

Research Paper

Comparing Alcohol Expectancies Among High- And Low-Risk Users, and Its Impact on Alcohol Use

Aldina Braganza e Gomes¹, Elsa Lumia Da Costa^{2*}

ABSTRACT

Alcohol expectancies are beliefs about the effects of alcohol on one's behaviour, emotions, and experiences. A cross-sectional study was undertaken among 300 individuals from Goa, India. The Alcohol Expectancy Questionnaire (AEQ) measured total expectancy and six subscales. The Alcohol Use Disorders Identification Test (AUDIT) was used to measure levels of alcohol consumption and to categorize low- and high-risk drinkers. Results reveal a positive correlation between alcohol expectancies and alcohol consumption levels. Positive expectancies, expectancies regarding women's drinking, and expectations of enhancement in health, coping and social functioning, were significantly greater among high-risk drinkers; and were positively associated with alcohol use. Negative expectancies, in contrast were significantly lower among low-risk drinkers; and were inversely correlated with level of alcohol use. Upon assessing the age- and gender-adjusted effects of expectancies on levels of alcohol use, only some expectancies significantly impacted consumption levels. Negative expectancies were the strongest predictor of reduced alcohol use. Followed by positive expectancies and expectations of social enhancement, which were significant predictors of increased alcohol use. Older age and the males gender also significantly predicted levels of alcohol use. After accounting for variance from the aforementioned variables, the effect of other expectancies - enhancement in health and coping and expectancies about women's drinking - did not significantly impact levels of alcohol consumption. Findings indicate that expectancies have greater predictive utility than age and gender in determining levels of alcohol use.

Keywords: *Alcohol Expectancies, High- And Low-Risk Users, Alcohol Use*

Many cultures include alcohol consumption in their traditions and rituals, and across the globe alcohol is seen as a social lubricant, facilitating relaxation and psychological pleasures that accompany meals and other sensual experiences. Nevertheless, alcohol garners public health attention for its dependency, psychological and physiological harms, and its impact on users' families, friends, and communities. Research studies have explored the influence of alcohol on aggression, increased sexual arousal and health concerns. These risky effects of alcohol are well established facts, yet the popularity of alcohol has not diminished.

¹Department of Psychology, Carmel College of Arts, Science and Commerce for Women, Nuvem, Goa, India.

²Department of Studies in Psychology, Karnatak University, Dharwad, Karnataka, India.

*Corresponding Author

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An underlying assumption is that individuals have certain positive expectations of alcohol consumption referred to as alcohol expectancies. These are defined as beliefs regarding the effects of alcohol on most people's behaviour, mood and/or emotions (Leigh & Stacy, 2004). Beliefs that initiate its consumption in the first place; such as, 'alcohol is fun' or 'alcohol relaxes you after a stressful day', may shape thoughts about alcohol expectancies and may act as motivators for alcohol consumption. These beliefs may also be learned vicariously from parents, peers, and social and cultural interactions, long before the actual consumption of alcohol takes place.

Exposure to these modelling events can begin early in life, even during childhood. Miller et al. (1990) examined the alcohol expectancies of elementary school children across the first through fifth grades. They found that the positive expectancies of the effects of alcohol increased with age, and were most notable among 8-to-10-year-olds. Importantly, a variety of studies have shown that positive expectancies of alcohol's effects predict initiation of drinking, intention to drink, and drinking rates among middle school, and college students (Christiansen et al., 1989, Goldman et al., 1991; Stacy et al., 1990).

Some alcohol expectancies are more strongly related to actual alcohol consumption than others. Research addressing different components of alcohol expectancies has demonstrated that positive expectancies have a large predictive effect on use, and is more influential than negative expectancies (Aarons et al., 2003). For instance, a strong belief that alcohol will produce certain positive outcomes such as social enhancement, positive mood, assertiveness, help forget problems, or the belief that alcohol will not cause certain negative outcomes such as negative moods, health problems, or cognitive impairment are associated with higher consumption (Oei & Young, 1999). In general, men tend to hold stronger positive, and weaker negative, expectancies than do women; however, there could be culture-specific beliefs that might influence these perceptions of alcohol between genders. Understanding this relationship between expectation and consumption is important especially since high-risk drinking is becoming more normalized.

The application of understanding alcohol expectancies within a population would serve to guide prevention and treatment efforts at different levels of problem drinking. The present study thus investigates the associations between alcohol expectancies and alcohol use among adolescents and adults.

