ALCOHOL EXPECTANCY RESPONSES FROM FIRST YEAR MEDICAL STUDENTS: ARE THEY PRONE TO ALCOHOLISM?

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ABSTRACT

***CONTEXT:** Modern life style and affluence lead to changes in people's outlook on various habits, including alcohol intake. Some of them will fall prey to the addictive nature of the drink. **AIMS:** Present study was done to evaluate the responses to comprehensive alcohol expectancy questionnaire (comprehensive effects of alcohol - CEOA) in order to test the tendency towards alcohol intake among the First Year Medical (MBBS) students of our college – that is, to assess the positive or negative reinforcement they would expect if they consumed alcohol. **SETTINGS AND DESIGN:** The study was done by giving a set of questionnaires to be answered by the students. **MATERIALS AND METHODS:** Questionnaires of CEOA had 38 responses, in which both negative and positive feelings were represented. All questions were again grouped into four groups of positive and three groups of negative responses. Each question was rated to what degree they agreed, by 4-point Likert-type scale (1 = disagree, 2 = slightly disagree, 3 = slightly agree, 4 = agree). The positive and negative responses were analyzed to group them into agreeing or disagreeing type. **STATISTICAL ANALYSIS USED:** Analysis of responses by Student 't' test and 2-way ANOVA was done to analyze the results. 'P' < 0.05 was accepted as significant. **RESULTS:** Results showed that negative expectancies outweighed positives significantly (2.8017 ± 0.58554 vs. 2.3055 ± 0.67604, t = 7.526; P<0.001.). Females rated the negatives more firmly (P<0.001). However, there was no statistically significant difference with respect to different religious beliefs, places of origin or incomes of the respondents. An experience of alcohol had a significant effect on the responses where they had stronger positive expectancy, which is an important point revealed in this study. **CONCLUSIONS:** In this study, we have observed a general acceptance that alcohol could provide positive reinforcement, especially among those who have had a prior experience of intake of alcohol. Thus, this study throws light on whether there is likelihood of youngsters falling into addiction in the later part of their life; hence it can act as a useful predictor for parents, health professionals, social counselors and the society as a whole so that they can take preventive measures against alcohol addiction.*

***Key words**: Addiction, alcohol expectancy, comprehensive effects of alcohol questionnaire, medical students*

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The subjective expectations of individuals from drinking of alcohol are widely varied in any population. This is bound to reflect in their attitude towards alcohol. Clinicians in this field are highly concerned about alcoholism and 'problem drinking' in the younger generation, both male and female,[1,2] more so in advanced countries. A recent study reported that in Germany, almost 60% of medical students had one or more episodes of 'binge drinking' every week.[3] Studies among Malaysian urban population have reported that 70% Chinese, 11% Malays and 42% of Indian ethnic people were drinkers, where most of them were social drinkers.[4] Researchers in this area do agree that the cognitive affects and expectancies from alcohol intake play a role as predictors of drinking in young people.[5-7]

The comprehensive alcohol expectancy questionnaire (comprehensive effects of alcohol - CEOA)[8,9] evaluates the negative and positive factors among 38 responses from the subjects. The analysis of responses throws light on whether the respondents will potentially be in favor of taking alcohol (fall into alcoholism or not). Several such studies have been conducted in the U.S. and other advanced countries using questionnaires.[2,10] These studies revealed interesting results, because the responses depend on the perception of the respondent of either positive or negative reinforcement.[11] As India is an upcoming economy with a largely younger population, there is need for scientific evaluation of the expectancies from this group.

In the present study, we evaluated the expectancies from comprehensive effects of alcohol of the mixed ethnic groups of young Indian medical students, who represent the cross section of India, with diverse background, because these students were selected on the basis of their performance in a national entrance examination. To our knowledge, this is the first such study among Indian medical students in India.

MATERIALS AND METHODS

The CEOA questionnaire

This questionnaire containing 38 responses, as per Kim Fromme,[9] had good internal reliability and was shown to be useful in testing expectancies, even among the adolescent population. The 38-item questionnaire had seven groups, four of which were positive effects and three negative effects. Example: "If I were under the influence of alcohol, I would be 'humorous.'" This is a positive expectancy. An example of negative expectancy is, "If I were . . ., I would be 'clumsy.'" The positive factors are 'sociability,' 'tension reduction,' 'liquid courage' and 'sexuality.' The negative factors are 'cognitive and behavioral impairment,' 'risk and aggression,' 'self perception.' These questions were to be rated to what degree they agreed, by 4-point Likert-type scale required to indicate their options by ticking the columns for disagree (1), slightly disagree (2), slightly agree (3) and agree (4). The respondents had to tick any one response only. Summery scores for the positive and negative factors respectively were used in this study. If the mean score was above 2 in the positive factors, it suggested that the respondent believed that alcohol had more positive reinforcement quality. If the mean score was above 2 in the negative factors, it suggested that the respondent believed that alcohol had more negative reinforcement quality.

Student volunteers in the age group of 19-23 years (mean 21 years) were given the CEOA questionnaire[9] to test their expectancy. The testing methods were explained to these students, and an informed consent was obtained by getting their signatures before they were given the questionnaire. It was made absolutely optional so that the students could be candid in their responses. Clearance was obtained from the Ethics Committee of our institution. No name or identity was asked or required to be revealed. However, their general information like age, religion, income, prior alcohol experience was taken in the 'general information form' attached to the questionnaire.

