

Original Article

Alcohol Effects Related Expectancies among Mid-Age Adolescents

Shahnawaz Ahmad¹, Atiq Ahmed²

¹Research Fellow, Office of NASI-ICMR Chair on Public Health Research, Rajasthan University of Health Sciences, Jaipur, ²Assistant Professor, Department of Social Work, Central University of Rajasthan, Ajmer, Rajasthan, India

DOI:10.37821/ruhsjhs.7.2.2022.410



This is an open-access article distributed under the terms of Creative Commons Attribution-Non-Commercial-No Derivatives 4.0 International License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

ABSTRACT

Introduction: This study aims to assess the comprehensive effects of alcohol expectancies among mid-age adolescents and analyse its association with demographic variables.

Methodology: Data were collected using a personal data questionnaire and the comprehensive effects of alcohol (CEOA) scale from mid-age adolescents in a school setting near Jaipur, India. Collected data were thoroughly checked, reviewed and analysed and statistical tests were performed as per the need and requirement of the study.

Results: Findings indicate significant expectancies for the positive effects of alcohol among both gender and age groups; and significantly less expectancy among 10th standard adolescents for the sexuality-related effects compared to those who study in 12th standard. Female adolescents were found to have higher agreements for the adverse effects of alcohol, mainly for cognitive and behavioural impairments.

Conclusion: The CEOA questionnaire is a good measure for Indian adolescents' alcohol-related expectancies and risk analysis, subject to more cultural adaptation. Further studies are desirable using longitudinal designs to validate expectancies' outcomes and devise more contextually appropriate scales.

Keywords: Alcohol expectancy, alcohol use, India, mid-age adolescents, negative alcohol expectancies, positive alcohol expectancies.

INTRODUCTION

Adolescence, the age of 10 to 19 years, is a period of numerous bodily changes and socio-behavioural adaptation to become grown-up individuals. This period of human development is filled with extreme curiosity and risk-taking ability, which often results in serious troubles;

alcohol use and misuse is one aspect of such concerns. Studies have explored prevalent use and experience of alcohol with early age initiation before reaching the legal drinking age among Indian adolescents.¹⁻⁸ Even those who have not yet experienced alcohol were found to have a higher positive attitude and expectancies for favourable effects of alcohol on mood and behaviour, which is an indication of the more likelihood of alcohol use and misuse.^{5,7,9,10} Alcohol-related positive expectancies were found to have a significant role in alcohol consumption and mediating factors for initiation and maintenance of drinking behaviour.¹¹⁻¹⁴

Although all age groups of adolescents are at the same risk of alcohol and tobacco use and other risky behaviour, mid-age adolescents between 14 to 17 years of age require more attention. As in the Indian context, this mid-age group of adolescents generally studies in schools in 10 to 12th standard, just a few years before the start of their college life. After completing high school (10th standards) or after intermediate (12th standards), adolescents often move from rural towards the urban area or from one city to another for further schooling or to complete their higher studies. It is the first stage when Indian adolescents face the world, and they have to make many decisions independently. Also, during this period, adolescents often fall into unwanted behaviours under the influence of socio-cultural factors; they start consuming alcohol and tobacco or engage in risky behaviour and sexual activities simply for the compliance peer group standards. Especially for early college students, consuming alcohol is a serious concern in India requiring behavioural change interventions from school periods.^{7,15-18}

This study aimed to assess the alcohol-related expectancies among adolescents and to analyse their association with personal variables. Such exploration is essential for the thorough understanding of alcohol expectancies among

mid-aged adolescents, which is necessary for effective interventions to address alcohol use and misuse among late-age adolescents and youths.

METHODS

This study used a cross-sectional research design, and data collection was carried out in a senior secondary school setting, Kandawas, Jaipur, India. An alcohol-related personal data questionnaire and the comprehensive effects of alcohol (CEOA) scale¹⁹ were used for data gathering. The Comprehensive Effects of Alcohol (CEOA) Scale used for assessing alcohol expectancy is a 38-items questionnaire with four-point scaling and has seven dimensions that measure both positive and negative expectancies related to the effects of alcohol among individuals. The first four dimensions measure the positive effects related expectancies, and the remaining three dimensions measure negative effects related expectancies of alcohol among individuals.

1. Sociability (Soc) - (Item Loadings - 1, 3, 5, 14, 24, 31, 34, 38)
2. Tension Reduction (TR) - (Item Loadings - 18, 27, 29)
3. Liquid Courage (LC) - (Item Loadings - 19, 20, 21, 22, 37)
4. Sexuality (Sex) - (Item Loadings - 7, 12, 16, 32)
5. Cognitive and Behavioural Impairment (CBI) - (Item Loadings - 2, 6, 8, 9, 11, 13, 15, 23, 26)

6. Risks and Aggression (RA) - (Item Loadings - 10, 17, 25, 35, 36)

7. Self-perception (SP) - (Item Loadings - 4, 28, 30, 33)

The scale recommended scoring criterion was used to process data gathered through CEOA; dimension wise items were summed and used for statistical analysis and interpretation.