Objectives of the study

- Examine the association between alcohol expectancies and alcohol consumption levels.
- Measure differences in alcohol expectancies between high- and low-risk alcohol users.
- Assess age- and gender-adjusted effects of alcohol expectancies on alcohol consumption levels.

METHODOLOGY

The present study investigated female and male respondents on various alcohol expectancies and levels of alcohol consumption.

Sample

The sample was recruited from Goa, India using the convenient sampling method with snowballing techniques. The assistance of medical professionals, mental health practitioners,

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members of Alcohol Anonymous, social workers and peers were used for referencing. Alcohol Use Disorders Identification Test (AUDIT) was administered to over 800 females before a sample size of 75 categorised as drinking at risk levels was obtained and they were matched with 75 low risk drinkers. Similarly, 150 male respondents from a sample size of 500 males of which 75 were categorized as high-risk on the AUDIT and 75 as low-risk. The participants ranged from 16 years to 75 years.

Procedure

Research participants were obtained through referrals from medical professionals, mental health practitioners, Alcohol Anonymous organization, and the general population. Meetings were held at locations convenient to the respondents. Upon establishing rapport, the objectives of the research were explained and their consent to participate in the same was obtained on a consent form with an assurance of maintaining strict confidentiality. Questions if any regarding the research or the data collected were entertained. A brief sociodemographic schedule was used. Following this, the Alcohol Use Disorder Identification Test (AUDIT) was administered as a screening tool, followed by the alcohol expectancy questionnaire (AEQ).

Measures

- **Sociodemographic Schedule:** A brief sociodemographic schedule was presented to each participant, to obtain information on their age and gender.
- **Alcohol Expectancy Questionnaire (AEQ)**
- **Alcohol Use Disorders Identification Test (AUDIT):** The AUDIT, that was developed by the World Health Organization (Barbor *et al.*, 1989). This 10-item scale that assesses alcohol use in the past 12 months with a score ranging from 0 to 40. A score below 8 indicated low-risk drinking, while scores above 9 were classified as high-risk drinkers. This cut-off was based on data from several validation studies (Allen *et al.*, 1997; Cherpitel *et al.*, 1995; Conigrave *et al.*, 1995; WHO, 1992) include one done in India (Carey *et al.*, 2003). Internal reliability estimates for the scale over 18 studies had an acceptable Cronbach's alpha with estimates of test-retest reliability ranging from .64 to .92 over three studies (Reinert & Allen, 2002).

Statistical Analysis

Data was processed and analysed using IBM SPSS v.26. For coefficients of correlation, a bivariate correlation matrix using Pearson's *r* was computed with two-tailed tests of significance. Independent samples *t*-tests were used to evaluate differences in expectancies between low- and high-risk users. A multiple linear regression model was run to assess the age- and gender-adjusted effects of alcohol expectancies on alcohol consumption.

Hypotheses

Three general null hypotheses were tested.

- H_{01} There will no correlation between alcohol expectancies and use of alcohol.
- H_{02} There will be no significant differences in alcohol expectancies between low- and high-risk alcohol users.
- H_{03} Alcohol expectancies will not significantly impact alcohol consumption after adjusting for age and gender.

RESULTS

Table 1. Pearson’s Correlation Matrix examining the association between Alcohol Use and Alcohol Expectancies.

	1	2	3	4	5	6	7	8
1. AUDIT Total	1							
2. Positive Expectancies	.787*							
3. Negative Expectancies	-.744*	-.725*						
4. Health Expectancies	.639*	.668*	-.637*					
5. Coping Expectancies	.668*	.707*	-.674*	.719*				
6. Social Expectancies	.681*	.758*	-.680*	.478*	.547*			
7. Women Expectancies	.439*	.568*	-.507*	.300*	.382*	.610*		
8. Total AEQ	.809*	.914*	-.793*	.838*	.863*	.813*	.542*	1

*. Correlation is significant at the 0.01 level (2-tailed).

Significant correlations were observed between level of alcohol use (AUDIT) and all subscales of alcohol expectancies (AEQ). Positive expectancies had moderate-to-strong positive correlations with the total AUDIT score ($r=.787, p<.01$). Conversely, negative expectancies had similar effect-size inverse correlations with total AUDIT scores ($r=-.744, p<.01$).

Moderate-strength correlations were observed between total AUDIT scores and expectancies associated with enhanced health ($r=.639, p<.01$), coping ($r=.668, p<.01$) and social benefits ($r=.681, p<.01$). Small-to-moderate correlations were observed between expectancies about womens’ drinking and total AUDIT ($r=.439, p<.01$). Strong positive correlations were observed between total alcohol use and total expectancy scores ($r=.809, p<.01$).

