



International Journal of Humanities & Social Science Studies (IJHSSS)
A Peer-Reviewed Bi-monthly Bi-lingual Research Journal
ISSN: 2349-6959 (Online), ISSN: 2349-6711 (Print)
Volume-II, Issue-V, March 2016, Page No. 204-214
Published by Scholar Publications, Karimganj, Assam, India, 788711
Website: <http://www.ijhsss.com>

Alcoholism among Youth: A Study from Gods own Country, Kerala, India

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Abstract

Alcohol consumption is a major public health issue in the world. Understanding regional differences in its use will help in planning for better interventions. The growing numbers of social problems among youth have become the major fear of the government agencies. Alcoholism among youth is one of the primary topics discussed when studying subject regarding social problems. Article 47 of the Directive Principles of State Policy described in The Indian Constitution says: "The state shall regard the raising of the level of nutrition and standard of living of its people as among its primary duties and in particular, the state shall endeavour to bring about prohibition of the use except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health". Alcohol consumption can have both health and social consequences for the drinker. The harmful use of alcohol can also result in harm to other individuals, such as family members, friends, co-workers and strangers. Moreover, the harmful use of alcohol results in a significant health, social and economic burden on society at large.

Key Words: Consumption, Youth, Health, Nutrition, Family

Introduction: Alcohol use in family is of concern to both researchers and policy makers. There may be someone in the family, who may be in a position to influence others for drinking, such as father, siblings, other relatives etc. Alcoholism is also known as a family disease. Alcoholics may have young, teenage, or grown-up children; they have wives or husbands; they have brothers or sisters; they have parents or other relatives. Each member of the family may be affected by alcohol differently.

Parental alcoholism may affect the foetus even before a child is born. In pregnant women, alcohol is carried to all of the mother's organs and tissues, including the placenta. Today, experts who study alcoholic families know that family and marital problems often start because of alcoholism, but they also learned that spouses and children may contribute to the drinker's habit and make it worse. Some of the families allow heavy drinking to continue rather than deal with serious family problems, and keep the habit going in exchange for keeping the family together. Denial is an essential problem for alcoholics and family members. Family members use denial to rationalize the drinker's alcohol dependency. In the beginning, denial is understandable because every family loves and wants to protect its members, but there comes a time when denial negatively affects family members. When family members deny the obvious and refuse to look for help, their behaviour can trigger multiple emotional problems in the children of the family.

Alcohol consumption is linked to many harmful consequences for the individual drinker, the drinker's immediate environment and society as a whole. Such social consequences as traffic accidents, workplace-related problems, family and domestic problems, and interpersonal violence have been receiving more public or research attention in recent years. Social consequences affect individuals other than the drinker, for example, passengers involved in traffic casualties, or family members affected by failure to fulfil social role obligations, or incidences of violence in the family.

Statement of the Problem; The habit of alcoholism not only affects the individual and also affects the relationship and the environment in which he or she belongs to. There are lots of families in front of eyes collapsed socially, economically and culturally due to the habit alcoholism among bread winners of the families. The scope of the study is to make the people to be aware of their habit and to teach them to know what all happen to their health if they are not able to control their drinking habit. Hence the researchers decided to study on "a study on alcohol use among the youth residing in Kollam region"

Aim and Objectives of the study:

1. To study the alcohol tendency among the youths who are involved in consuming alcohol
2. To study the socio economic conditions of the respondents due to alcoholism
3. To understand the health, social and behavioural aspects of the alcoholics under study
4. To provide various suggstions for to tackle alcoholism among the youth.

Methodology: A self-administered questionnaire survey done among the youths in the Kollam. One hundred and fifty (150) youth age range from 15 to 24 stayed in Kollam is the sample size for this inquiry. Scientific sampling method (stratified sampling using class divisions as strata) was used to select the respondents. Questionnaire sought information on demography, patterns of alcohol use, alcohol use in family and among friends, beliefs and perceptions regarding alcohol, questionnaire and tobacco practices and other related areas.

Study type: It is a descriptive study. A self-administered questionnaire survey was done among youths of Kollam region using a common pre-tested questionnaire survey tool to assess and compare prevalence and pattern of alcohol use among them.

