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Self-Efficacy to Limit Drinking Mediates the Association between Attitudes and Alcohol-related Outcomes

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Abstract

Personal attitudes toward alcohol consumption are reliable predictors of alcohol use and related problems, with emerging work suggesting that one's favorable attitude toward limited drinking (i.e., at levels below the threshold for heavy episodic drinking) is a buffer against alcohol use and binge drinking. However, little work has examined the specific mechanism(s) through which one's personal attitude toward limited drinking is associated with alcohol use and related problems. One such mechanism may be an individual's self-efficacy to limit their alcohol use. The current study aimed to evaluate whether self-efficacy to limit one's alcohol use mediates the association between one's personal attitude toward limited drinking and actual alcohol use and related problems over time. Participants were mandated students (n = 568; 28% female) who violated campus alcohol policy and received a brief motivational intervention. Mediation models were used to test (a) self-efficacy to limit one's alcohol use as a traditional mediator of the attitudes—drinking quantity association and (b) self-efficacy and drinking quantity as serial mediators of the attitudes—alcohol-problems link. Favorable attitudes toward limiting drinking at baseline were positively associated with self-efficacy to limit drinking at 1 month, which was associated with a reduction in drinking quantity at 3 months; this, in turn, was associated with a reduction in alcohol-related problems at 5 months. These findings provide a rationale for incorporating attitudes and self-efficacy in the development and refinement of intervention strategies.

Keywords

alcohol; drinking; college students; attitudes; self-efficacy

College is a time during which late adolescents often explore their relationship with alcohol and other drugs. While more than half of those attending college are under the age of 21, 81% report lifetime alcohol use (Johnston et al., 2015). Furthermore, roughly 33% of college students report heavy episodic drinking (4+/5+ drinks in a single sitting for females/males) at least once in the past 2 weeks, and as many as 40% report getting drunk in the past 30 days (Johnson et al., 2015). Indeed, the college environment appears to promote a style of

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drinking involving high quantities of alcohol use per occasion among both underage and of-legal-age young adults (White & Hingson, 2013).

One prominent predictor of alcohol use is one's personal attitude toward use. Generally, attitudes represent an individual's evaluative judgements of a behavior. They range from positive to negative (e.g., alcohol use is good/bad) and are often influenced by situational factors, including observations of one's own behavior (Bem, 1967). Attitudes and their influence on behavior represent a fundamental aspect of the human experience and a key explanatory variable in many theories of health behavior (Bem, 1967; Glassman & Albarracin, 2006; Higgins, 1987; Montano & Kasprzyk, 2008). Applied to alcohol use, attitudes have been identified as a stronger and more proximal predictor of alcohol use, binge drinking, and alcohol-related problems – both cross-sectionally and longitudinally – than other cognitive correlates of heavy drinking, including descriptive and injunctive norms (DiBello et al., 2018a; Krieger, Pedersen, & Neighbors, 2018). This unique predictive value over normative perceptions is important because one's descriptive norm – or perception of how much others drink – is among the few consistent mediators of effective brief interventions for alcohol use among college students (Reid & Carey, 2015). Similarly, one's injunctive norm – or perception of how approving others are of drinking – is also a strong, independent predictor of drinking behavior that is targeted in interventions for heavy-drinking college students (Krieger et al., 2016). The influence of attitudes beyond these variables indicates that attitudes are a promising but potentially underutilized target in alcohol interventions.

Research has also shown that there is value in examining one's attitude toward alcohol use in general (Collins & Carey, 2007; Collins at al., 2011) as well as one's attitude toward consuption above and below the threshold for heavy episodic drinking – consumption of 4/5+ drinks in one sitting for females/males, respectively (DiBello et al., 2018a). For example, DiBello and colleagues (2018a) found that positive attitudes toward one's heavy alcohol use was a strong positive predictor of alcohol use, binge drinking, and alcohol-related problems, both cross-sectionally and longitudinally. In contrast, having a favorable attitude toward limiting one's personal alcohol use (having fewer than 4/5 drinks in one sitting) was independently associated with decreased alcohol use and binge drinking, again both cross-sectionally and longitudinally (DiBello et al., 2018a). Thus, attitudes that are specific to different levels of drinking appear to have a strong influence on behavior. Despite this influence, less work has examined the process and pathway through which an individual's favorable attitude toward limiting alcohol consumption might impact drinking.

