1469–7661.
- Merline A, Jager J, Schulenberg JE. Adolescent risk factors for adult alcohol use and abuse: Stability and change of predictive value across early and middle adulthood. *Addiction* 2008;103:84–99. [PubMed: 18426542]
- Miller, WR. Motivational enhancement therapy: Description of a counseling approach. In: Boren, JJ.; Onken, LS.; Carroll, KM., editors. *Approaches to drug abuse counseling*. Bethesda, MD: National Institute on Drug Abuse; 2000. p. 89-93.
- Miller, WR.; Rollnick, S. *Motivational interviewing: Preparing people for change*. 2nd ed.. New York, NY: Guilford Press; 2002.
- Monti PM, Barnett NP, Colby SM, Gwaltney CJ, Spirito A, Rohsenow DJ, et al. Motivational interviewing versus feedback only in emergency care for young adult problem drinking. *Addiction* 2007;102(8):1234–1243. [PubMed: 17565560]
- Morojele NK, Brook JS. Adolescent precursors of intensity of marijuana and other illicit drug use among adult initiators. *The Journal of Genetic Psychology* 2001;162:430–450. [PubMed: 11831352]
- Moyers, TB.; Martin, K.; Manuel, JK.; Miller, WR. The Motivational Interviewing Treatment Integrity (MITI) Code. 2003. Version 2.0, <http://casaa.unm.edu/download/miti.pdf>
- Moyers, TB.; Martin, T.; Manuel, JK.; Miller, WR.; Ernst, D. Revised global scales: Motivational Interviewing Treatment Integrity 3.0 (MITI 3.0) [Electronic Version]. 2004. Retrieved October 27, 2008, from <http://casaa.unm.edu/download/miti3.pdf>
- National Youth Court Center. National Listings. 2004 Retrieved 9-25-04.
- Peterson PL, Baer JS, Wells EA, Ginzler JA, Garrett SB. Short-term effects of a brief motivational intervention to reduce alcohol and drug risk among homeless adolescents. *Psychology of Addictive Behaviors* 2006;20:254–264. [PubMed: 16938063]
- Prochaska JO, DiClemente CC, Norcross JC. In search of how people change: Applications to addictive behaviors. *American Psychologist* 1992;47(9):1102–1114. [PubMed: 1329589]
- Project MATCH Research Group. Project MATCH secondary a priori hypotheses. *Addiction* 1997;12:1671–1698.
- Ramchand R, Morral AR, Becker K. Seven-year life outcomes of adolescent offenders in Los Angeles. *American Journal of Public Health* 2009;99:1–8.
- Rehm J, Greenfield TK, Rogers JD. Average volume of alcohol consumption, patterns of drinking, and all-cause mortality: Results from the US National Alcohol Survey. *American Journal of Epidemiology* 2001;153:64–71. [PubMed: 11159148]
- Rohsenow DJ, Marlatt GA. The balanced placebo design: Methodological considerations. *Addictive Behaviors* 1981;6(2):107–122. [PubMed: 7023202]
- Rounsaville BJ, Carroll KM, Onken LS. A stage model of behavioral therapies research: Getting started and moving on from stage I. *Clinical Psychology: Science and Practice* 2001;8:133–142.
- Schmiege SJ, Broaddus MR, Levin M, Taylor SC, Seals KM, Bryan A. Sexual and alcohol risk reduction among incarcerated adolescents: Mechanisms underlying the effectiveness of a brief group-level motivational interviewing-based intervention. *Journal of Consulting and Clinical Psychology* 2009;77:38–50. [PubMed: 19170452]
- Shillington AM, Clapp JD. Beer and bong: Differential problems experienced by older adolescents using alcohol only compared to combined alcohol and marijuana use. *American Journal of Drug and Alcohol Abuse* 2002;28:379–397. [PubMed: 12014822]
- Stein LAR, Colby SM, Barnett NP, Monti PM, Golembeske C, Lebeau-Craven R. Effects of motivational interviewing for incarcerated adolescents on driving under the influence after release. *The American Journal on Addictions* 2006;15 Suppl1:50–57. [PubMed: 17182420]

