Drug and Alcohol Dependence 116 (2011) 117–124

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Sponsorship and service as mediators of the effects of Making Alcoholics Anonymous Easier (MAAEZ), a 12-step facilitation intervention

Meenakshi S. Subbaraman[a,b,*], Lee Ann Kaskutas[a,b], Sarah Zemore[a,b]

[a] Alcohol Research Group, 6475 Christie Ave, Suite 400, Emeryville, CA 94608, USA
[b] School of Public Health, University of California, Berkeley, CA, USA

ARTICLE INFO

Article history:
Received 17 June 2010
Received in revised form 1 December 2010
Accepted 4 December 2010
Available online 2 February 2011

Keywords:
Mechanisms of treatment
Mediators
Mediation
Twelve-step facilitation
Twelve-step participation
Alcoholics Anonymous

ABSTRACT

A recent trial ($n = 508$) of "Making Alcoholics Anonymous Easier" (MAAEZ), a group-format 12-step facilitation program, showed that MAAEZ participants had increased odds of abstinence (OR = 1.58; $p = 0.063$). Effects were especially marked in several subgroups, including those with more prior AA/NA/CA exposure, and those with severe psychiatric problems. This paper examines whether the effects of MAAEZ were explained by higher engagement in particular Alcoholics Anonymous (AA) and other 12-step organization activities. Mediation analyses were performed, estimating MAAEZ effects attributable to AA/NA/CA meeting attendance, overall AA/NA/CA involvement, having a sponsor, and engaging in 12-step service. The only variable that appeared to mediate MAAEZ effects in the sample overall was doing service at either 6 months or at both 6 and 12 months. Among those with high prior AA/NA/CA attendance, both having a sponsor and doing service emerged as mediators, with having a sponsor explaining approximately 25% of the MAAEZ effect. Doing service also partially explained the MAAEZ effect among those with high psychiatric severity. Results highlight the value of studying specific AA/NA/CA activities as mediators of treatment effects, and demonstrate the importance of exploring subgroups when trying to understand treatment mechanisms. Findings also suggest that treatment programs should emphasize specific activities for particular clients. For example, individuals may have attended many AA/NA/CA meetings, but never known how to ask for a sponsor or get involved in service; doing service may represent a non-threatening way of connecting with 12-step members for clients with psychiatric problems such as social anxiety.

1. Background

Recognizing factors that explain treatment effects is crucial to providing optimal care. This involves studying mediation, or variables that lie on the causal chain between treatments and outcomes. Causal chain analyses can explain why treatments work, identify "weak linkages" between hypothesized mediators and outcomes that point to erroneous theory, and elucidate effects that only emerge in particular subgroups (Finney, 1995). A prime example of the utility of mediation analyses within subgroups comes from Project MATCH (Matching Alcoholism Treatments to Client Heterogeneity) that identified an "inoculation effect" from the negative influences of social networks supportive of drinking. This effect only was found among those with networks saturated with heavy-drinking influences (Longabaugh et al., 2001). Causal chain analyses showed that greater involvement in Alcoholics Anonymous (AA) explained the effect in this subgroup among those treated in "Twelve-Step Facilitation" (TSF). Importantly, mediation analyses also determined that TSF (relative to the comparison condition) had not differentially decreased the amount of support for drinking in this group's social network; rather, results suggested that the recovering individuals encountered in AA exerted a counter-balancing influence. This type of mediation analysis highlights targets for treating particular client subgroups, and is the emphasis here.

This paper explores mediators of a different TSF intervention, Making Alcoholics Anonymous Easier (MAAEZ), which has been shown to be effective among subgroups not affected by earlier TSF approaches: those with high psychiatric severity, and with high prior involvement in Alcoholics Anonymous (AA), Narcotics Anonymous (NA) and Cocaine Anonymous (CA) (Kaskutas et al., 2009). MAAEZ is a manualized, group-format intervention designed for use in front-line treatment centers.

TSF interventions encourage participation in support groups that provide aftercare following specialty treatment. Project MATCH and many other studies have shown that treatment effects

* Corresponding author at: Alcohol Research Group, 6475 Christie Ave, Suite 400, Emeryville, CA 94608, USA. Tel.: +1 510 597 3440x272; fax: +1 510 985 6459.
E-mail addresses: msubbaraman@arg.org, msubbaraman@berkeley.edu (M.S. Subbaraman).

0376-8716/$ – see front matter © 2011 Elsevier Ireland Ltd. All rights reserved.
doi:10.1016/j.drugalcdep.2010.12.008

decline over time, and that sustained involvement in 12-step groups such as AA, NA, and CA can help in maintaining good recovery outcomes for years after formal treatment ends (Moos and Moos, 2006). TSF interventions thus often focus on meeting attendance (as it is the entree into the 12-step group), while also emphasizing other 12-step activities found to predict abstinence such as doing the steps (Toumbourou et al., 2002), having a sponsor (Crape et al., 2002), or helping behaviors such as being a sponsor (Cross et al., 1990).

Because TSF interventions ultimately encourage AA/NA/CA attendance and involvement, TSF and 12-step effectiveness are closely intertwined, and mediators of the TSF effect should be considered in the context of AA/NA/CA effectiveness studies. Theoretical perspectives of behavioral change used to explain mechanisms for AA (and NA, CA etc.) include social learning theory, cognitive behavioral theory, psychodynamic theory, and spirituality; see (Kaskutas, 2009; Moos, 2008 for reviews). For example, AA involvement leads to more positive social networks (Bond et al., 2003; Humphreys et al., 1999; Kaskutas et al., 2002; Timko et al., 2005), greater self-efficacy and coping skills (Humphreys et al., 1999; Kelly et al., 2010; Morgenstern et al., 1997; Timko et al., 2005), higher motivation for abstinence (Kelly et al., 2010), greater life meaning (White and Laudet, 2006), and spiritual changes (Kaskutas et al., 2003; Robinson et al., 2008; Zemore, 2007). Causal chain analyses of these 12-step variables has influenced the development of TSF interventions, as well as provided a logical framework for examining mediators of TSF.

