Published in final edited form as:

J Evid Based Soc Work. 2005 May 1; 2(1-2): 79–90. doi:10.1300/J394v02n01_05.

Iatrogenic Effects of Group Treatment on Adolescents with Conduct and Substance Use Problems: A Review of the Literature and a Presentation of a Model

Mark J. Macgowan, PhD, LCSW and Eric F. Wagner, PhD, LCSW

The Community-Based Intervention Research Group, Florida International University

Summary

Group therapy is the most popular approach in the treatment of adolescent substance use problems. Recently, concerns have mounted about possible iatrogenic effects of group therapy based on studies on adolescents with conduct disorder. This paper reviews three possible contributors to response to group treatment among adolescents, and proposes a model of the relations among these variables, specifically in regard to how they independently and interactively contribute to outcomes among youth with conduct and substance use problems.

Keywords

Conduct disorder; adolescent substance abuse; group treatment; adolescents

Introduction

Group therapy is the most commonly used approach in the treatment of alcohol and other drug (AOD) use problems (Khantzian, 2001; Stinchfield, Owen, & Winters, 1994). It is especially popular in the treatment of adolescents with AOD use problems because (a) of the importance of the peer-group during this developmental period (Nowinski, 1990), (b) adolescents seem to like it (O'Leary et al., 2002), and (c) it is cost-effective (French et al., 2002). Although there is considerable evidence that group therapy can be effective in reducing a range of adolescent problems including AOD use (e.g., Hoag & Burlingame, 1997; Kaminer & Burleson, 1999; Panas, Caspi, Fournier, & McCarty, 2003; Waldron, Slesnick, Brody, Turner, & Peterson, 2001), research also has documented unanticipated iatrogenic effects of group therapy when conducted with youth with conduct problems (e.g., Catterall, 1987; Dishion, McCord, & Poulin, 1999; Feldman & Caplinger, 1977). Adolescents with AOD use problems commonly demonstrate co-occurring conduct problems; a recent study found that 89% of youth in treatment for substance use problems also have a diagnosis of conduct disorder (Clark & Bukstein, 1998). Thus, there is reason to be concerned about possible iatrogenic effects of group treatment on adolescent with AOD

Address correspondence to: Mark J. Macgowan, PhD, LCSW, Community-Based Intervention Research Group, Florida International University, University Park, MARC310, Miami, FL 33199 (Macgowan@fiu.edu).

[Haworth co-indexing entry note]: "Iatrogenic Effects of Group Treatment on Adolescents with Conduct and Substance Use Problems: A Review of the Literature and a Presentation of a Model." Macgowan, Mark J. and Eric F. Wagner. Co-published simultaneously in *Journal of Evidence-Based Social Work* (The Haworth Social Work Practice Press, an imprint of The Haworth Press, Inc.) Vol. 2, No. 1/2, 2005, pp. 79-90; and: *Addiction, Assessment, and Treatment with Adolescents, Adults, and Families* (ed: Carolyn Hilarski) The Haworth Social Work Practice Press, an imprint of The Haworth Press, Inc., 2005, pp. 79-90. Single or multiple copies of this article are available for a fee from The Haworth Document Delivery Service [1-800-HAWORTH, 9:00 a.m. - 5:00 p.m. (EST). E-mail address: docdelivery@haworthpress.com].

use problems. Considering the apparently conflicting evidence about group therapy's efficacy with youth having conduct problems, it is crucial for AOD researchers to examine group factors and processes to understand what can make treatment groups harmful.

Studies of iatrogenic effects have found that aggregating youth with conduct disorder (CD) created environments in which youth exhibited negative behavior that was positively reinforced by other group members (i.e., "deviancy training," Dishion et al., 1999). However, other studies have suggested that antisocial behavior and deviancy training also were affected by group leader behaviors (Dishion, Poulin, & Burraston, 2001; Feldman, Caplinger, & Wodarski, 1983). These findings collectively suggest that (a) group composition, (b) member-reinforced disruptive behavior in groups, and (c) leadership behavior may have independent effects on outcomes for substance abusing adolescents who participate in group treatment. The purpose of this article is to review research on each of these three possible contributors to treatment response among teenagers who receive group treatment for AOD problems, many of whom also have associated conduct disorder. In addition, we introduce a model of the relations among these variables, specifically in regard to how they may independently and interactively contribute to AOD outcomes among substance abusing adolescents. This model is intended to guide future research on possible iatrogenic effects of group treatment on adolescents with substance use problems.