One potential pathway for attitudes to influence drinking is through self-efficacy. Self-efficacy is defined as the belief that one can successfully perform the required behaviors for producing an outcome (Bandura, 1977, 2000), or one's confidence in the ability to do something. Research specific to alcohol use has examined several different facets of self-efficacy, including drink refusal self-efficacy (DRSE) as well as self-efficacy to use drinking self-control strategies (self-efficacy for moderate drinking). DRSE is the belief that one is able to refuse or resist alcohol. It buffers against heavy alcohol use among young adults (e.g., Young et al., 2007) and is associated with abstinence following treatment (Maisto et al., 2000). Self-efficacy to limit one's drinking has also been associated with less alcohol

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consumption and related problems over time (Bonar et al., 2012; Gonzalez & Skewes, 2018). Similarly, self-efficacy in general is a reliable proximal predictor of risky alcohol use, mediating effects of both alcohol expectancies and impulsivity on heavy drinking and alcohol-related problems (Connor et al., 2011; Gullo et al., 2010).

How might a positive attitude towards limited drinking lead to greater confidence in one's ability to actually limit his/her drinking? One's personal attitudes are often associated with self-efficacy as it relates to both alcohol use (Koning et al., 2011, Reid & Carey, 2018) and other domains (Kanadli, 2017). Importantly, self-efficacy has consistently been associated with decreased drinking (e.g., Connor et al., 2011; Foster et al., 2014; Oei & Jardim, 2007). Thus, it is possible that self-efficacy accounts in part for the association between personal attitudes and alcohol consumption. We speculate that positive attitudes facilitate the four sources of self-efficacy as identified by Bandura (1982). It is possible that beliefs about the wisdom and enjoyable nature of limited drinking (i.e., drinking less than the threshold for heavy episodic drinking) may motivate a drinker to attend to and observe others who are drinking moderately (vicarious experience). Similarly, positive attitudes about moderate drinking could lead to a greater adoption and practice of moderation strategies (performance accomplishments). Positive attitudes toward limiting drinking may lead one to affiliate with other moderate drinkers, leading to self-efficacy development through verbal persuasion and other social influences. Also, feeling positively about limited drinking may result in positive affect when engaging in moderate drinking, and the absence of anxious arousal can also facilitate self-efficacy.

It is noteworthy that both attitudes and self-efficacy have been shown to be viable targets for intervention. Indeed, work by DiBello, Carey, and Cushing (2018b) aimed to target positive attitudes toward heavy consumption (+4/5 drinks) and intentions, using principles of cognitive dissonance to reduce alcohol use. A brief counter-attitudinal advocacy manipulation was adapted to the alcohol prevention context. Pilot study findings indicated strong support for the feasibility and acceptability of the intervention and evidence of short-term effects in reducing drinking intentions and behavior. Furthermore, self-efficacy has been consistently associated with successful change efforts in alcohol and other substance use (Bandura, 1999; Kadden & Litt, 2011; Morgenstern et al., 2016). The development and fostering of self-efficacy for moderating one's alcohol use has been incorporated within alcohol treatment approaches, including Relapse Prevention (Marlatt & Donovan, 2005) and Motivational Interviewing (W. R. Miller & Rollnick, 2013).

The current paper aimed to extend previous work linking attitudes with drinking behavior by examining how attitudes toward limited drinking might influence subsequent alcohol useover time. Based on research suggesting that both attitudes (DiBello, et al., 2018a) and self-efficacy (Connor et al., 2011; Foster et al., 2013; Oei & Jardim, 2007) are strong predictors of alcohol use, we hypothesized that the association between personal drinking attitudes at baseline and actual drinking behavior at 3 months would be mediated by one's self-efficacy to limit their own drinking at 1 month (see figure 1). Moreover, we hypothesized that the association between baseline attitudes and 5-month alcohol related problems would be mediated by both 1-month self-efficacy and 3-month alcohol use, consistent with a serial mediation model (see figure 2). Analyses controlled for both

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biological sex (Wilsnack et al., 2018) and perceived drinking norms (DiBello et al., 2018a), as these are reliable predictors of alcohol use.