10 to 12th standard students were invited to participate in the study and fill out the questionnaire. Before filling the questionnaire, respondents were asked to read and sign the consent form for their formal participants in the study. Filled-in questionnaires were collected from respondents and thoroughly checked for impurities. Data were analysed using SPSS software. Statistical analysis using t-test and ANOVA was carried out to see the difference in dimension wise alcohol expectancy with the demographic and personal variables.

Data collection was carried out during the field work after institutional ethics clearance, and this study was part of a need assessment for devising an alcohol literacy intervention.

RESULTS

Out of 53 filled-in questionnaires returned by the participants, only 52 were found suitable for inclusion in statistical analysis.

Table 1: Descriptive statistics of study participants (N=52)

Variables	Dimensions	%(N)	Mean(±) SD
Sex	Male	46.2(24)	15.79(.99)
	Female	53.8(28)	
Age (in years)	14	5.8(3)	
	15	35.5(20)	
	16	32.7(17)	
	17	17.3(9)	
	18	5.8(3)	
Class of Study	10th	36.5(19)	
	11th	34.6(18)	
	12th	28.8(15)	
Tobacco Experience	Yes	57.7(30)	
	No	42.3(22)	
Alcohol Experience	Yes	26.9(14)	
	No	73.1(38)	
CEOA Sociability			25.25(2.63)
CEOA Tension Reduction			8.80(2.18)
CEOA Liquid Courage			16.30(2.66)
CEOA Sexuality			12.26(1.87)
CEOA Cognitive Behavioral Impairment			24.86(6.11)
CEOA Risk & Aggression			15.69(2.44)
CEOA Self Perception			10.61(2.54)

Age, gender and class of the study of respondents: There were 53.8% female and 46.2% male respondents. A larger portion, 35.5%, of participants were 15 years old, followed by 32.7% in 16 years, 17.3% were 17 years, 5.8% were 18 years and remaining 5.8% participants were in the 14 years of age group (Table 1). Regarding study class, 36.5% were in the 10th standard, 34.6% were in the 11th class, and remaining 28.8% were in the 12th standard. Primarily students in these standards fall under the age group of 14 to 17 years, considered mid-age adolescents.

Alcohol and tobacco use among participants: 57.7% of participants reported tobacco consumption, and 26.9% have consumed alcohol.

The comprehensive effects of alcohol (CEOA) and its association with other variables: Scale recommended analysis plan was used to process the CEOA questionnaire data. As discussed in the methodology section, CEOA yields seven dimensions or subscales of alcohol expectancy. Subscales/dimensions scores were calculated by summing the respective item loadings in different dimensions, and descriptive analysis was carried out. Mean for comprehensive effects of alcohol sociability was measured 25.25±2.63, CEOA tension reduction 8.80±2.18, CEOA liquid courage 16.30±2.66; CEOA sexuality 12.26±1.87; CEOA cognitive behavioural impairment 24.86±6.11; CEOA risk and aggression 15.69±2.44, and CEOA self-perception mean was found to be 10.61±2.54.

t-test statistics indicate a significant mean difference for cognitive and behavioural impairment (t= -3.63, p <0.001) and means comparison shows that female (27.42±6.13) adolescents have significantly higher approval for the adverse effects of alcohol on cognitive and behavioural

functioning of the brain than the male adolescents (21.87 ± 4.62). Mean difference for self-perception (t = -1.41, p <0.05) and means comparison shows those adolescents who have experienced alcohol (11.42±2.92) have higher agreements for the harmful effects of alcohol consumption of self-perception compared to those who have not consumed alcohol (10.31±2.36)(Table 2).

ANOVA analysis of different dimensions of comprehensive effects of alcohol with adolescent age indicates a significant mean difference for self-perception (f =2.48, and p <0.05). Posthoc comparison with Bonferroni statistics shows a significant mean difference between 15 and 17 years old adolescents (p <0.05), indicating that 15 years old adolescents have more approval for adverse effects of alcohol on self-perception than 17 years old adolescents (Table 3). Similarly, a mean difference was observed for sexuality (f=3.45, and p<0.05). Posthoc analysis shows that 12th standard adolescents, those about to complete their schooling and planning to move to college, have significantly higher agreements for the positive effects of alcohol on sexuality than the 10th class students (p <0.05) who have two years of school education to complete before moving to college.