Review of Literature: The age of initiation to alcohol is going down. Different states have different legal minimum age limits for alcohol consumption, with the lowest being 18 years in Karnataka and Kerala and the highest at 25 years in Delhi; Maharashtra has permissible age for beer and wine as 21 years and 25 years for spirits. There is increasing lobbying by the alcohol industry for reduction in the permissible age. Young people, especially teenagers, are more sensitive to alcohol use because their bodies and brains are still developing. Studies and findings around the world are conclusively underscoring the dangers of early alcohol use resulting in a much higher risk of dependence and abuse, but the legal age in India for serving alcohol is seldom checked. In India, the young are being lured towards alcohol use.

The World Health Organization defines violence as "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in, or has a high likelihood of resulting in, injury, death, psychological harm, or deprivation"[1]. Youth that involved in the alcohol consumption often has problems with the social integration, are more prone to fighting and are more often resisted to participate in healthier activities. It is stated that, the youth has a higher risk of being involved in illegal activities and participating in unprotected sex [2]. By referring to Siemieniako & Kubacki [28], part of the

growing problem with increasing alcohol consumption among women might lead to unfeminine and immoral behaviors. World Health Organization [3] stated that alcohol uses are risk factors for both being victimized and performing youth violence. Youth violence can be in many forms. These include bullying, gang violence, sexual aggression and assaults. Youth violence normally occurs on the streets, bars and nightclubs.

Consuming alcohol will directly affect the cognitive and physical functions that can reduce the self-control and the ability to process incoming information and assess risks.

Comprehensive community intervention approaches may have considerable potential to reduce college-age drinking problems, especially given the success of these programs in reducing alcohol-related problems and in preventing health-compromising behaviors among youth. (*J. Stud. Alcohol*, Supplement No. 14: 226-240, 2002)(4)

This shocking result was revealed in a study done by National Drug Dependence Treatment Centre and the All India Institute of Medical Sciences where a total of 119 children were covered examining their pattern, profile and substance use. Alcohol, tobacco and inhalants are common initial substances of abuse and have been described as 'gateway substances'. These substances are easily available to the children, according to the revelations in the research.

Alcoholism among young people: According to the *National Institute of Alcohol Abuse and Alcoholism's Underage Drinking Research Initiative (NIAAA-UDRI)* approximately 5,000 young adults under the age of 21 die due to underage drinking.

1. 1,900 died from vehicular crashes or accidents
2. 1,600 died as a result of homicide
3. 300 died from suicide
4. remaining people died from other injuries, such as burns, falls, and drowning

Cancer: According to the NIAAA, considerable evidence suggests a connection between heavy alcohol consumption and increased risk for cancer, with an estimated 2 to 4 percent of all cancer cases thought to be caused either directly or indirectly by alcohol. (NIAAA) A strong association exists between alcohol use and cancers of the esophagus, pharynx, and mouth, whereas a more controversial association links alcohol with breast cancer. Together, these cancers killed an estimated 58,970 people in the United States in 2010.6

Acute and chronic health problems: As alcohol-related diseases such as liver cirrhosis, cancers and heart disease take time to develop; chronic effects resulting directly from alcohol misuse are rarely seen among young people. Thus it is the shorter-term acute effects of alcohol consumption that are more evident in this population. In particular, acute intoxication can occur rapidly and by surprise in children and young people which is probably due to a combination of physiological factors (e.g. limited ability to metabolise alcohol and lower body weight) and socio-cultural reasons (including a lack of experience of the effects of alcohol and drinking in unsupervised contexts). The most common impacts of alcohol intoxication are vomiting (~ 60% of children hospitalized for alcohol use) and coma, which in cold environments can result in fatal hypothermia [7]

Shorter-term effects: Alcohol stimulates the release of endorphins giving the subject a sense of well-being which can encourage continued drinking. Increasing intoxication leads to euphoria, loss of inhibition, reduced coordination, garrulousness and belligerence [9].

With increasing blood alcohol concentrations subjects experience lethargy, cardio-respiratory depression. With further intake subjects develop stupor and coma that may end in death [8].

Mid-term effects: Alcohol disrupts the sleep-wake cycle, altering total sleep time [46]. Consolidation of learnt material takes place in sleep and so this can be adversely affected by persistent Drinking. Research suggests that alcohol has a more profound effect on memory and learning in adolescents than in people who start drinking in later life.