Methods

Participants and Procedure

The current manuscript represents secondary data analyses of a larger parent study evaluating outcomes of an intervention for students mandated for campus alcohol violations (Carey et al., 2018a). Data used in the manuscript were collected at the baseline, one-, three-, and five-month assessments. All participants received a single brief alcohol intervention between baseline and the one-month assessment, which resulted in reductions in alcohol use and consequences (Carey et al., 2018b). Right after the one-month follow-up, participants received a series of 12 email boosters, containing either corrective alcohol norms or general health information, based on random assignment. The RCT portion of the study did not result in differential group differences on outcomes (Carey et al., 2018a). The baseline and one-month assessments consisted of online surveys completed in a private suite and facilitated by a research assistant. All other assessments were completed remotely. All study procedures were approved by the university's Institutional Review Board.

A total of 568 undergraduate students from a large public university in the Northeastern U.S. participated in the parent study and provided data for the current analyses. Participants were 72% male and 84% White with a mean age of 19.18 years (SD = 1.16).

Measures

Demographics.—Participants self-reported their gender (male or female).

Alcohol consumption.—The Daily Drinking Questionnaire (DDQ) (Collins et al., 1985) was used to assess alcohol use over the past month. The DDQ 7-day grid was summed to calculate typical drinks per week (DPW). The DDQ was assessed at baseline and 3- months. A standard drink was defined as 12 oz. of beer, 5 oz. of 12% table wine, 12 oz. of wine cooler, or 1.25 oz. of 80-proof liquor.

Alcohol-related consequences.—The Brief Young Adult Alcohol Consequences Questionnaire (BYAACQ) (Kahler et al., 2005) is a 24-item self-administered checklist of problems related to drinking; responses are dichotomous (*yes/no*) and refer to the past month which was collected at baseline and 5-months. The BYAACQ demonstrates strong psychometric properties and is free of gender bias (Kahler et al., 2005). Example items include, "I have felt very sick to my stomach or thrown up after drinking," and, "I have woken up in an unexpected place after heavy drinking." Internal consistency reliability ranged from .84 – .90 across time points.

Attitudes.—Attitudes toward limited drinking were assessed at baseline and one month using an adapted version of the attitudes measure developed by Hagger et al. (2012). The gender-specific stem read, "Keeping my alcohol drinking within what is considered moderate drinking for adults (i.e. at 4 or fewer drinks for men [or] at 3 or fewer drinks for women) on each individual occasion over the next month would be…" Five semantic

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differential scales ranged from 1 to 5: unenjoyable-enjoyable, bad-good, harmful-beneficial, foolish-wise, and unpleasant-pleasant. The five items were averaged to create a single scale representing attitude toward moderate drinking (alpha = .94).

Self-efficacy.—Self-efficacy to limit drinking was assessed at baseline and 1-month using Alcohol Reduction Strategies-Current Confidence scale (ARS-CC; Bonar et al., 2011). Participants are asked to respond to 30 items asking how confident they are that they can engage in alcohol moderation strategies on a scale from 0 to 4; Not at all confident, A little confident, Moderately confident, Very confident, Completely confident. Sample items include, “Leave at least 15 minutes in between each drink”, “Stay away from the refrigerator, keg, or bartender where alcohol is easily available”, “Set a limit on the total number of drinks you’ll have before you start drinking”. The 30 items were averaged to reflect one’s self-efficacy for moderate drinking with higher scores representing higher self-efficacy (alpha = .96).

Drinking Norms.—Items adapted from the Drinking Norms Rating Form (Baer et al., 1991; Turrisi et al., 2007) were used at baseline to assess perceived descriptive norms related to alcohol use. Questions included (a) “How many of your close friends drink alcohol?” (b) “How many of your friends get drunk on a regular basis (at least once a month)?” and (c) “How many of your close friends drink primarily to get drunk?” Items were scored on a 5-point scale ranging from 0 (none) to 4 (nearly all) and averaged to create a composite score. Reliability for the current sample was .85.

We operationalized injunctive norms, collected at baseline, as perceptions regarding friends’ approval of drinking and getting drunk. Participants responded to the items, “How do most of your friends feel about drinking?” and “How do most of your friends feel about getting drunk?” (Kahler et al., 2003). Responses were rated on 5-point continuous-response scales ranging from 0 (strongly disapprove) to 4 (strongly approve) and were averaged to create a composite score. Reliability for the current sample was .90.