Group Composition

Group composition plays a major role in outcomes in group-based treatment research (Bertcher & Maple, 1974; Burlingame, Fuhrman, & Mosier, 2003; Feldman et al., 1983). An important compositional variable linked to retention and outcomes in groups is the presence of youth with conduct disorder (CD). Adolescent AOD treatment studies suggest that a diagnosis of CD is significantly related to negative outcomes such as treatment dropout (Galaif, Hser, Grella, & Joshi, 2001; Kaminer, Burleson, & Goldberger, 2002; Kaminer, Tarter, Bukstein, & Kabene, 1992). However, most studies have treated CD as a pre-group, individual-level variable; no study to date has examined the compositional mix of conduct disorder on outcomes. If CD is a factor in explaining outcomes, it is likely that aggregating youths with CD in groups may compound the likelihood of poor outcomes.

A review of 28 group-based treatments involving juvenile offenders reported that in most cases, group counseling did not result in significant behavior changes (Romig, 1978). The author of the review concluded that it was the aggregation of CD youths in such groups that led to the lack of treatment effects. Another study examined the effects of a group counseling workshop involving high school students at risk of dropping out (Catterall, 1987). Students who participated in the program were more likely to drop out of school by the following semester than those in the comparison group. Catterall concluded that the negative findings were due to within-group bonding among antisocial teens.

Recent studies by Dishion and colleagues have provided further evidence supporting the negative influence of CD adolescents on one another. These researchers found that youth who participated in the Teen Focus Groups had increased smoking and delinquency at 1- and 3-year follow-ups (Dishion & Andrews, 1995; Poulin, Dishion, & Burraston, 2001). The studies by Dishion and colleagues identified subtle processes in the groups, which resulted in the disruptive processes leading to poor outcomes. Specifically, youths used these groups to showcase their problematic behavior, and reinforcing responses from peers ("deviancy training") increased antisocial behavior (Dishion et al., 1999; Eddy, Dishion, & Stoolmiller, 1998). Dishion and associates found that aggregating youths with conduct problems provides the basis for group processes that result in poor outcomes.

Feldman and colleagues also examined the elements and processes of group treatment when conducted with youth with conduct problems (Feldman & Caplinger, 1977; Feldman et al., 1983). However, theirs is the only study in which researchers experimentally manipulated the number of youths with conduct problems in groups to assess outcomes. Homogeneous groups consisting of boys with conduct problems demonstrated no improvements in antisocial behavior. These researchers demonstrated that groups with higher concentrations of youth with conduct problems would likely have poorer outcomes, particularly in the absence of experienced leadership or proper treatment implementation.

A recent meta-analysis of skills training groups examined whether there were differences in treatment effects for interventions that differed in group composition (Ang & Hughes, 2002). The study reported a respectable overall effect size ($d = .55$) for skills training groups composed exclusively of adolescents with conduct problems. However, this effect size was significantly lower than that reported for skills training interventions delivered in the context of either individual treatment or non-aggregated compositions ($d = .70$). Homogeneous groups of antisocial youths tended to have reduced effects on outcomes when compared with mixed groups.

Collectively, this body of research suggests that groups with a higher percentage of youth with conduct problems will display greater antisocial behavior in groups, which will lead to poorer outcomes. Although the research reviewed does not directly address the degree of conduct disorder within groups, it is plausible that groups with higher percentages of youth with conduct disorder and/or youth with more severe conduct disorder will more likely exhibit antisocial behavior in the group, leading to poorer outcomes, than groups with fewer youth with conduct problems and less severe conduct problems. In sum, it appears that a diagnosis of conduct disorder may be an important factor in explaining outcomes in adolescent AOD treatment research, but no research has been done that examines the compositional mix of conduct disorder in AOD treatment groups. Furthermore, group composition is hypothesized to be a necessary but insufficient variable in influencing outcomes. The studies by Dishion, Feldman and associates, reviewed above, clearly indicate that composition alone did not adequately explain outcomes. These studies found that within-group factors (e.g., deviancy training, leadership behaviors) explained the effects. Composition thus sets the stage for the expression of antisocial behavior and deviancy training in groups, which leads to poor outcomes.