Table 2. Independent Sample t-tests Comparing Alcohol Expectancies between High-risk and Low-risk Alcohol Use.

Expectancies	Low-Risk M (SD)	High-Risk M (SD)	t	p
Positive Expectancies	11.76 (3.058)	19.42 (2.417)	-24.068	.000
Negative Expectancies	38.83 (4.999)	25.51 (4.520)	24.207	.000
Health Expectancies	12.93 (4.627)	18.81 (3.162)	-12.850	.000
Coping Expectancies	12.58 (3.815)	19.10 (2.405)	-17.708	.000
Social Expectancies	12.21 (3.501)	19.59 (2.754)	-20.308	.000
Women Expectancies	6.69 (1.864)	10.29 (3.340)	-11.504	.000
Total Expectancies (AEQ)	49.48 (10.696)	76.92 (6.473)	-26.881	.000

Results of independent samples t-tests reveal that low-risk and high-risk alcohol users differed significantly on all scores of alcohol expectancies. High-risk users had significantly more positive expectancies, $t(2, 298)=-24.068, p<.0000$; and significantly lower negative expectancies $t(2, 298)=24.207, p<.0000$, compared to low-risk users. The remainder of all expectancies – health, coping, and social enhancement, and expectancies about womens’ drinking – and the total expectancy scores were also significantly greater in high-risk users compared to low-risk users (Table 2).

The results of the multiple linear regression analysis reveal that positive expectancies, negative expectancies, social enhancement expectancies, age and gender independently predicted alcohol use, while expectancies about health, coping and women did not ($R=.860$,

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$adjR^2=.732$, $F(8, 292)=103.180$, $p<.000$) (Table 3). Together expectancies, age and gender accounted for 73.2% of the variance in alcohol use.

Greater alcohol use was associated with lower negative expectancies ($\beta=-.311$, $p<.000$), greater positive expectancies ($\beta=.301$, $p<.000$), social enhancement expectancies ($\beta=.263$, $p<.000$), increasing age ($\beta=.228$, $p<.000$), and the male gender ($\beta=.077$, $p=.020$) compared to females. The effects of these three expectancy variables on alcohol use were observed despite the effects of age and gender. Moreover, expectancies explained alcohol use with greater effect size than age and gender.

Table 3. Multiple Linear Regression Model Examining the Effect of Alcohol Expectancies, Age and Gender on Alcohol Use Levels.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-4.031	3.279		-1.229	.220	-10.484	2.422
Positive Expectancies	.529	.109	.301	4.859	.000	.315	.743
Negative Expectancies	-.314	.052	-.311	-6.046	.000	-.417	-.212
Health Expectancies	.056	.081	.033	.692	.489	-.103	.214
Coping Expectancies	.029	.094	.016	.304	.762	-.157	.214
Social Expectancies	.449	.096	.263	4.681	.000	.260	.638
Women Expectancies	.016	.105	.006	.155	.877	-.191	.224
Age	.151	.027	.228	5.682	.000	.098	.203
Gender	1.268	.543	.077	2.336	.020	.200	2.336

Dependent Variable: AUDIT
 $p<.000$

$R=.860$, $adjR^2=.732$, $F(8, 292)=103.180$,

DISCUSSION

Amongst the existing determinants of use and abuse of alcohol, expectancies regarding alcohol, are an important precursor to drinking behaviours. Alcohol expectancies are anticipatory beliefs about the way alcohol influences behaviour (Leigh & Stacy, 2004). Expectancies often act as a psychological lens which can prompt cognitive motivation, even before the first drink has been sipped. These beliefs can be learned from prevailing cultural norms and interpersonal experiences. And, these beliefs may be acted upon, through vicarious modelling, and observational learning. Their influence is not only extended to alcohol consumption but also the quantity and frequency being consumed. This research study thus placed its emphasis on the role of alcohol expectancies on alcohol use, and the differences in expectancies between high-risk drinkers and low-risk drinkers to understand this relationship.

Positive expectations about alcohol were positively correlated with levels of alcohol use; and were significantly higher among high-risk drinkers compared to low-risk drinkers. Findings of the present study are in line with literature which suggests that positive alcohol expectancies such as mood enhancement, tension reduction, and social facilitation have been seen as motivators of alcohol use, and are the main psychological mechanisms that initiate and maintain the use of alcohol (Jones et al., 2001; Goldman et al., 1999).