Preliminary Analyses and Analysis Plan

Data were screened for outliers and normality prior to analysis. For alcohol problems, a count variable, we trimmed outliers above three times the interquartile range from the 75th percentile plus one unit (Tukey, 1977). After accounting for outliers in this way, skewness (1.63) and kurtosis (2.85) estimates were within the normal range (Kline, 2011) and the alcohol-related problems outcome was 75.3% non-zero.

The PROCESS macro for SAS 9.4, model 4 (Hayes, 2013) was used to test the mediation model and MPlus version 8 was used to test the serial mediation model where alcohol problems was modeled as a count outcome. PROCESS is a statistical package that computes the indirect path following the *ab* product of coefficients approach (MacKinnon et al., 2002) as well as the bootstrapped 95% asymmetric confidence intervals around the indirect effect (Hayes, 2013; MacKinnon et al., 2002). This bootstrapping procedure is less sensitive than other procedures to violations of statistical assumptions (Preacher et al., 2007). First, using PROCESS, we examined 1-month self-efficacy to limit drinking as a mediator of the association between baseline attitudes and 3-month drinks per week. Next, using MPlus, we

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evaluated a serial mediation model wherein both 1-month self-efficacy and changes in alcohol consumption from baseline to 3 months would serially mediate the association between baseline moderate attitudes and changes in 5-month alcohol-related consequences. All analyses controlled for biological sex, intervention condition, and descriptive and injunctive norms. To allow us to model change in outcomes, analyses also controlled for baseline levels of each outcome. Then, we conducted supplementary analyses to rule out an alternative temporal ordering of the variables.

Results

Descriptive Information and Correlations

Descriptive statistics and zero-order correlations among primary predictor and outcome variables are presented in Table 1. Most drinking variables were positively and significantly correlated with each other across all time points.

Self-Efficacy as a Mediator of Moderate Attitudes and Alcohol Use (Model 1)

We examined a single mediator model to explain the relationship of baseline attitude toward limited drinking and drinks per week at 3 months (see Table 2 for results). Tests of the indirect effects indicated that 1-month self-efficacy to limit drinking significantly mediated the association between baseline attitudes and change in drinks per week at from baseline to 3 months, $ab = -.144$, [95% CI: −.501, −.005].

Self-Efficacy and 3-Month Alcohol Use as Mediators of Moderate Attitudes and Alcohol-related Problems (Model 2)

Next, we examined a serial mediation model, in which 1-month self-efficacy to limit drinking and 3-month alcohol use would mediate the association between baseline attitude toward moderate drinking and alcohol-related problems at 5 months (see Table 2 for results). Results from the serial mediation model provide a set of three indirect effects. The first indicates that 1-month self-efficacy to limit drinking significantly mediated the association between baseline attitude toward limited drinking and change in alcohol-related problems from baseline to 5 months, $ab = -.055$, [95% CI: −.10, −.011]. Second, results indicated that change in alcohol use from baseline to 3 months mediated the association between baseline attitude toward limited consumption and change in alcohol-related problems from baseline to 5 months, $ab = -.097$, [95% CI: −.137, −.057]. Finally, test of the combined indirect effect of 1-month self-efficacy and 3-month alcohol use showed significant serial mediation, $ab = -.011$, [95% CI: −.021, −.001]. Specifically, favorable attitudes toward limited drinking at baseline were positively associated with self-efficacy to limit drinking at 1 month, which in turn was associated with a reduction in drinking quantity at 3 months. This reduction in drinking quantity at 3 months was then associated with a reduction in alcohol-related problems at 5 months.

Serial Mediation: Alternative temporal ordering of moderate attitude and self-efficacy

In order to rule out an alternative temporal ordering, where self-efficacy would precede one's attitude toward moderate consumption in the prediction of alcohol use and alcohol-related problems, we conducted the same analyses presented above with reversed predictor

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and mediator variables. Thus, baseline self-efficacy was modeled as a predictor of 1-month attitude toward moderate consumption, which was modeled as a predictor of the 3-month alcohol use outcome. Again, all analyses controlled for biological sex, intervention, descriptive and injunctive norms, and baseline levels of each outcome.

