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Alcohol Expectancies among Adolescents in Inner Mongolia

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Background

According to WHO and the World Bank, years of life lost to alcohol exceed years of life lost to other major causes such as tobacco, malnutrition, unsafe sex, and lack of sanitation, mainly because alcohol-related deaths tend to strike young people.

Current Alcohol Situation in China

China will become the world's largest producer of beer in the next couple of years. In 1996, China was the world's largest producer of distilled spirits. In 1997, China established 100 new wineries. Wine production in 1997 was 52 percent greater than in 1995.

In the period 1970 to 1996, in China, reported per capita alcohol consumption rose 401.91 percent from 1.03 liters in 1970-72 to 5.17 liters in 1994-96. In 1996, it was estimated that 81.3 percent of this alcohol consumption was distilled spirits, 17.6 percent was beer, and 1.1 percent was wine. No data are available on home-produced alcohol, which could be significant, especially in rural areas.

Since 1983, there has been a rising prevalence of alcohol-related disorders in the medical records of the Chinese health care system. In 1989, a nationwide survey suggested 5.7 percent of men and 1 percent of women were alcohol-dependent.

The History of Alcohol Culture

China has a long history of alcohol production and use. Archaeologists have uncovered evidence of alcohol use in China as early as 5,000 BC. Cases of alcoholism were recorded in Chinese traditional medicine texts as early as 2200 BC. There is historical evidence of government control of alcohol as early as the reign of Emperor Yu in 2298-2205 BC. During the Zhou Dynasty (1122-221 BC) the first law was passed to regulate alcohol use. Punishment for violation of alcohol laws was often severe. For example, under the Wei regime (221-264 BC), the sentence for non-governmental brewing of alcohol was death. Occasionally the fall of a dynasty was attributed to alcohol.

Alcohol use is considered an integral part of Chinese culture and is frequently referred to in well-known classical literature. In a number of classic and notable poems, poets praised the beauty of alcohol associating it with emotions such as happiness, joy, love, worry, sympathy, longing, anger, hate, homesickness, and sadness. Some of the famous poets were known as "alcohol immortals." Li Bai and Du Fu reportedly wrote their great poems under the influence of alcohol. *Jiu* (alcohol in Chinese) is regarded as the representation of happiness and the embodiment of auspiciousness.

Types of Alcohol

The classic, traditional drink of China is spirits made from malted millet, rice or sorghum. Recently beer has replaced spirits as the most common alcoholic beverage in some areas, especially urban areas. Yellow wine, also known as cooking wine, is commonly used to eliminate bad tastes and enhance the flavor in food. Medicinal wine is made of liquor or yellow wine mixed with herbs and is used to treat or prevent diseases. The type of alcohol, the pattern of drinking, and the quantity of alcohol consumed differs from region to region.

Alcohol Expectancy Theory

Expectancy theory has served as a conceptual basis for studying adolescent alcohol use for the past 20 years in the USA. An expectancy is the belief of an association between a given behavior and certain outcomes. These memorized associations then influence decisions made at future times of choice. In this manner, early learning experiences influence later behavior by means of the expectancy concerning the behavior. Alcohol expectancies are formed at an early age, even before the actual consumption of alcohol, based on observations of other people's alcohol use. Expectancies can subsequently be revised, based on the experiences of one's own alcohol use. Expectancies have been found to be useful in predicting drinking behavior, patterns of use, the onset of use, and patterns of problematic use.

Method

Development of a Chinese Adolescent Alcohol Expectancy Scale

Following three months of fieldwork involving in-depth interview and focus group discussions exploring alcohol expectancies with 64 adolescents in Inner Mongolia, a 131-item Chinese Adolescent Alcohol Expectancy Questionnaire (CAAEQ) was developed. The proposed expectancy scale was pretested with 120 students and revised.

Exploratory factor analysis using principal components with Varimax rotation was used to determine a factor structure based on both statistical adequacy and conceptual coherence. To determine the best factor structure, analyses were conducted extracting two through nine factors. A factor structure of eight factors was identified as the most adequate. The factors were cleaned and the result was a 97-item alcohol expectancy instrument. Reliability coefficients computed for the 8 factors ranged from 0.67 to 0.94.