Antisocial Behavior and Deviance Training in Group

The previously described studies by Feldman and Dishion and colleagues (i.e., Dishion & Andrews, 1995; Dishion et al., 1999; Eddy et al., 1998; Feldman & Caplinger, 1977; Feldman et al., 1983; Poulin et al., 2001) reported that conduct disordered youths in groups displayed antisocial behavior and deviancy training. *Antisocial behavior* in group is “any action that serves to disrupt, hurt, annoy, or otherwise prevent members from participating in the group's tasks or activities” (Feldman & Caplinger, 1977, p. 15). *Deviancy training* within groups is “the process of contingent positive reactions to rule-breaking discussions” (Dishion et al., 1999, p. 756).

Although research on this topic is limited, studies performed to date clearly and consistently indicate that groups in which such disruptive behaviors occur have poorer outcomes (Dishion & Andrews, 1995; Dishion et al., 2001; Feldman & Caplinger, 1977; Feldman et al., 1983; Rose, 1998). Stated simply, groups whose members display more disruptive, hurtful, or annoying behaviors demonstrate less response to treatment than groups whose members display lower levels of these behaviors.

In their recent investigations, Dishion and colleagues found that the sequences of rule breaking talk reinforced by laughter predicted increases in self-reported smoking and teacher-reported delinquency years later. These researchers have labeled this phenomenon “deviance training,” and they have suggested that the aggregation of delinquent youth in treatment groups may both exacerbate normative social pressures for conformity during adolescence and reduce access to the protective effects of less deviant peers. Dishion, McCord, and Poulin (1999) have argued that adolescent peer networks formed because of deviance, such as treatment groups for adolescents with conduct and AOD problems, provide a context where these problem behaviors may be reinforced. While the presence of disruptive behavior in groups and the process of deviance training are expected to have significant impacts on outcomes, these effects appear to be moderated by group leader behaviors, as described in the next section.

Group Leader Behaviors

Small group researchers have noted that leadership is one of the most important factors in explaining the functioning of small groups and predicting group therapy outcomes (e.g., Burlingame, Mackenzie, & Strauss, 2004; Cartwright & Zander, 1968; Dies, 1994). Yet, therapist variables and their relations to key outcomes have been left “virtually unstudied in the substance abuse treatment field” (Stinchfield et al., 1994, p. 469). An important unanswered question is how leader behaviors affect disruptive behavior within groups to impact outcomes. The effects of leadership behaviors on outcomes can be examined from two perspectives: immediate outcomes after the leader's intervention, and long-term outcomes (Greene, 2000). Examination from both perspectives is essential for understanding of the impact of group leader behaviors on response to group treatment.

The classic studies by Lewin, White, and Lippitt demonstrated the effects of three forms of leadership (authoritarian, democratic, and laissez-faire) on children's behavior in group (Lewin & Lippitt, 1938; Lewin, Lippitt, & White, 1939; White & Lippitt, 1968). The studies revealed that there was more aggression (about 30 times more) and more scape-goating in authoritarian-led groups than in democratically led groups. In addition, authoritarian leadership was likely to develop disruptive sub-groupings. These early studies revealed that leader behaviors had a direct impact on disruptive behavior in the groups.

An important finding from Feldman and colleagues was that group leadership was influenced by group compositional variables (Feldman & Caplinger, 1977; Feldman et al., 1983). Although experienced leaders (e.g., those with graduate level coursework in group methods) were more effective than inexperienced leaders in fostering positive behavior change, there were differential effects based on group composition. Leader experience was “significantly influenced by contextual variables and, especially, by the compositional nature of the treatment group” (Feldman & Caplinger, 1977, p. 5). However, group composition was only weakly related to outcomes when groups were led by experienced leaders, but was very influential when groups were led by less experienced leaders.

Further details from the Feldman studies revealed that leader *behaviors* accounted for more of the variance in explaining behavior within the groups than leader *experience* (Feldman et al., 1983). Leader experience accounted for 2% of the variance, but leader behaviors accounted for an average of 80% of the explained variance in youths' antisocial behavior in-group. Thus, leader behaviors appear to have much greater impact on member behaviors in-group than leader experience. Furthermore, *negative* leader behaviors (i.e., criticism, threats, or negative attention) were significantly associated with antisocial behavior in groups. For example, a leader's negative attention to member behavior was the best predictor of

antisocial behavior, accounting for an average of 11% of the variance in observed antisocial behavior over treatment (Feldman et al., 1983, p. 235).