Our results did not support this alternative temporal ordering. Attitude toward moderate consumption was not a significant mediator of the association between baseline self-efficacy and drinks per week at 3 months, $ab = -.070$, [95% CI: −.331, .038]. Similarly, the results of the serial mediation model showed that 1-month attitudes toward limited consumption did not mediate the association between baseline self-efficacy and 5-month alcohol-related problems, $ab = -.123$, [95% CI: −.272, .089]; 3-month alcohol consumption did not mediate the association between baseline self-efficacy and 5-month alcohol-related problems, $ab = .095$, [95% CI: −.178, .117]; and there was no serial mediational pathway from baseline self-efficacy to 5-month alcohol related problems through 1-month attitudes toward limited consumption or 3-month alcohol use, $ab = -.002$, [95% CI: −.114, .068].

Discussion

The present study provides support for the hypothesis that self-efficacy to limit one's drinking mediates the attitudes – drinking link. We also found support for self-efficacy and changes in alcohol use as serial mediators for the attitudes – problems link. Importantly, the data used to test these hypotheses afforded clear temporal ordering in our mediation models, one prerequisite for establishing a mechanism of change (cf. Nock, 2007). Notably, when examining alternative temporal orderings of the variables in our proposed models, the results did not support mediation. Thus, the results derived from testing both the primary models as well as the alternative models confirm the temporal ordering of these variables. Taken together, these data suggest that (a) one's attitude toward limited drinking precedes one's self-efficacy to limit their own drinking and (b) both one's self-efficacy to limit drinking and changes in drinking precede changes in alcohol-related problems.

This study extended previous work in additional ways. First, we evaluated the proposed mediation effects over a three month period of time (model 1) and a 5 month period of time (model 2) and also demonstrated significant serial mediation. Second, we controlled for both descriptive and injunctive norms when running the analyses. This allowed for the examination of the strength of this mediation process over and above other well-known cognitive predictors of alcohol use. Third, the study evaluated these models using two different drinking outcomes. We think it is important to test the extent to which these findings are consistent across outcomes that are interrelated but not redundant. The consistency of findings across dimensions of alcohol involvement gives us more confidence in the reliability of the observed temporal pattern.

The results of this study should be interpreted with several limitations in mind. First, data were collected from primarily White male underclassman who were mandated to an alcohol intervention; therefore, research examining the proposed associations in more diverse samples is needed. Second, data were collected via self-report, which may differ from objective measures of alcohol use. However, self-reported estimates of alcohol use are

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highly correlated with objective measures and, therefore, are unlikely to bias the results of this study (Leffingwell et al., 2013). Third, data were derived from a larger study, which provided participants with alcohol-reduction interventions. To control for these experiences, we used intervention condition as a covariate. However, because it is likely that the interventions introduced variability in outcomes over the follow up period, it is possible that the strengths of the relationships among attitudes, self-efficacy, drinking, and consequences would be greater than estimated here in the absence of any alcohol-reduction intervention. Finally, we did not experimentally manipulate the independent variable or proposed mediator(s). Although the longitudinal nature of the data allows us to determine temporal relationships among variables, these data do not reflect causal associations. Randomized trials designed to manipulate attitudes are needed to determine if attitudes cause subsequent change in self-efficacy, alcohol use, and alcohol-related problems.

The finding that attitudes are predictive of both other cognitive correlates of drinking and drinking behavior has implications for alcohol prevention and intervention efforts. Consistent with the idea that manipulation of attitudes may impact subsequent alcohol use outcomes, emergent work suggests that minimizing favorable attitudes toward heavy alcohol use while maximizing favorable attitudes toward moderate drinking reduces subsequent alcohol consumption among college students (DiBello et al., 2018b). Data from the current study suggest that self-efficacy may also play a central role in the association between attitudes and drinking behavior and, therefore, dually targeting moderate drinking attitudes and self-efficacy for limiting drinking may be useful when attempting to change risky drinking among young adults. Indeed, these finding are consistent with the work of DiBello et al. (2018b) supporting attitudes as an important target of intervention as well as the work of Marlatt and Donovan (2005) and Miller and Rollnick (2013) showing the value of fostering self-efficacy in both Relapse Prevention and Motivational interviewing, respectively. These conclusions are consistent with those of a recent meta-analysis, which indicated that attitudes and intentions (along with subjective norms) have large associations with drinking behavior (Cooke et al., 2016).