One hundred ninety-four students opted to answer the questions; the questionnaire was given to them during a free hour between the class sessions. The questionnaire was given to the students only once, and they were allowed enough time to go through it and respond.

After scrutinizing the response sheets, all the incomplete booklets and also those which had double answers for a question were discarded. Only completed response sheets were accepted for the study. This way, 20 response sheets were disqualified out of the response sheets of 194 students who answered the questionnaire. Hence we had 174 complete sets, out of which 99 were from males and 85 were from females.

Statistics

The data were analyzed by bivariate comparison of positive and negative responses by applying Student 't' test and ANOVA using SPSS 13. '*P*' < 0.05 was accepted as significant.

RESULTS

Comparing the means of positive reinforcement factor responses and negative reinforcement factor responses among all the students, the negative effects were rated significantly higher than positive effects (Negative *vs.* Positive: 2.8017 ± 0.58554 *vs.* 2.3055 ± 0.67604, t = 7.526; *P*<0.001). Gender-wise analysis showed that this trend was evident in both males and females [Table 1]. The responses of females when compared with those of males did not show significant difference in positive reinforcement factors; however, responses of females were stronger with respect to the negative effects (2.8937 ± 0.56294 *vs.* 2.7226 ± 0.59578, t = 1.992; *P*< 0.048).

When expectancy ratings were analyzed only from those having tasted/taken alcohol previously, those who had taken alcohol before

Table 1: Response scores of expectancies (mean ± SD) on the basis of gender and previous experience of alcohol

	Gender			Previous experience	
	Male	*Female*	*Collective*	*Taken*	*Not taken*
Positive	2.348±0.617	2.257±0.674	2.306±0.676	2.623±0.703	2.212±0.641
Negative	2.723±0.596	2.894±0.563	2.802±0.586	2.72±0.545	2.822±0.593
Pos vs Neg	***P*<0.001	***P*<0.001	***P*<0.001	ns	***P*<0.001
Pos vs Pos			ns	***P*<0.001	
Neg vs Neg			ns	***P*<0.001	

Pos = positive expectancy, Neg = Negative expectancy, Pos vs Pos = Positive in males vs. positive in females, Neg vs Neg = Negative in males vs. negative in females, ns = Not significant, **Highly significant

agreed strongly that alcohol had a positively enhancing effect (2.6228 ± 0.70264 *vs.* 2.2119 ± 0.64065, t = 3.595; *P*< 0.001).

DISCUSSION

The CEOA questionnaire can be used to predict the acceptance/rejection of alcohol consumption by individuals. In the present study using CEOA, we have found certain indications to suggest that the expectancies from alcohol in the middle class and upper class medical college students were predictable on the basis of their responses. We observed that the respondents felt strongly on positive reinforcement factors of alcohol effect, regardless of gender. However, negative factor responses from female respondents were stronger than those from their male counterparts. Among the college drinkers, cognitive effects and expectancies were the strongest predictors of drinking behavior.[5,7] Further, in our study we found that prior exposure to alcohol resulted in stronger positive reinforcement responses. Earlier reports suggested that heavy drinkers had more emphatic views on negative and positive expectancies.[10,11] Prior exposure to alcohol led to a definite response pattern, showing assertive positive and negative expectancy patterns. This is in agreement with our above observation in the present study. Also, the observation by Dunn *et al.*[12-14] found that heavy drinkers showed greater positive alcohol expectancies than light drinkers. Obviously, this is the reason for their love for drinking. In a previous study on students of Selangor state, Hejar Abdul Rahman had reported that alcoholism was a major problem among young Malaysians,[15] which according to him led to destructive attitudinal changes too. Drinking is very prevalent in college students of the west also.[16]

A very important and obvious factor coming clear in our study is that tasting/testing alcohol before had a great influence on the alcohol intake and attitude to drinking in these students. Hence first exposure and the knowledge of limits must be a factor which the educators and parents must keep in mind. Even though limited alcohol consumption could have many positive effects on the health,[17-19] it is necessary for the society to keep it under the limits in the growing age.

In our study, female respondents had more emphatic views on the expectancies. Earlier studies also had shown differences between male and female respondents, but the findings were equivocal. Some suggested greater positive reinforcements in females,[20] while others reported men to have greater positive reinforcement expectancies.[10] Men reportedly stated more tension reduction;[10] however, expectancies from the opposite sex were different, which suggested that women thought men would be sexually more free after alcohol consumption and men appeared to think that females would be more relaxed and would feel happy after drinking.[21] In the present study too, we observed a general acceptance to alcohol intake. Results of positive expectancy ratings which showed 'slightly agree to slightly disagree' represented an interesting trend of uncertainty. Considering that we examined youngsters, who were children from well-educated families, they were in a vulnerable situation. A slight swing in favor of acceptance could lead them to alcoholism. However, their

present responses were very guarded.

This is a preliminary study of alcohol expectancy. Analyzing the full data from the responses with respect to the expected effects and individual responses evaluation will reveal more detailed patterns. In the Indian context, there is still some reservation towards alcohol intake in the society. So studies of this kind will reveal the tendency of the affluent younger generation in a booming economy. Hence we decided to carry out this study in larger and more diverse groups of students and investigate the responses. Further study is being carried out to test this trend in collaboration with Psychiatry. However, presently this study throws light on the trends, which were highly indicative of the impending dangers for the society and which need to be addressed by the parents, health professionals, social counselors and the society as a whole so that they can take preventive measures against alcohol addiction.

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