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Lack of Effect for Decisional Balance as a Brief Motivational Intervention for At-Risk College Drinkers

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Abstract

This study examined the effects of written and in-person decisional balance exercises on measures of risky drinking. College students determined to be at-risk for alcohol-related problems ($N = 131$) were randomly assigned to an in-person decisional balance (IDB), a written decisional balance (WDB), or an assessment-only control (C) group. IDB participants met with an interventionist for individual 30-minute discussions of the pros and cons of maintaining versus changing their drinking behavior, whereas WDB participants completed written decisional balance exercises. All participants completed alcohol-use assessments at baseline, 2-week posttest, and 6-month follow-up. Process analyses indicated that IDB participants generated more cons of current drinking and more pros of cutting down than WDB participants. Further, the proportion of pros to cons for cutting down predicted IDB but not WDB group drinking change. On the other hand, analyses of covariance indicated no significant differences among the groups on 2-week alcohol consumption, heavy-drinking episodes, alcohol consumption during peak drinking occasions, and alcohol-related problems. This study did not provide support for decisional balance as a stand-alone brief motivational intervention for at-risk college drinkers.

Keywords

alcohol drinking patterns; alcohol rehabilitation; at-risk populations; college students; alcohol abuse; brief psychotherapy

The decisional balance exercise (DB) was originally designed as a therapeutic tool to help reduce decision-making errors by making people more cognizant of the decision-making process and the factors contributing to their decisions. DB gives people an opportunity to articulate ambivalence, or mixed thoughts and feelings, about their current behavior and to determine if the weight of the evidence is accumulating towards the need for behavior change (Miller, 1999). Research to date indicates that DB helps people more effectively make career decisions (Janis, 1968; Mann, 1972), is a good indicator of readiness to change substance use (e.g., Prochaska et al., 1994), and is a component of successful brief motivational intervention (BMI) packages (e.g., Sellman, Sullivan, Dore, Adamson, & MacEwan, 2001). In light of the efficacy of personalized normative feedback as a stand-alone BMI for at-risk college drinkers (Agostinelli, Brown, & Miller, 1995; Collins, Carey, & Sliwinski, 2002; Walters, Bennett, & Miller, 2000), it would be logical to isolate DB from the multicomponent BMI package and evaluate its stand-alone efficacy.

This study addressed two goals. The first goal was to isolate DB from the BMI package in which it is a typical component in order to examine its efficacy as an intervention in its own

right. Thus, participation in DB exercises was compared to an assessment-only control (C). The second goal was to compare the efficacy of two forms of DB: in-person (IDB) and written decisional balance (WDB) exercises. This study thus explored whether the more time- and cost-efficient WDB would be as efficacious as the IDB.

It was hypothesized that participants receiving either of the two DBs would report consuming fewer drinks during the last two weeks, fewer heavy-drinking episodes, and fewer drinks per heaviest drinking occasion in the last two weeks (peak drinks) than the C group at the two-week posttest and six-month follow-up. Participants receiving either of the DBs were expected to report fewer alcohol-related problems at the six-month follow-up than participants in the C group. Participants receiving IDB were expected to drink less and have fewer alcohol-related problems at posttest and follow-up than the WDB participants.

Method

Participants and Recruitment

College students ($N = 234$) in introductory psychology classes signed up for an alcohol-use study and were screened for heavy, episodic drinking. The eligibility criterion followed a precedent set in other studies (cf., Borsari & Carey, 2000; Collins et al., 2002) and included students who reported at least one heavy-drinking episode (i.e., consuming five or more drinks on one occasion for men and four or more drinks on one occasion for women; Wechsler et al., 2002) in the last two weeks. All eligible students who were contacted agreed to be randomized into the DB study ($N=131$).

Measures

A *Personal Information Questionnaire* was used to assess sociodemographic information. The *Daily Drinking Assessment* assessed frequency and quantity of reported alcohol consumption in the past two weeks. Two-week quantity scores were obtained for each group by summing the number of drinks over the fourteen-day period ending the day before the assessment. The *Frequency-Quantity* (F-Q) questionnaire included open-ended items assessing participants' peak quantity of alcohol consumption and frequency of heavy-drinking episodes in the past two weeks. The *Rutgers Alcohol Problem Index* (RAPI; White & Labouvie, 1989) consists of 23 items assessing alcohol-related problems. Participants indicated on a Likert scale how many times in the past 30 days they experienced each problem. Internal consistency was adequate in the present sample ($\alpha = .87$). The *Social Desirability Scale* (Crowne & Marlowe, 1964) was included as a covariate in analyses when it was associated with the outcome variable. The Social Desirability Scale evinced adequate reliability in this sample ($\alpha = .76$).

Procedure

The screening/baseline assessment sessions were conducted in small groups over a two-week period. Students provided written informed consent and then completed the assessment packets. Research assistants contacted eligible students by telephone. Students providing oral consent to participate were randomly assigned to the C, WDB, or IDB groups. C participants were scheduled for a 2-week posttest, whereas WDB and IDB participants were scheduled for individual sessions.