In summary, heavy alcohol use is prevalent among young adults and results in a range of negative health outcomes. In this study, favorable attitudes toward limiting drinking were associated prospectively with self-efficacy to limit drinking, which was associated with subsequent reductions in drinking and alcohol-related problems. This effect was observed independent of baseline levels of alcohol use and other strong cognitive predictors of alcohol use outcomes (i.e., descriptive and injunctive norms). Future research examining the causal associations between attitudes, self-efficacy, and drinking behavior is warranted, as the mediational pathway supported in this study applies to a high-risk population with clinically-meaningful levels of drinking. These data indicate promise for interventions that manipulate attitudes and self-efficacy to limit drinking behavior.

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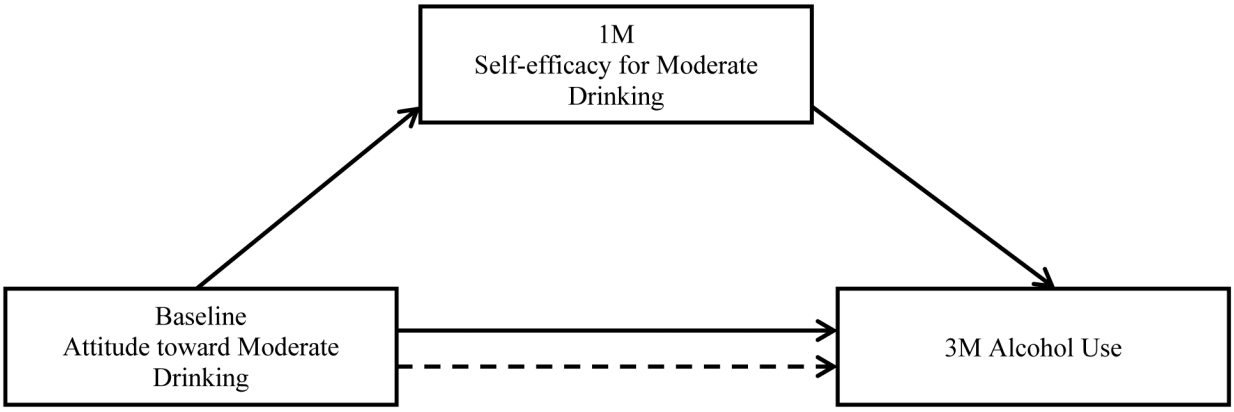

Figure 1.
Conceptual Figure of Primary Mediation Model

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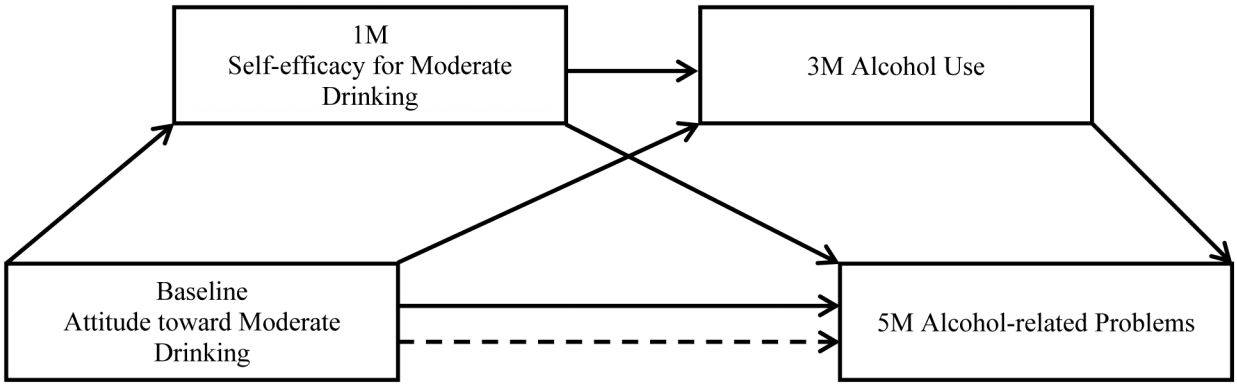

Figure 2.
Conceptual Figure of Serial Mediation Model

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Table 1

Descriptive Statistics and Correlations.

