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Journal of Substance Abuse Treatment 31 (2006) 41–50

Journal of Substance Abuse Treatment

Regular article

End-of-treatment outcomes in cognitive-behavioral treatment and 12-step substance use treatment programs: Do they differ and do they predict 1-year outcomes?

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Received 25 October 2005; received in revised form 1 March 2006; accepted 22 March 2006

Abstract

This study examined changes in treatment-related proximal outcomes from intake to follow-up, associations between continuing care and maintenance of proximal outcome gains, correlations between specific proximal outcomes and substance use outcomes, and potential mediators of treatment effects for 12-step versus cognitive–behavioral (CB) substance use disorder (SUD) treatment. The participants were 1,873 male veterans seeking SUD treatment at five CB-oriented and five 12-step-oriented VA inpatient/residential SUD programs. Patterns of change in proximal outcomes were similar across the two program types. After discharge, attendance at 12-step groups, but not outpatient treatment, was associated with greater maintenance on most proximal outcomes. Only a few proximal outcomes at discharge were associated with 1-year substance use; most 1-year proximal outcomes were associated with 1-year substance use. Having a sponsor, reading 12-step materials, attending 12-step meetings, and having an abstinence goal appeared to mediate the greater effects of 12-step programs (relative to CB programs) on abstinence.

Keywords: SUD; 12-step; Cognitive–behavioral; Mediators; Expectancies; Coping

1. Introduction

Several recent articles (Finney, Moos, & Humphreys, 1999; Finney, Noyes, Coutts, & Moos, 1998; Humphreys, Huebsch, Finney, & Moos, 1999; Moos, Finney, Ouimette, & Suchinsky, 1999; Morgenstern, Bux, Labouvie, Blanchard, & Morgan, 2002; Morgenstern, Frey, McCrady, Labouvie, & Neighbors, 1996) have addressed treatment process issues, particularly the relationship between intermediate or "proximal" outcomes (Rosen & Proctor, 1981), or potential mediators of treatment effects, and substance use treatment outcomes. Studying the links between proximal and ultimate outcomes is important because theories of substance use disorder (SUD) treatment predict that specific intervening changes should take place if positive ultimate outcomes are to be achieved. For example, social learning theory, on which cognitive–behavioral (CB) therapy is based, suggests that changes in coping styles and expectations about the costs and benefits of continued substance use will lead to recovery. Traditional 12-step approaches, which combine elements of Alcoholics Anonymous/Narcotics Anonymous/Cocaine Anonymous (AA/NA/CA) with the disease model of addiction, predict improvement from a different set of beliefs and behaviors, including accepting an alcoholic or addict identity and attending 12-step self-help group meetings. Examining whether theorized changes took place during treatment and whether they were related to SUD outcomes is one way to test the adequacy of treatment theories. Examining proximal outcomes as potential mediators or mechanisms of treatment effects can also indicate which of the changes

The views expressed are those of the authors and do not necessarily reflect those of the Department of Veterans Affairs.

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0740-5472/06/$ – see front matter
doi:10.1016/j.jsat.2006.03.008

made during treatment are potentially responsible for the salutary effects of a particular approach. Knowing which changes typically take place during treatment can provide clinicians with normative information against which to compare their own clinical experiences. Knowing which proximal outcomes are associated with longer term SUD outcomes can suggest which areas of intervention should be clinical priorities.

1.1. Associations among treatment type, proximal outcomes, and SUD outcomes

Studies of change on proximal outcomes during different types of SUD treatment (i.e., CB or 12-step) have generally found patterns of change to be more similar than different treatment theories would suggest. For example, Finney et al. (1998), using the same data set examined in this study, found that patients in CB SUD programs improved between intake and discharge on all measured behavioral variables that are traditionally associated with 12-step treatment (such as attending 12-step meetings and taking the steps). Patients in 12-step programs improved on all but one of the proximal variables that are traditionally associated with CB treatment (such as expectancies and coping). However, the study of Finney et al. did not address whether CB and 12-step patients maintained changes on specific proximal outcomes beyond discharge. It is possible that differences between CB and 12-step patients in proximal outcomes emerge after leaving treatment.

A subsequent study (Finney et al., 1999), again using the same data set analyzed here, grouped the proximal outcome variables just described into five composite variables (12-step cognitions, 12-step behaviors, CB cognitions, substance-specific coping, and general coping) and used these five composite proximal outcome variables to predict 1-year SUD outcomes. Discharge levels of all composite proximal outcomes, except substance-specific coping, were modestly associated with SUD outcomes at 1-year follow-up, whereas follow-up levels of all composite proximal outcomes were more strongly associated with concurrent SUD outcomes. Morgenstern et al. (2002) criticized this study for combining proximal outcomes into composite indices. They argued that some proximal outcomes within a category may be related to SUD outcomes, but others may not. If true, clinical efforts geared toward an entire category of proximal outcomes are unnecessary and inefficient. Indeed, the study of seven 12-step cognitions by Morgenstern et al. found that only three of the cognitions (commitment to AA, commitment to abstinence, and intention to avoid high-risk situations) were associated with better 6- and 12-month SUD outcomes. However, their study did not address other potential proximal outcomes (such as 12-step behaviors or general coping) and did not examine proximal outcomes as potential mediators of the effects of 12-step versus other treatments on ultimate outcomes. Mediational analyses are needed to inform clinicians about which aspects of 12-step programs and which proximal outcomes associated with 12-step treatments appear to be responsible for their superior effects.

1.2. Proximal outcomes as mediators of treatment effects

Ouimette, Finney, and Moos (1997), using data further analyzed here, found that patients in 12-step programs were more likely to be abstinent than were those in CB programs at 1-year follow-up. Humphreys et al. (1999) tested the hypothesis that the effects of 12-step versus CB treatment on abstinence was mediated by a composite measure of posttreatment involvement in 12-step self-help groups. They found evidence for a causal chain in which 12-step treatment was associated with higher posttreatment self-help group involvement, which, in turn, was associated with abstinence from substance use. However, Humphreys et al. did not examine during-treatment variables (changes from intake to discharge), individual aspects of 12-step group participation, or other more general proximal outcomes as potential mediators of the 12-step treatment main effects on abstinence. Comprehensive mediational analyses are needed to avoid overlooking a potentially important treatment mechanism. These analyses also examine the possibility that treatments may not work in the way that treatment developers and practitioners believe they do.

1.3. Continuing care and proximal outcomes

Continuing care may help to maintain proximal outcome gains made during treatment. Finney et al. (1999) compared four types of continuing care (no continuing care, outpatient care, 12-step group involvement, and both outpatient and 12-step group involvement) in the posttreatment maintenance of proximal outcomes. They found that patients who were involved in 12-step groups, either alone or in combination with outpatient mental health treatment, experienced better maintenance of substance-specific coping skills, CB cognitions, 12-step behaviors, and 12-step cognitions than did patients with only outpatient care. However, this analysis aggregated proximal outcomes into composites. It also did not address the possibility that patients from different program types may benefit differentially from different types of continuing care, implying that aftercare recommendations should differ for patients in 12-step versus CB treatment.

1.4. Aims of the study

This study has three aims. The first aim is to elaborate on the adequacy of CB and 12-step SUD treatment theories by examining treatment-specific changes in disaggregated proximal outcomes from intake to 1-year follow-up and their relation to 1-year SUD outcomes. The second aim is to examine specific proximal variables as potential mediators of the effects of 12-step programs (relative to CB programs)