

Changes in 12-step Cognitions Among Treatment Seeking Adolescents

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INTRODUCTION

Twelve Step therapy is the dominant therapeutic model in the USA and studies have demonstrated that changes in patient 12-step beliefs, cognitions, and practices can be produced during treatment (Tonigan et al., 2002). Some of these 12-step related changes have accounted for reductions in substance use, while other cognitive shifts have not (Finney et al., 1999). This study tested whether changes in positive and negative beliefs about 12-step practices occurred during adolescent outpatient treatment and, if so, whether such changes predicted subsequent substance use.

METHODS

A total of 152 opiate-dependent adolescents were randomized to one of two pharmacotherapy conditions as part of their participation in a clinical trial investigating the effects of buprenorphine. All participants received group and individual drug counseling, emphasizing 12-step principles and participation. The 40-item Addiction Recovery scale (ARS) was administered at intake and at the end of treatment (week 12). Items on the ARS contained positive and negative statements about 12-step practices and beliefs. Urine toxicology screens were conducted weekly. A positive UA screen was conservatively assumed in the absence of a weekly result.

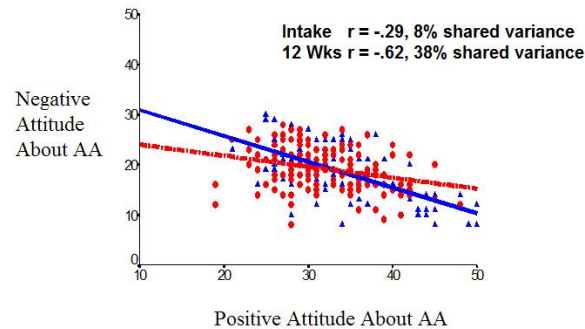
RESULTS

Of the 152 adolescents, 64 (42%) were female. On average, in the 30-day period before randomization participants reported using alcohol 1.97 (SD = 4.16) days, opiates on 19.38 (SD = 13.09) days, cocaine on 2.25 (SD = 5.21) days, and marijuana on 9.49 (SD = 11.57) days. At intake, adolescents reported generally favorable attitudes about 12-step practices and beliefs, mean 31.78 SD=5.32, and the relationship between positive and negative views of AA practices was predictably negative, $r = -.29, p < .01$.

Paired t-tests indicated that significant pre-post increases in positive attitudes about AA occurred during treatment ($N = 83$ for pre-post positive and $N = 85$ for negative pre-post), $t(82) = 2.03, p < .05$, but that negative views about AA were relatively unaffected during treatment, $t(84) = -.25, p < .80$.

Pre-post effect size estimates for the positive and negative AA attitude scales were $d = .23$ and $d = .03$, respectively. Figure 1 shows the association between positive and negative attitudes about AA at both intake ($N = 144$) and at the end of treatment ($N = 85$ pairs). As shown, the polarity in response to scale items increased significantly during the course of treatment.

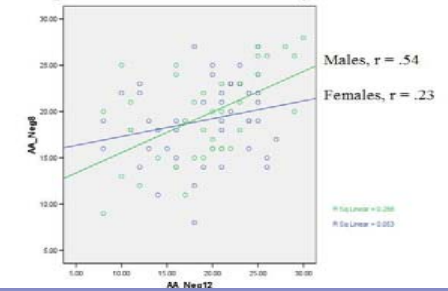
Association Between Positive and Negative Attitudes About AA at Intake (red) and End of Treatment (blue)



Hierarchical regression analyses were conducted to determine if pre-post changes in attitudes about AA were predictive of substance use during treatment, defined here as the total number of weeks of positive drug screens¹. A positive drug screen was assumed when a weekly UA was missing. Intake scale values were entered in step 1, and in step 2 the end of treatment scale value was entered. Considering negative AA attitudes first, neither the baseline nor incremented variance accounted for in step 2 by the end of treatment scale predicted total weekly drug screens, $F(2, 82) = .77, p < .47$. An identical picture emerged with the positive AA attitudes scales, $F(2, 82) = .54, p < .58$. Secondary analyses were done to see if adolescent gender moderated the relationship between pre-post positive and negative attitudes about AA. No interaction was identified for the positive beliefs scale, but Figure 2 displays the disordinal interaction ($p < .03$) between negative AA attitudes at intake and at the end of treatment separately for males and females. As shown, the rank order of attitudes of males about the negative aspects of AA were relatively similar between pre and post assessments. In contrast, knowledge of negative attitude

about AA at pretest was a poor predictor of the magnitude of negative AA attitudes at end of treatment for females.

Pre-Post Negative Attitudes About AA by Gender



DISCUSSION

Findings suggest that, on average, negative beliefs about 12-step programs are relatively unaffected during treatment among adolescents, especially for males. Positive attitudes and beliefs about AA, however, were significantly enhanced during the course of 12-weeks of individual and group therapy. Not predicted, the negative association between positive and negative attitudes about AA increased during treatment. It appears, then, that jointly holding both positive and negative attitudes about AA became less tenable during the treatment experience.

Findings indicated that substance use during treatment was largely unrelated to beliefs about AA, regardless of the valence of such beliefs. Behavioral measures of 12-step attendance may fare better in predicting substance use reduction.

REFERENCES

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