DISCUSSION

Previous studies^{5,7,20,21,22} have consistent findings from their sampled students. Ahmad reported 64.8% tobacco and 20.9% prevalence of alcohol among male adolescents⁵. Mahanta et al²² reported 48.3% alcohol prevalence among their sampled adolescents. Sharma and Chaudhary²³ have reported the prevalence and use of more than one addictive substance among adolescents. There are numerous

Table 2: Analysis of cognitive and behavioural impairment and self-perception

Study variables	Personal variables	Groups	Mean ± SD	p
Cognitive behaviour impairment	Gender	Male	21.87±4.62	0.001*
		Female	27.42±6.13	
Self-perception	Alcohol use	Yes	11.42±2.92	0.03**
		No	10.31±2.36	

*p <0.001, **p <0.05

Table 3: Comparison of different dimensions of comprehensive effects of alcohol

Study variables	Personal variables	f	p
Sexuality	Class of study	3.45	0.03*
Self-perception	Age	2.48	0.05*

*p <0.05

causative factors behind the high use of tobacco and alcohol among adolescents: easy availability and accessibility^{24,25} family and parental factors²⁶, pocket money²⁷, peer pressure^{28,22} and indeed, positive expectancies related to the effects of alcohol on behaviour and actions plays a vital role.

CONCLUSION

Comprehensive effects of alcohol expectancy were found among mid-age adolescents, especially positive expectancies: Sociality, tension reduction, liquid courage, and sexuality related expectancies were similar in both gender and age groups; the only difference was observed in sexuality-related expectancies between 10th and 12th standard adolescents, those in the 12th standard were showed higher expectations from alcohol for positive effects on sexuality. Regarding adverse effects related to expectancies, female adolescents were more aware and had negative expectations from alcohol on cognitive and behavioural functioning. Overall, CEOA is an effective measure for alcohol expectancy assessment and risk analysis for alcohol use and misuse among adolescents, subject to cultural adaptation. Risk and aggression, which is a negative dimension in CEOA, adolescents consider as the positive side of human personality; it may be because of cultural learning. As for courage, risk-taking ability, and aggression has always been praised in Indian culture and society. Further studies are desirable with longitudinal design to validate expectancies' role and outcome and devise more culturally appropriate scales.

REFERENCES

1. Mohanan P, Swain S, Sanah N, Sharma V, Ghosh D. A study on the prevalence of alcohol consumption, tobacco use and sexual behaviour among adolescents in urban areas of the Udupi District, Karnataka, India. *Sultan Qaboos Univ Med J*. 2014; 14(1); 104-12.
2. Jaisoorya TS, Beena KV, Beena M, Ellangovan K, Jose DC, Thennarasu K, et al. Prevalence and correlates of alcohol use among adolescents attending school in Kerala, India. *Drug Alcohol Rev*. 2016; 35(5): 523-29.
3. Thakur S, Singh H, Sachdeva A, Barwal V. Prevalence and correlates of alcohol abuse among school-going adolescents in India's hilly district of the Himalayan region. *Journal of Advanced Medical and Dental Sciences Research*. 2017; 5(9): 5-10.
4. Manimunda SP, Sugunan AP, Thennarasu K, Pandian D, Pesala KS, Benegal V. Alcohol consumption, hazardous drinking, and alcohol dependency among the population of Andaman and Nicobar Islands, India. *Indian J Public Health*. 2017; 61(2): 105-11.
5. Ahamd S. Attitude towards alcohol consumption among Indian male adolescents. *Alcoholism Treatment Quarterly*. 2021: <http://doi.org/10.1080/07347324.2021.1981182>.
6. Nishant, Acharya J. Assessment of prevalence of alcohol use among school-going adolescent students. *Journal of Advanced Medical and Dental Sciences Research*. 2020; 8(8): 46-49.
7. Ahmad S. Effectiveness of psychosocial interventions on alcohol and tobacco expectancy among adolescents: A randomized control trial. 2019. (Unpublished doctoral dissertation). Central University of Rajasthan, India. <http://hdl.handle.net/10603/330464>.
8. Ahmad S. Prevalence of alcohol consumption among Indian female adolescents. *Alcoholism Treatment Quarterly*. 2019; <https://doi.org/10.1080/07347324.2021.2004963>.
9. Ganaraja B, Bhat MR, Kotian MS. A comparison of responses to alcohol expectancy questionnaire (CEOA) of Indian and Malaysian medical students. *Indian J Physiol Pharmacol*. 2010; 54(3):265-70.
10. Sandhya B, Carol BMS, Kotian MS, Ganaraja B. Alcohol expectancy responses from teenagers: The early forewarning signals. *J. Clin Diagn Res*. 2013; 7(3): 489-92.
11. Christiansen BA, Smith GT, Roehling PV, Goldman MS. Using alcohol expectancies to predict adolescent drinking behaviour after one year. *J Consult Clin Psychol*. 1989; 57 (1): 93-99.
12. Stacy AW, Widaman KF, Marlatt GA. Expectancy models of alcohol use. *J Pers Soc Psychol*. 1990; 58(5): 918-28.
13. Patrick ME, Wray-Lake L, Finlay AK, Maggs JL. The long arm of expectancies: Adolescent alcohol expectancies predict adult alcohol use. *Alcohol & Alcoholism*. 2010; 45(1): 17-24.
14. Brown SA, Goldman MS, Christiansen BA. Do alcohol expectancies mediate the drinking patterns of adults? *J Consult Clin Psychol*. 1985; 53(4): 512-19. <https://doi.org/10.1037/0022-006X.53.4.512>.
15. Goel N, Khandelwal V, Pandya K, Kotwal A. Alcohol and tobacco use among undergraduate and postgraduate medical students in India: A multicentric cross-sectional study. *Cent Asian J Glob Health*. 2015; 4(1), 187.
16. Chaudhary V, Katyal R, Singh SP, Joshi HS, Upadhyay D, Singh A. A study on pattern of alcohol use using AUDIT among college students in a medical college of North India. *Natl J Community Med*. 2015; 6(2): 253-57.
17. Mehra J, Nayak K, Jain PK, Srivastava D, Kharya P, Sachan N. Alcohol use and its influencing factors among undergraduate students in Uttar Pradesh University of