- Stein LAR, Colby SM, Barnett NP, Monti PM, Golembeske C, Lebeau-Craven R, et al. Enhancing substance abuse treatment engagement in incarcerated adolescents. *Psychological Services* 2006;3:25–34. [PubMed: 20617117]
- Stern SA, Meredith LS, Gholson J, Gore P, D'Amico EJ. Project CHAT: A brief motivational substance abuse intervention for teens in primary care. *Journal of Substance Abuse Treatment* 2007;32:153–165. [PubMed: 17306724]
- Tapert SF, Schweinsburg AD. The human adolescent brain and alcohol use disorders. *Recent Developments in Alcoholism* 2005;17:177–197. [PubMed: 15789866]
- Tobler NS, Roona MR, Ochshorn P, Marshall DG, Streke AV, Stackpole KM. School-based adolescent drug prevention programs: 1998 meta-analysis. *The Journal of Primary Prevention* 2000;20:275–336.
- Tobler NS, Stratton HH. Effectiveness of school-based drug prevention programs: A meta-analysis of the research. *The Journal of Primary Prevention* 1997;18:71–128.
- U.S. Department of Justice. Age-specific arrest rates and race-specific arrest rates for selected offenses, 1993–2001. Uniform Crime Reporting Program, Federal Bureau of Investigation; 2003. Retrieved May 15, 2009 from: <http://www.fbi.gov/ucr/ucr.htm>
- Vaughn MG, Howard MO. Adolescent substance abuse treatment: A synthesis of controlled evaluations. *Research on Social Work Practice* 2004;14(5):325–335.
- Waldron HB, Turner CW. Evidence-based psychosocial treatments for adolescent substance abuse. *Journal of Clinical Child and Adolescent Psychology* 2008;37(1):238–261. [PubMed: 18444060]
- Weber, RP. Basic content analysis. Newbury Park, CA: Sage Publications; 1990.
- Weiss B, Caron A, Ball S, Tapp J, Johnson M, Weisz JR. Iatrogenic effects of group treatment for antisocial youth. *Journal of Consulting and Clinical Psychology* 2005;73:1036–1044. [PubMed: 16392977]
- Yan AF, Chiu Y-W, Stoesen CA, Wang MQ. STD-/HIV-related sexual risk behaviors and substance use among U.S. rural adolescents. *Journal of the National Medical Association* 2007;99:1386–1394. [PubMed: 18229775]
- Zimmer-Gembeck MJ, Helfand M. Ten years of longitudinal research on U.S. adolescent sexual behavior: Developmental correlates of sexual intercourse, and the importance of age, gender and ethnic background. *Developmental Review* 2008:153–224.

**Table 1**

Examples of teen quotes using the MITI 3.0

MI component	Definition	Teen feedback
Evocation	Facilitator encourages clients to brainstorm reasons and ideas for how to change	<ul style="list-style-type: none"> <li>“Liked the way she asked questions to make people more interested, like getting their opinion on something.” (Session 1)</li> <li>“Liked that people could say what they wanted/ what they thought, it’s good to hear what other people think about stuff...open discussion.” (Session 2)</li> <li>“You can really get something out of this, and relate it to our lives or our friends’ lives. It was useful.” (Session 5)</li> </ul>
Collaboration	Facilitator encourages clients to share the talking, there is agreement on goals, and there is little power differential	<ul style="list-style-type: none"> <li>“It was fun. I thought it was going to be a class, and that you guys were going to do all the talking.” (Session 3)</li> <li>“In like some groups, some people don’t talk at all. They’re probably just like sitting there. She kind of got everybody involved.” (Session 6)</li> <li>“It was more interactive than [other types of groups] where we don’t really do any talking at all, we just listen.” (Session 4)</li> </ul>
Autonomy/Support	Facilitator emphasizes and supports client’s personal choice for changing	<ul style="list-style-type: none"> <li>“I liked that we were not being told things, not like a classroom environment.” (Session 3)</li> <li>“This class is like a reminder, because people already know this. It always comes down to you - and it’s your choice - and all you can do is give people info and teach them things, and you know... the rest is up to them.” (Session 3)</li> <li>“Like she said early at the beginning of class; she said that she wasn’t going to be like a teacher and tell us what to do. She was going to like listen and like give us a good outlet; give us like tips but not to like tell us what to do.” (Session 1)</li> </ul>
Empathy	Facilitator expresses understanding of the client and attempts to understand their point of view	<ul style="list-style-type: none"> <li>“She was like really open and nonjudgmental.” (Session 6)</li> <li>“She would repeat back what we said to check with us if it was right; she showed that she cared.” (Session 5)</li> </ul>