- It has been reported that the fatal dose of alcohol in childhood could be as low as 3 grams/kg in a child compared to 5-8 grams/kg in an adult [7]. In a 30 kg ten year old this equates to 1.5 bottles of wine and in an adult to 5 - 8 bottles with presumably adolescents in the middle, depending on weight. The reduction though metabolism of 0.1 g/l/hr or 0.08/kg/hr - in the blood means that if a 75 kg adolescent had a blood level of 1g/kg after a bottle of wine, it would take ten hours for full elimination. Since there is at least a temporary effect of alcohol on memory, this young person could still have alcohol affecting their brain function in the school morning. So potentially there could be a problem with learning in school the morning after heavy drinking, in addition to the fatigue associated with the alcohol-related sleep disruption.
- Alcohol is also linked with depression, although it is not possible to determine if adolescents drink due to depression or if depression occurs as a toxic effect of alcohol consumption [9]. However, research on alcohol abusers has found significantly fewer locus coeruleus neurons in the brain stem compared to non-alcohol abusers, suggesting that alcohol may change brain structure and thus trigger a behavioural response [8].

Longer-term effects: In observational studies of subjects with chronic alcohol use disorders, both left and right hippocampal volumes were significantly smaller than in non-users. Thus long-term memory may be affected by prolonged drinking [7].

Using functional magnetic resonance imaging (fMRI) to measure blood flow to various parts of the brain, alcohol abusers have shown reduced perfusion (blood flow) to the prefrontal and parietal cortices, particularly in the right hemisphere during tasks of spatial working memory e.g. remembering location of objects [7, 9, 10]. Also subjects with alcohol dependence demonstrate diminished spatio-visual and motor speed responses [7, 8, 10].

Alcohol also stimulates release of the neurotransmitter Dopamine which activates the Dopaminergic reward pathway [7]; this can make alcohol addictive, as both short term and long term exposure reinforces this pathway in the brain. Abstinence from alcohol after periods of heavy drinking sensitises N-methyl-D-aspartate (NMDA) receptors causing an influx of calcium ions into neurons as a result of their increased activity. This process is neurotoxic and causes cell degeneration.

Research Results

Findings

Table-1: Youth's Age and Consumption Level

Age	Frequency	Percentage (%)
15	2	1.3
16	14	9.3
17	42	28.0
18	30	20.0
19	25	16.7
20	25	16.7
21	7	4.7
22	2	1.3
23	1	.7
24	2	1.3
Total	150	100

Table -1 above indicates that the majority of the respondent started drinking alcohol at the age of 17 with the percentage of 28%. While 20% of respondents started to drink at the age of 18. At the age of 19 and 20, its share same percentage which is 16.7%. The least number of respondents who started to drink is at the age of 23. This is worrying statistic, as in Kollam region at the age of seventeen, the youths are at the level of secondary school they started consuming alcohol.

Table-2: Factors Lead To Alcohol Consumption

Reasons	Frequency	Percentage (%)
Culture	2	1.3
Enjoy	1	.7
Family	21	14.0
Friends	15	10.0
Fun	20	13.3
Habit	4	2.7
Happy	1	.7
Myself	1	.7
Occasion	1	.7
Party	6	4.0
Pleasure	1	.7
Stress	16	10.7
Try	59	39.3
Work	2	1.3
Total	150	100.0

From the Table-2 shows that, it indicates that most of respondents drink because of they want to try something new to them. With the higher number of percentage, 39.3% with the reason of trying. Followed by 14%, respondent tends to drink because of their family. This is because their family consumed alcohol and makes them to follow what their family did. Next percentage is 20% where

respondents started to drink because want to have fun. Besides that, some of the respondents started to drink due to stress. By taking alcohol, they believe it will reduce the stress condition; however, this assumption is violating the medical facts. Friends also are the reason of the respondents to start drinking with the number of percentage, 15%.

Table 3: Frequent Of Consumption

Duration	Frequency	Percentage
Everyday	2	1.3
3-5 times a week	17	11.3
once a week	32	21.3
only on weekends	38	25.3
only on special occasion	61	40.7
Total	150	100.0

On the above Table 3 shows that most of respondents drink during special occasion with the percentage of 40.7%, 25.3% of them drink only on weekends, 21.3% of them once a week, 11.3% of them drink for three to five times a week and 1.3% of them drink every day.