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The present study also found that positive and enhancement-related expectancies in health, coping, and social domains were associated with higher consumption levels; and were significantly greater among high-risk drinkers compared to low-risk drinkers. These findings highlight the role of several positive expectations in the domains of health, stress management, and social enhancement, associated with increased alcohol levels, hazardous use and alcohol dependence.

Leigh and Stacy (2004) suggest that individuals with positive expectancies about social enhancement and reduced anxiety, are more likely to engage in repeated drinking episodes, and to have a greater subjective pleasurable experience from it. Moreover, positive expectancies increased the likelihood of heavier drinking and resulted in more alcohol-related health consequences (Werner et al., 1993).

Conversely, holding negative expectancies such as cognitive impairment, lack of control, aggression and adverse health effects was associated with low levels of alcohol consumption and low-risk drinking behaviour. Such results suggest that negative alcohol expectancies, act as deterrents or protective cognitive factors to reduce alcohol consumption. These findings echo strongly with other studies conducted by Brown et al. (1987) who suggest that individuals who held negative expectations from alcohol use, are less likely to engage in frequent or heavy drinking, than individuals with lower levels of negative expectations.

Expectancy-challenging interventions showed a decline in drinking rates among adolescents and young adults (Darkes & Goldman, 1993). Furthermore, such interventions revealed that negative expectancies can shield the influence of positive expectancies, to even bring down rates of drinking in wet cultures (Christiansen & Goldman, 1983). Moreover, it was also seen that in wet cultures, where consuming alcohol is part of traditions, greater population being heavy drinkers show an elevated sense of endorsement of positive alcohol expectancies and have been associated to heavier drinking patterns and greater incidence of alcohol-related problems (Werner et al., 1993; Brown et al., 1987).

Such findings further strengthen the rationale for creating expectancy-based preventive and treatment programs. Rethinking drinking can be used as a cognitive-behavioural tool that challenges unrealistic and overly positive beliefs. Particularly among young adults and adolescents where binge drinking is common, such preventive programs may help bring a reduction in drinking behaviours (Darkes & Goldman, 1993; Wood et al., 2007). This highlights that alcohol expectancies not only have utility as a diagnostic construct, but can also be used as a preventive tool in rehabilitation centres and other awareness drives.

The degree to which gender moderates the effect of alcohol expectancies on drinking behaviour may also be a function of other measures of individual difference, for example, within the domain of personality or overall social cultural perception. Similar findings were cited in a study in Bangalore (Prasad et al., 1998) where the common reason for drinking given by Indian women was for improving their physical health and for relief from minor ailments. The belief that alcohol has medicinal value during the post-partum period is also prevalent in many parts of India.

The multiple linear regression analysis revealed that expectancies predicted alcohol use with greater effect size than age and gender. When all expectancies were held constant, only positive, negative and social enhancement expectancies, followed by age and the male gender, significantly impacted levels of alcohol use.

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As discussed, there was a strong relationship between positive as well as negative expectancies on alcohol use. Expectations about social enhancement was also an influential predictor of the levels of alcohol use.

Although age and drinking experience are typically confounded, both may contribute to the development of alcohol expectancies. Age might contribute through increased exposure to cultural messages about alcohol, whereas personal experience might contribute through actual reinforcement of alcohol's effects. As the individual acquires more drinking experience their expectancies may become personalized, thereby yielding more reliable measures of expectancy.

Prior research has demonstrated that frequency of use was associated with expectations of global positive effects, sexual enhancement and social and physical pleasure for men, but with expectations of tension reduction for women (Mooney et al., 1987). In a large sample of college students identified by family history of alcoholism (positive or negative), Sher and colleagues determined that men reported higher levels of expectancies than women for tension reduction, social lubrication, activity enhancement and performance enhancement (Sher et al., 1996). Carey (1995), however, found no significant gender differences in the alcohol expectancies of male and female college students (Jones, 2001).

Taken together, the results of this study support evidence that alcohol expectancies predict alcohol consumption levels. Positive expectations, negative expectations, and expectations of social enhancement from drinking, were significant determinants of the level of alcohol use. Incremental use was also seen as age progressed, i.e. older adults consumed more alcohol than younger adults; and use was greater among males, compared to female adults.

The role of alcohol expectancies as a modifiable risk factor reinforces their significance in the broader theoretical framework of alcohol use and misuse. Prevention and treatment efforts at different levels of problem drinking should include challenging specific expectancies associated to alcohol consumption; in order to decrease alcohol use, given that these practices are ingrained within the cognitive process at an early age.

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Conflict of Interest

The author(s) declared no conflict of interest.

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