Participants assigned to the WDB condition received a decisional balance grid with instructions to complete the form with "good" and "not-so-good" things about their current drinking, to develop an "alternative drinking plan," which would allow them to minimize the not-so-good things and maximize the good things about their current drinking, and to list the good and not-so-good things about the alternative drinking plan. Participants were given 30 minutes to complete the self-administered WDB.

IDB participants attended a 30-minute individual session with the first author, who maintained a motivational-interviewing style and adhered to a treatment manual created for this study (Collins, 2004). Participants were prompted to identify good things and not-so-good things about their current drinking. Next, they were asked how they could change their drinking in order to reduce their experience of the not-so-good things and to maximize their experience of the good things about their drinking. Participants defined their own alternative drinking plan and then generated the pros of changing their drinking in this way. Finally, the interventionist prompted them to consider the not-so-good things about their plan, which elucidated barriers to change, and the interventionist and participants discussed ways to minimize these barriers.

Posttest and follow-up assessments were conducted in small groups two weeks and six months after the intervention sessions, respectively. Participants repeated the baseline assessment and received course credit for completing the posttest and \$10 for the follow-up.

Results

Analyses of variance indicated only one marginal baseline group difference on heavy-drinking episodes, $F(2, 127) = 2.99, p = .05$. A Tukey HSD test indicated that the IDB group reported more heavy-drinking episodes ($M = 3.26$) than the C group ($M = 2.17$).

Most of the participants (98%) completed the posttest, and 64% completed the follow-up. One third of the sample was not interested in returning for the follow-up assessment, for which monetary compensation was offered instead of course credit. Attrition analyses indicated that more students living on-campus completed the study (70%) than did students living off-campus (15%; $t = 14.90, p < .01$), and more freshman and sophomore students completed the study (66%) than did junior and senior students (33%; $t = 3.98, p = .05$).

Process analyses revealed that the WDB and IDB groups differed on the number of pros and cons they generated during the intervention. The WDB group reported fewer cons of current drinking ($M = 5.49; SD = 3.13$) than the IDB group ($M = 6.71; SD = 2.42; t(84) = 2.47, p = .02$). The WDB group reported fewer pros of alternative drinking ($M = 4.47; SD = 2.82$) than the IDB group ($M = 5.79; SD = 1.75; t(83) = 4.02, p < .001$).

Seven ANCOVAs were conducted with baseline drinking scores as covariates, the three posttest and four follow-up drinking scores as outcome variables, and group as a three-level, fixed factor. Analyses involving drinking variables that correlated with social desirability included social desirability as an additional covariate. All dependent variables exhibited positively skewed distributions and were transformed using a square-root transformation. For the three dependent variables assessed at posttest, the baseline values were significant covariates, but group was not a significant predictor (all $ps > 0.75$). Similarly, for the four dependent variables assessed at follow-up, baseline scores were significant covariates, but group did not significantly predict outcomes (all $ps > 0.27$).

Exploratory multiple regressions were conducted, separately by group, to evaluate whether participants' proportions of pros to cons for current drinking and alternative drinking plans predicted drinking behavior change. For the IDB group only, the regression involving the heavy-drinking episodes change score was significant, $F(2, 38) = 3.28, p = .049$, and indicated that the proportion of pros to cons for alternative drinking was a marginally significant predictor of the change in drinking ($\beta = -.294, p = .066$). Specifically, the higher the proportion of pros to cons for alternative drinking, the more participants reduced their drinking. None of the other regression models were significant ($ps > .069$).

Discussion

Process analyses indicated that WDB and IDB groups differed significantly on the number of pros and cons generated. When the DB exercise was guided by an interventionist, participants generated significantly more cons of current drinking and more pros of alternative drinking plans, and the weight of their DB towards change predicted actual behavior change.

However, the main outcome analyses indicated no significant differences among the intervention groups and the control group on the drinking outcome variables. The relatively small effect size for the group factor in the ANCOVA models may be due to the relative brevity of the intervention. Alternatively, characteristics of the sample may have limited the sensitivity of the design: although the criterion for eligibility in this study corresponds to criteria used in other alcohol intervention studies with this population (e.g., Borsari & Carey, 2000; Collins et al., 2002), it is relatively inclusive. Thus, this study may have recruited participants whose drinking is not typically heavy enough to cause significant problems in their lives and may have limited the amount of change possible and/or limited the motivational impact of the DB exercise.

Further, the current intervention may not have been appropriate for this population's level of readiness to change. The focus of DB is to help resolve ambivalence about changing one's drinking. Additional analyses not reported here revealed that participants had relatively low ambivalence about their drinking compared to other at-risk drinker populations (Collins, 2004). Thus, DB may not have had the same motivational impact that it would with more ambivalent drinkers. Techniques such as self-monitoring or personalized normative feedback, which are designed to raise awareness of alcohol effects, may be more effective interventions for at-risk college drinkers. DB may be more appropriate as a stand-alone intervention for people who have higher readiness to change, and who are ready to resolve discrepancy by moving towards an active change strategy.

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