Table-4: Drinking Habits Among Family Members – Multiple Option

Others Who drink	Frequency	Percentage
Father	47	31.3
Mother	7	4.7
Daughter	0	0
Siblings	43	28.7
Other Members	28	18.7
Nobody in the family	25	16.6
Total	150	100

One focus of this study was directed towards home drinking. Questions were angled at finding drinkers within the house. From the above table it is clear that out of the total respondents 47% claimed that, their fathers are also drinkers (Table 4). This caters to the majority followed by sibling's drinkers (43%), mother (7%) and the rest. Generally we can term this as a systematic spread taking place in the household. Lady drinking is slowly catching up and evidence was reported in this study by people saying that their mother are consuming alcoholic drinks. It can be strongly concluded that, in majority of the cases there are multiple drinkers inside a single household. There are only 25% respondents who say that they are the single drinker in their family.

Table-6: Social Impact on family

Impacts	Frequency	Percentage
Family	38	25.3
Neglect	11	7.4
Study	52	34.6
Quarrels	28	18.7
Fear	21	14

Total	150	100
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From the above table shows that 25.3 % families felt that the drinker had less time with the family and 7.4 % felt neglected. 14% felt afraid of the man when he drinks. Around 18.7 % of families had quarrels because of the drinking habit of the man. 34 % of the families of alcohol users had experienced change in study pattern of their children's.

Table-7: Common health problems among drinkers as perceived by the family (multiple responses)

Health Problems	Frequency	Percentage
Neuro Muscular	46	30.6
Gastritis	18	12
Psychiatric	43	28.6
Weight loss	12	8
Hyper tension	14	9.4
Diabetics	11	7.4
Jaundice, Cough, TB	6	4
Total	150	100

The commonest health problems (30.6%) were neuromuscular in nature and 28.6% of them were psychiatric problems. There was hypertension in 9.4 % and diabetes in 12%. Gastritis was present in 12%.

Table-8: Immediate impact of drinking on behaviour

Immediate impact of drinking		
	F	P
Violence	47	31.4
Others- irritable, lose self-control	23	15.4
Drowsiness	80	53.4
Total	150	100

From the above table the respondent who responded to this question, drowsiness (53.4%) was commonest immediate effect of drinking; violence was seen among 31.4%.

Discussion: Some parents might choose to introduce their children to alcohol, and research shows that the outcome of this decision depends on the context in which it occurs. For example, parents in some cultures think it acceptable to offer their child a little wine at family dinners on special occasions, and in cultures where this is the practice the rates of alcohol-related problems are sometimes lower. However, problems with alcohol can develop when parents provide alcohol to youth without guidance or supervision. For this reason, if youth should start drinking — and it is recommended that they do not — it would be better for them to drink small amounts of alcohol in the company of their parents, if the parents demonstrate low-risk drinking.

From the above social impact table shows that 25.3 % families felt that the drinker had less time with the family and 7.4 % felt neglected. 14% felt afraid of the man when he drinks. Around 18.7 % of families had quarrels because of the drinking habit of the man. 34 % of the families of alcohol users had experienced change in study pattern of their children's. So it shows that regardless of a family history of alcoholism, a lack of parental monitoring, severe and recurrent family conflict, and

poor parent-youth relationship can contribute to alcohol abuse in adolescents. Youth with conduct disorders, poor socialisation, and ineffective coping skills as well as those with little connection to parents, other family members, or college may be at an increased risk for alcohol related violence in the families.

By taking alcohol, they believe it will reduce the stress condition; however, this assumption is violating the medical facts. One of the main causes of alcoholism is overdo drinking to forget life's struggles and problems. Many alcoholics drink in the hope that they will be able to forget their problems by drinking large quantities of alcohol. A person who drinks irresponsibly may develop alcohol tolerance in the long run. The more a person drinks, the more he or she becomes more alcohol tolerant. This can lead to greater alcohol consumption, and then later, to alcoholism. The findings also indicated that there is a significant relationship between the availability of alcohol as an influencing factor that leads the alcoholism among youth. It means that the availability of alcohol can influence the youth to involve in the alcoholism. It is also can be seen in the findings that there is a significant relationship in the lack of knowledge of alcoholism as an influencing factor in leading the alcoholism among youth that lives in Kollam region.

Besides that, the advertisement is also the factor of youth to drink alcohol, indicated that showing Media alcohol advertisements to individuals can raise their short term interest in alcohol consumption. Although alcohol counteradvertising may be a good choice for reducing youth alcohol misuse, there is still much to learn about the most effective content and placement. The message content that was found to be effective against tobacco industry manipulation may not be appropriate for alcohol

Another important thing is the over impact of alcohol advertising want to reduce the social and medical problems associated with the misuse of alcohol, and they often argue for a ban on alcohol advertising. This policy choice is based on the assumptions that alcohol advertising increases alcohol misuse and that bans eliminate or reduce advertising. A ban on one or two media, such as television and radio, will result in substitution to available alternative media. It can be said that television and radio reach so many people that bans on their use will surely have an effect.