		1.	2.	3.	4.	5.	6.	7.	8.	9.
1.	BL Drinks Per Week	--								
2.	3M Drinks Per Week	.54***	--							
3.	BL Alcohol-related Problems	.42***	.19***	--						
4.	5M Alcohol-related Problems	.31***	.36***	.37***	--					
5.	BL Moderate Attitudes	−.38***	−.39***	−.09	−.21***	--				
6.	1M Self-efficacy Moderate Drinking	−.24***	−.27***	−.21***	−.31***	.20***	--			
7.	BL Descriptive Norms	.40***	.32***	.30***	.17***	−.16***	−.11*	--		
8.	BL Injunctive Norms	.35***	.27***	.25***	.09*	−.27***	−.11*	.57***	--	
9.	Gender	−.27***	−.28***	.04	−.06	.12*	.26***	−.09*	−.06	--
	Mean	12.57	9.83	5.44	3.29	3.78	2.70	3.20	3.12	--
	SD	9.74	9.32	4.25	4.11	.83	.79	.77	.64	--

Note. 1M = one month. 5M = 5 months, BL = baseline

* $p < .05$,

*** $p < .001$.

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Table 2.

Self-efficacy as a mediator of the association between Moderate attitudes and drinks per week.

Criterion	Predictor	b	*se*	t	*p*
1M Self-efficacy	Gender	.446	.093	4.7684	<.001
	Intervention	.035	.084	.417	.677
	Descriptive Norms	−.046	.066	−.702	.483
	Injunctive Norms	.025	.083	.302	.763
	Baseline Drinks Per Week	−.005	.005	−1.064	.288
	Attitudes toward Moderate Consumption	.123	.057	2.153	.032
3M Drinks per week	Gender	−2.035	.950	−2.141	.033
	Intervention	.148	.822	.180	.857
	Descriptive Norms	.606	.644	.941	.347
	Injunctive Norms	.861	.810	1.063	.289
	Baseline Drinks Per Week	.606	.644	.941	.347
	Attitudes toward Moderate Consumption	−1.669	.565	−2.955	.003
	1M Self-efficacy	−1.170	.565	−2.073	.039

Note. 1M = one month. 3M = 3 months.

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Table 3.

Self-efficacy and Alcohol use as mediators of the association between Moderate attitudes and Alcohol-related problems.

Criterion	Predictor	b	*se*	t	*p*
1M Self-efficacy	Gender	.581	.105	5.535	.000
	Intervention	.010	.095	.110	.913
	Descriptive Norms	.018	.074	.244	.808
	Injunctive Norms	.034	.094	.362	.718
	Baseline Drinks Per Week	.003	.006	.458	.647
	Baseline Alcohol-related Problems	−.052	.013	−3.919	.000
	Attitudes toward Moderate Consumption	.106	.063	1.687	.093
3M Drinks per week	Gender	−1.707	1.026	−1.663	.098
	Intervention	.825	.873	.945	.345
	Descriptive Norms	1.390	.682	2.038	.043
	Injunctive Norms	.043	.868	.050	.961
	Baseline Drinks Per Week	.373	.053	6.980	.000
	Baseline Alcohol-related Problems	−.147	.125	−1.174	.242
	Attitudes toward Moderate Consumption	−1.429	.584	−2.444	.015
	1M Self-efficacy	−1.478	.591	−2.501	.013
5-Month Alcohol-related Problems	Gender	0.023	0.088	0.27	0.790
	Intervention	0.137	0.071	1.93	0.053
	Descriptive Norms	0.085	0.063	1.35	0.176
	Injunctive Norms	−0.200	0.069	−2.91	0.004
	Baseline Drinks Per Week	0.000	0.004	−0.03	0.973
	Baseline Alcohol-related Problems	0.075	0.009	8.39	<.0001
	Attitudes toward Moderate Consumption	−0.165	0.048	−3.46	0.001
	1M Self-efficacy	−0.283	0.050	−5.71	<.0001
	3M Drinks Per Week	0.024	0.004	6.57	<.0001

Note. 1M = one month. 3M = 3 months. 5M = 5 months.