For example, mediation analyses of several evidence-based TSF interventions have focused on having a sponsor, who (consistent with social learning theory) provides a successful role model. Most of these studies have also considered summary measures of overall involvement, since 12-step "dose" involves more than meeting attendance (Emrick et al., 1993) or any single activity. As reported above, AA involvement was a mediator of the "Project Match TSF" effect among those with high network support for drinking. Overall AA involvement partially mediated the effect of another TSF approach, "Intensive Referral," which involved arranging for an AA member to meet the client at a meeting (Timko et al., 2006). Sustaining particular activities (e.g., doing service during both the first and second follow-up periods, and having a sponsor at each follow-up) significantly predicted abstinence at 6 and 12 months in that study (Timko and Debenedetti, 2007). Overall AA involvement also partially mediated the effects of a "Directive" TSF intervention focused on meeting attendance. This twelve-step directive study compared outcomes for participants who signed contracts detailing their personal AA attendance goals to those who had simply been told that they would probably benefit from AA but that the decision to go was "up to you" (Walitzer et al., 2009, p. 394). A third motivational enhancement TSF condition did not significantly affect outcomes.

Although overall involvement was also emphasized in MAAEZ, the key focus was on promoting involvement with the 12-step fellowship. For example, MAAEZ incorporates role-plays of asking for a sponsor, and presents doing service as a way of getting outside oneself and feeling part of the AA/NA/CA fellowship. Our choice of potential mediators of the MAAEZ effect was theoretically derived from the intervention's broad goal of connecting with the 12-step culture, and thus we focus here on having a sponsor and doing service.

The MAAEZ emphasis on the 12-step fellowship also is consistent with the empirical literature, as other studies of AA-oriented predictors of outcome conducted in diverse samples have shown this to be important (Crape et al., 2002; Emrick et al., 1993; Toumbourou et al., 2002; Weiss et al., 1996, 2005; Witbrodt and Kaskutas, 2005; Zemore and Kaskutas, 2004; Zemore et al., 2004) and highlight its significance as a target for TSF interventions. Recent mediation analyses of Project MATCH TSF-derived "Network Support" therapy (Litt et al., 2009) provide additional compelling evidence for an emphasis on the AA fellowship. The "Network Support" condition emphasized AA's utility in meeting new, sober people, and found that AA attendance and the number of abstinent friends in the social network each appeared to mediate the Network Support treatment effect.

The primary focus here lies on subgroup effects that have not been observed in other TSF interventions. Subgroups that appeared to benefit especially from MAAEZ (Kaskutas et al., 2009) included those with high levels of prior AA/NA/CA exposure (i.e., 91 meetings or more), and those with more severe psychiatric problems (i.e., who were above the median ASI psychiatric composite score). These groups respectively represent a large proportion of treatment populations (Humphreys et al., 1998b; Regier et al., 1990) and are especially difficult to treat successfully (Rounsaville et al., 1987; Weisner et al., 2000). In contrast to MAAEZ, Project MATCH TSF carried an advantage at 1-year only among those with low psychiatric severity (Project MATCH Research Group, 1997), and Timko's "Intensive Referral" TSF was superior at 6 months among those with low levels of prior 12-step group meeting exposure (Timko et al., 2006).

2. Methods

2.1. Sample and design

The MAAEZ trial was approved by the Public Health Institute's Institutional Review Board. The study was implemented in existing California treatment centers, which offered long- and short-term residential and outpatient services. Participants were recruited between July 2005 and May 2006. The study used an "OFF–ON" design; those recruited during the OFF condition received usual care ($n = 196$), while six usual care sessions were replaced by six MAAEZ sessions during the ON condition ($n = 312$). The ON condition followed the OFF condition. MAAEZ effectiveness was based on comparisons between those in the OFF vs. ON conditions.

Prior to conducting the baseline interview, the 508 participating clients (211 long-term residents, 136 short-term residents, and 161 outpatients) provided consent (an 82% participation rate). Seventy-five percent were re-interviewed by telephone at 6 months ($n = 380$) and 76% at 12 months ($n = 384$). Client incentives totaled $100 ($20 at baseline and $40 at 6 and 12 months).

Comparisons of gender, age, and race of the 508 who participated in the study to the 114 who refused showed no significant differences. Regarding attrition, proportionately fewer long-term residential clients were interviewed at 12 months (65%) than short-term residential clients and outpatients (82% and 83%, respectively, $p < 0.001$). Reflective of long-term resident's demographics, those lost to follow-up at 12 months were more likely to have reported less than a college education, unemployed status, lower income, and a drug-dependence only diagnosis (all p's < .05).

Overall, the sample was 33% female, 52% White, and 28% married. Dependence diagnoses broke down to 17% alcohol only, 43% drug only, 23% drug and alcohol, and 18% undiagnosed. The mean ASI psychiatric severity score was 0.33 (SD = 0.27), similar to that found among individuals entering substance abuse treatment in a large health maintenance organization (0.37) and well above that of its general membership (0.03) (Weisner et al., 2000). Forty percent of the sample had attended more than 90 AA/NA/CA meetings in their lifetime. Of those with high prior AA/NA/CA attendance ($n = 201$), 56.7% had high psychiatric severity; of those with high psychiatric severity ($n = 255$), 44.7% had high prior AA/NA/CA attendance.