**Table 2**

## Examples of teen feedback by substance use prevention strategy

Prevention Strategy	Teen feedback
Normative Feedback	<ul style="list-style-type: none"> <li>• “It makes you think about how many other people do it and what they’re going through.”</li> <li>• “We all guessed higher than what the statistics say because we’re in like the Teen Court program so we kind of only see what like our friends have been doing, not like national...it doesn’t fit with what I know.”</li> </ul>
“Wheel of Change”	<ul style="list-style-type: none"> <li>• “[I liked the] wheel of change just cause it helps you remember you can always get back to the better.”</li> <li>• “I like the wheel; [it’s] trying to help people know that they made a mistake but there’s always ways to change it and to get a fresh start.”</li> </ul>
Confidence/Willingness Rulers	<ul style="list-style-type: none"> <li>• “I liked the ruler, it was cool.”</li> <li>• “It was a good way to see how you felt and to see where you were at.”</li> <li>• “I think you should do it again at the end [of the session] to see how much you changed.”</li> </ul>
Balanced Placebo Design	<ul style="list-style-type: none"> <li>• “Balanced Placebo Design was cool - I liked that; I want to try that with my friends.”</li> <li>• “I could see that totally happening; it tells me it’s not only the drug but your brain too, a lot of people don’t know that.”</li> <li>• “Yeah, I learned that people can trick you and you have to be careful.”</li> </ul>
Decisional Balance Exercise	<ul style="list-style-type: none"> <li>• “Actually visually see and kind of understand the cons are a lot worse than the pros, if you think about it.”</li> <li>• “With the long term pros, [we] had nothing in it, everything else [short-term] had a whole bunch of stuff; It shows why most kids start [drinking and using].”</li> </ul>
Triggers/Dealing with Stress	<ul style="list-style-type: none"> <li>• “Triggers...it is easier to stop them if you know where they are coming from; the list was helpful, made you think of things.”</li> <li>• “Yeah, I thought that the way we handled anger and feelings and stuff was good. Yeah, I liked the part on how we cope with feelings.”</li> </ul>
Improving Communication	<ul style="list-style-type: none"> <li>• “When we started talking, it made more sense, like how a message can get screwed up by who’s listening and who’s talking.”</li> <li>• “I did like the aggressive, passive aggressive, passive, assertive thing...that’s useful knowledge to know about people. You know to recognize that in people.”</li> </ul>



**Table 3**

## Summary of suggested intervention changes

Session topic	Teen feedback
Alcohol and other Drug Information	<ul style="list-style-type: none"> <li>• Include the effects of a variety of drugs, not just alcohol and marijuana</li> <li>• Include more pictures and information about the effects of alcohol and drugs on the brain</li> <li>• Delete information on social marketing (e.g., ads marketing alcohol and marijuana), the information was not helpful</li> </ul>
Activities	<ul style="list-style-type: none"> <li>• “Wheel of Change”: Simplify language</li> <li>• Story that describes different events in a character’s day where teens identify his emotions: Delete story, it was too simple and obvious</li> <li>• Writing down goals: Keep goals anonymous so teens will be open to sharing goals honestly</li> </ul>
Handouts	<ul style="list-style-type: none"> <li>• Reduce amount of handouts given in each session</li> <li>• Simplify wording, limit amount of text</li> <li>• Discuss the content of the handout instead of providing written material</li> <li>• Define concepts clearly (e.g., what normative percentages mean)</li> </ul>