Additionally, the effects of leader behaviors were substantially increased when analyses were done at the group level. When the variables were aggregated to examine the effects at the group level, negative leader interventions such as negative attention explained an average of 42% of the variance in antisocial behavior during the first two treatment phases (16 weeks). Criticism accounted for 22% of the variance during the first phase of treatment. Positive attention was inversely associated with antisocial behavior across all phases of treatment, explaining an average of 11% of the variance in group antisocial behavior. The researchers concluded that “the data reveal clearly that the *direct* effects of leader interventions are manifested primarily at the *group* level, and not at the individual level of analysis” (Feldman et al., 1983, p. 250, emphasis in the original).

Dishion and colleagues did not examine the specific effects of leader behaviors on outcomes. However, they concluded that leaders have an important influence in reducing deviancy training noting that “skilled group leadership that could orchestrate a dynamic group environment that does *not* provide group attention for deviance would reduce or eliminate the iatrogenic effect” (Dishion et al., 2001, p. 89, emphasis in the original). This quote underscores the importance of the interaction between leader behavior and disruptive behavior in groups in determining response to adolescent AOD group treatment.

In sum, leader behaviors have a clear influence on member disruptive behavior in group, which in turn, affect outcomes. In particular, leadership seems to have a stronger impact on group-level behavior than on individuals within the group. However, no study to date has examined the effects of leader behaviors in reducing disruptive behavior in group, and the ultimate effects that leader behaviors have on AOD outcomes.

Proposed Model

Given the foregoing, we would like to propose the model depicted in Figure 1 to guide future research on the possible iatrogenic effects of group treatment on adolescents with substance use problems. The variables include in the model are hypothesized to have little influence on their own (i.e., they have little direct effect) and their influence on outcomes is hypothesized to change over the life of the group. Group composition, disruptive behavior in group, and leader behaviors are hypothesized to work together to affect outcomes. Disruptive behavior in group (B) is viewed as a mediator of AOD outcomes in group (D), explaining how group composition (A) affects AOD outcomes (D). Full mediation is proposed; disruptive behavior (B) is expected to dominate the effects of group composition (A). The direct effects of group composition (dashed arrow) weakens when disruptive behavior in group is considered (Finney, 1995; Kraemer, Stice, Kazdin, Offord, & Kupfer, 2001). However, it is proposed that the effects of this part of the model are influenced by leader behaviors. Once disruptive behavior is displayed in group, leader behaviors related to the presence of disruptive behavior in the group (C) are expected to influence the effect of disruptive behavior in groups. Thus, leader behaviors affect the strength of the relationship between disruptive behavior and AOD outcomes (Finney, 1995, p. 137; Kraemer et al., 2001, p. 852). The elements are hypothesized to work together to explain AOD outcomes.

Conclusions

Research concerning possible iatrogenic effects of group treatment on adolescents with AOD use problems is important for a number of reasons. First, identifying the factors that contribute to iatrogenic effects will help develop effective group treatment approaches. With the high co-occurrence of AOD abuse/dependence and conduct disorder, many group

interventions potentially could have unintended iatrogenic effects. Without research into the “side effects” of treatment, “interventions that produce iatrogenic effects propagate” (Eddy et al., 1998, p. 58). Second, no study had appeared in the literature that examined possible iatrogenic effects with adolescents in group treatment for AOD problems. The literature thus far has been devoted to iatrogenic effects with adolescent in group treatment for conduct problems. Third, there has been no research on the independent, combined, and longitudinal influences of group composition, disruptive behavior, and leader behaviors on outcomes among adolescents who participate in group therapy, regardless of the presenting problems. Given (a) the prevalence of group treatment for adolescents with AOD problems and (b) the field's interest in improving the interventions that we provide, it is our hope that the literature review and proposed model presented herein will inspire and guide future research on the topic of possible iatrogenic effects of group treatment on adolescents with AOD use problems.

Acknowledgments

Partial support for this article came from the U.S. National Institute on Alcohol Abuse and Alcoholism grant RO1 AA13369.

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Note. Left to right positioning reflects temporal order. Dashed arrow indicates a correlation that weakens when the other variable is considered.

FIGURE 1.

Proposed model of relations among group composition, disruptive behavior, and leader behaviors in predicting response to AOD group treatment.