Short communication

Motivation and life events: A prospective natural history pilot study of problem drinkers in the community

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Abstract

A prospective natural history study was conducted of problem drinkers who were thinking about quitting or reducing their alcohol consumption. Two primary constructs, cognitive appraisals and life events, were measured in a mailed-out baseline survey. A one-year follow-up survey identified those who had made reductions in drinking. Partial correlations controlling for baseline drinking severity revealed some support for both cognitive appraisal and life events explanations of change.
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Natural history research attempts to find out how people recover from substance abuse problems without treatment. This information is then used to try to improve services for people with addictions concerns. Most such research to date has been retrospective, interviewing people who have already successfully resolved their substance abuse (reviewed in Blomqvist, 1999). A prospective research design has the advantage of allowing measurement of the relevant constructs of interest prior to the person's actual quit attempt. This pilot study employed such a prospective design, focusing on two

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constructs that have been emphasized in previous natural history research. The first, respondents' anticipated costs and benefits of change, is one means of measuring respondents' motivation to change (Sobell, Sobell, Toneatto, & Leo, 1993). It was hypothesized that respondents who reported greater anticipated benefits of change or fewer anticipated costs of change would achieve greater reductions in drinking. The second construct, respondents' life events prior to and after their quit attempt, has similarly been hypothesized to be related to successful quitting attempts (e.g., Tucker, Vuchinich, & Gladsjo, 1994). Respondents who experience the greatest net improvement in their positive life experiences or the greatest reduction in their negative life events pre to post quit attempt were hypothesized to be most likely to have successfully reduced or quit their drinking.

1. Method

Respondents thinking about quitting or reducing their alcohol concerns were recruited through newspaper advertisements. They were sent a baseline survey and then followed up in two months' time to assess serious quit attempts. Results from this two-month follow-up are presented elsewhere (Cunningham, Wild, Koski-Jännes, Cordingley, & Toneatto, 2002). Those respondents who made a serious quit attempt by the two-month follow-up were then recruited to participate in a one-year follow-up to explore the factors associated with sustained behavior change. A serious quit attempt was defined as the respondent agreeing he or she had made the attempt and having drank no more than twelve drinks per week for a 14-day period prior to the two-month follow-up.

1.1. Baseline and 12-month surveys

The Alcohol Use Disorders Identification Test was used to measure drinking severity (Babor, De La Fuente, Saunders, & Grant, 1989). The Alcohol and Drug Consequence Questionnaire (ADCQ, Cunningham, Sobell, Gavin, Sobell, & Breslin, 1997) was used to measure motivation for change and provides two subscales—the anticipated costs and the anticipated benefits of reducing drinking. A simplified version of the Life Events Questionnaire (LEQ, Tucker et al., 1994, formulated to be self-administered) was used to assess life events in the year prior to the baseline survey. The AUDIT and LEQ were re-administered on the 12-month follow-up.

1.2. Respondents

As was described in the earlier paper (Cunningham et al., 2002), 100 respondents with AUDIT scores of 8 or more (indicating a current alcohol problem) completed the baseline and two-month follow-up surveys. Of these, 53 qualified as making a serious quit attempt and were recruited for the 12-month follow-up (only one declined to participate at the time of this recruitment). Thirty-one respondents returned the 12-month follow-up (58% follow-up rate)

and comprise the sample for this pilot study report. The mean (SD) age of these respondents was 43.5 (11.1) years, 77% were male, 45% married, 55% had some post-secondary education and 74% were full or part time employed. Respondents' mean (SD) AUDIT score at baseline was 18.3 (7.6) and 58.1% of respondents had accessed alcohol treatment at some point in their lives.

2. Results

The most appropriate analysis plan for this data would be stepwise regression analysis in which all the predictor variables were entered simultaneously. However, there were insufficient respondents in this sample to conduct such an analysis. Thus, as this was a pilot study, partial correlations were employed as a reasonable alternative. Table 1 presents partial correlations between the four predictor variables (ADCQ costs and benefits subscales, reduction in negative life events, increase in positive life events) and drinking at the twelve-month follow-up. In each partial correlation, respondents' baseline AUDIT score and respective baseline drinking value were entered as covariates (e.g., baseline drinks per drinking day and AUDIT score entered in partial correlation to predict drinks per drinking day during the 12-month follow-up). Respondents' highest number of drinks on one occasion was negatively correlated with the benefits subscale of the ADCQ ($r = -0.38$, $p < .05$), with the reduction in the number of negative life events between baseline and follow-up ($r = -0.46$, $p < .05$) and with the increase in respondents' positive life events ($r = -0.35$, $p < .05$). Respondents' proportion of drinking days, typical drinks per week and number of days in which they consumed six or more drinks on one occasion were positively correlated to the costs subscale of the ADCQ ($r = 0.43$, $p < .05$; $r = 0.35$, $p < .05$; $r = 0.37$, $p < .05$, respectively) (Table 1).

Table 1
Partial correlations predicting drinking at the 12-month follow-up[a]

Predictor	Drinks per drinking day	Highest number of drinks	Proportion of drinking days	Typical drinks per week[b]	Number of 6+ drinking days
	R	R	R	R	R
Benefits subscale, ADCQ	−.22	−.38[*]	−.33	−.25	−.24
Costs subscale, ADCQ	.04	.20	.43[*]	.35[*]	.37[*]
Reduction in negative life events	−.25	−.46[*]	−.26	−.30	−.31
Improvement in positive life events	−.33	−.35[*]	−.31	−.29	−.27

[a] The respondents' AUDIT score and respective baseline drinking value were entered (e.g., baseline drinks per drinking day entered in partial correlation to predict drinks per drinking day during the 12-month follow-up).
[b] Typical drinks per week variable not asked at baseline so only the AUDIT score was added to the first step of this partial correlation.
[*] $p < .05$.

3. Discussion

The overall pattern of results followed the predicted hypotheses. In general, the more a respondent anticipated positive benefits of change, experienced a net reduction in the number of negative life events or experienced an increase in the number of positive life events, the more likely they were to have reduced their drinking at the twelve-month follow-up. Similarly, the greater the anticipated costs of change, the less likely respondents were to have reduced their drinking. Thus, support for both the motivational and life events explanations for change was obtained.

The primary limitation of this study was its small sample size. Thus, partial correlations were employed rather than a more conservative regression analysis. Similarly, while the pattern of partial correlations supported the hypotheses, only some of these correlations reached significance, in part because there were few subjects. A well-developed study justified by this pilot study would include a larger sample size. Other refinements would include collateral confirmation of self-reports (another limitation of the current study).

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