Nine hundred and nineteen students selected from four high schools in Huhhot City and Baotou City in Inner Mongolia completed this questionnaire. The sample was 53.9 percent male and 46.1 percent female. The majority (72.0 percent) of the respondents were 15 to 16 years old. Almost sixty percent of the samples were in Grade 10, 26.4 percent in Grade 11, and 13.6 percent in Grade 12. Ethnically, 86.8 percent of the respondents were Hanzu, 6.3 percent were Mongolian, and 6.9 percent were other nationalities.

Results

Classification of Drinking Status

Eight hundred and sixty-seven usable questionnaires were collected. Students who never drank or who did not drink in the last year or

in the last month were classified as non-drinkers (42.2 percent). Students who reported drinking at least 1 time during the past 12 months but who did not drink in the last 30 days were classified as occasional-drinker (33.1 percent). Students who drank both in the last year and in last month were classified as Regular-drinkers (24.7 percent). Males were almost twice as likely to be regular drinkers (30 percent) as females (16 percent).

Expectancies and Alcohol Use

Multivariate Analysis of Variance (MANOVA) was used to test whether gender, grade, or drinking status could predict alcohol expectancies and to examine possible interaction effects. Gender, grade, and drinking status served as independent variables, with the 8 expectancy factors serving as dependent variables.

No significant interaction effects were observed among gender, grade, and drinking status.

MANOVA showed a significant main effect for gender [Wilk's Lambda=.94, $F(8, 783)=6.2$, $p<.001$], grade [Wilk's Lambda=.92, $F(16, 1,566)=4.4$, $p<.001$] and drinking status [Wilk's Lambda=.91, $F(16, 1566)=4.7$, $p<.001$].

Univariate MANOVA tested the independent variables against each expectancy factor individually.

- Gender predicted Factor 1 [$F(1, 806)=17.8$, $p<.001$], Factor 2 [$F(1, 806)=60.8$, $p<.001$], Factor 6 [$F(1, 806)=6.8$, $p<.01$], and Factor 8 [$F(1, 806)=9.2$, $p<.01$].
- Grade predicted Factor 1 [$F(2, 805)=30.8$, $p<.001$], and Factor 5 [$F(2, 805)=14.8$, $p<.001$].
- Drinking status predicted all factors but Factor 5: Factor 1 [$F(2, 805)=5.3$, $p<.001$], Factor 2 [$F(2, 805)=44.5$, $p<.001$], Factor 3 [$F(2, 805)=7.4$, $p<.01$], Factor 4 [$F(2, 805)=18.5$, $p<.001$], Factor 6 [$F(2, 805)=21.6$, $p<.001$], Factor 7 [$F(2, 805)=7.7$, $p<.001$], and Factor 8 [$F(2, 805)=29.2$, $p<.001$].

Conclusion

Female students were more likely to report global negative expectancies, while male students were more likely to report stronger positive social perception expectancies. The 11th and 12th graders expected more negative effects from drinking including global negative effects and negative personal effects than did the 10th graders. Nondrinkers and occasional drinkers reported greater expectancies of negative personal effects and negative perceptions of drinking than regular-drinkers. In contrast, regular drinkers more often reported expectancies of positive social perception, tension reduction and pleasure, social courtesy, social facilitation, and beneficial drinking. The results suggest that alcohol expectancies among Chinese adolescents in Inner Mongolia vary as a function of gender, grade, and drinking behavior.

Discussion

The significant positive role of alcohol in Chinese history and culture means Western-style prohibition would be an unsuccessful tactic for reducing alcohol-related deaths among young people. A reduction in high-risk drinking could possibly be achieved through well-planned educational programs to modify alcohol expectancies that influence adolescent behavior related to alcohol, given that expectancies are learned, often quite early in life. It might be possible to counter high-risk drinking typically associated with

strong-positive expectancies by introducing educational programs aimed at creating more negative expectancies associated with low-risk drinking patterns.

The great cultural diversity that exists in China among regions, incomes, nationalities, accessibility to alcohol, the patterns of drinking, beverages of choice, and styles of drinking behavior suggests the need to better understand alcohol use patterns in different parts

of the country. In this study, data from two nonrandom samples in the two largest cities in Inner Mongolia have limited generalizability. However, the results do represent a first attempt to describe alcohol expectancies among a group of Chinese adolescents. Given the rapidly increasing rate of alcohol consumption in China, and the increasing incidence of alcohol-related problems, the benefits from research of this type could be significant.