- Medical Science in district Etawah, India. *Int. J Community Med Public Health*, 2018;5(12):5425-29. <http://dx.doi.org/10.18203/2394-6040.ijcmph20184828>
18. Tanjeja N, Singh AP, Sachdeva S, Dwived N. Tobacco, alcohol, and drug consumption practices among medical and paramedical students in a government medical college of New Delhi, India. *J Indian Assoc Public Health Dent*. 2020;18, 161-67.
 19. Fromme K, Stroot EA, Kaplan D. Comprehensive effects of alcohol: Development and Psychometric assessment of a new expectancy questionnaire. *Psychological Assessment*. 1993;5: 19-26.
 20. Lourde LR, Kodali PB. Prevalence and risk factors of alcohol consumption behavior among late adolescents: Evidence from Puducherry, India. *Journal of Mental Health and Human Behaviour*. 2020; 25(2): 100-105.
 21. Rose-Clarke K, Pradhan H, Rath S, Rath S, Samal S, Gagrai S, et al. Adolescent girls' health, nutrition and well being in rural eastern India: a descriptive, cross-sectional community-based study. *BMC Public Health*. 2019; 19(1): 1-11.
 22. Mahanta B, Mohapatra PK, Phukan N, Mahanta J. Alcohol use among school going adolescent boys and girls in an industrial town of Assam, India. *Indian J Psychiatry*. 2016; 58(2): 157-63.
 23. Sharma M, Chaudhary M. A study of drugs and substance abuse among adolescents of slum dwellers. *International Journal of Indian Psychology*. 2016;3 (4): 21-27.
 24. Tsering D, Pal R, Dasgupta A. Substance use among adolescent high school students in India: A survey of knowledge, attitude, and opinion. *J Pharm Bioallied Sci*. 2010; 2 (2): 137-140.
 25. Ahmad S. Factors associated with adolescent's alcohol and tobacco use in rural communities of Rajasthan. 2016. In P. Norby, and J. Peter (Eds.), *Social work and health: Inclusive practices research and education* (pp. 137-147). Kerala: DCRD Publication.
 26. Alati R, Baker P, Betts KS, Connor JP, Little K, Sanson A, et al. The role of parental alcohol use, parental discipline and antisocial behaviour on adolescent drinking trajectories. *Drug and alcohol dependence*. 2014;134:178-84. <https://doi.org/10.1016/j.drugalcdep.2013.09.030>.
 27. Khosla V, Thankappan KR, Mini GK, Sarma PS. Prevalence and predictors of alcohol use among college students in Ludhiana, Punjab, India. *Indian J Med Res*. 2008; 128(1): 79-82.
 28. Kokiwar PR, Jogdand GRS. Prevalence of substance use among male adolescents in an urban slum area of Karimnagar district, Andhra Pradesh. *Indian J Public Health*. 2011; 55(1): 42-45.

Corresponding Author

Dr Shahnawaz Ahmad, Research Fellow, Office of NASI-ICMR Chair on Public Health Research, Rajasthan University of Health Sciences, Jaipur.

e-mail: ishahnawaz@hotmail.com