The only way to reduce total advertising is to legislate comprehensive advertising bans, including all forms of promotion, and display of the product's name, the product and product logos. Comprehensive community programs addressing problems associated with alcohol have involved multiple agencies in city government as well as private citizens and private organizations. Such programs seek to stimulate behaviour change by influencing the normative environment in which high-risk individuals live.

Comprehensive community interventions are also distinguished by the use of multiple intervention strategies for changing health-related behaviors. Although programs differ with respect to content and behavioral targets, they typically include some combination of: school-based education, public information programs, medical screening and treatment, media advocacy, organizing and mobilizing of different community groups and populations, promotion of environmental changes that can influence the price and availability of products like alcohol and tobacco that affect health and programs to publicize and enhance enforcement of existing laws pertaining to the use of alcohol, tobacco or other drugs. Programs can also provide social and entertainment activities that are alcohol, drug or tobacco free or that promote healthy lifestyles such as exercise and good nutrition.

Although comprehensive community interventions share the common features of multiple participants and interventions, they have varied on a number of dimensions, including the primary target population, the geographic or organizational setting, who initiated the program and the location of the director. Primary target populations can include all members of a community, youth, adults, elderly, certain minorities or racial subgroups or groups with distinct behaviors. Geographic and organizational settings can range from cities to neighbourhoods or counties and may or may not reflect geopolitical units. Initiators of such programs have varied from university researchers to members of city government or private organizations within a community.

Recommendations

1. In order to root out alcoholism among the youth, school students, there is need for a favourable school and family environment which encourages vibrant co curricula activities such as sports, music, drama, clubs and societies. Such activities will give a strong sense of belonging and purpose in life therefore reducing boredom and idleness both of which are positively associated with alcoholism among the students.
2. Parents and guardians should desist from giving students a lot of pocket money which economically empowers them to acquire alcoholic drinks. Parents should also try and shield students from the effects of parental conflicts and family dysfunctions by ensuring those students' physical, emotional and social needs are met. Still, it is necessary for parents and guardians to establish firm rules and regulations at home regarding what time children should get home and other family expectations.
3. The government should regulate the sale of alcohol through licensing, packaging, pricing, restricting the age of consumers and regulating opening hours for the selling points. This will ensure that the selling points are located away from school premises, small portable packages are abolished, prices are non-affordable to students, consumers below the age of majority are not accessible to alcohol and selling points are only operational during the night.
4. Religious institutions should endeavour to mould students' spiritual and moral values. This may help the youth to resist the pressure to engage in alcoholism and immoral activities that are consequences of alcoholism. Likewise, the school guidance and counselling department should organize frequent counselling sessions to remind students of the negative long term effects of alcoholism. In addition, parents, teachers and other community members should act as good role models for the youths by avoiding alcoholism.
5. Counselling intervention such as self-monitoring, peer pressure management, self-regulation, values clarification, and thought stopping could help the youths to withstand parental, neighbour-hood and peer pressure all of which are implicated in this study as causative factors in adolescent drinking. The primary focus of intervention has to be the adolescents since it might not be possible to extend such intervention to those agents that predispose such adolescents to alcohol drinking.
6. The education programs on the danger of alcohol should be implemented in school as education at an early stage is very important. Other than that, a campaign involving the public can be implemented and electronic media can be used in order to help in transmitting the message of the dangers that alcoholism will bring and in the end reduce the alcohol consumption among youth
7. Community rehabilitation counselling centres would need to be established where they do not exist and further equipped and empowered where they are available. Realizing that

- majority of the youths are in the offices, and the work place there is need to strengthened the provision of counselling services in schools, hospitals and rehabilitation centres to minister unto the counselling needs of youths alcoholics.
8. Family effects on children's drinking alcohol consumption behaviour of parents, grandparents and siblings can have a detrimental influence on the drinking patterns of the offspring
 9. Community task forces including government officials, law enforcement personnel, school representatives, health professionals, youth workers, parents, concerned citizens and adolescents stimulated passage ordinances to prevent alcohol sales to minors and intoxicated youths.
 10. Legal and environmental interventions that influence access to alcohol and enforce laws governing behavior after drinking such as drunk-driving laws have had an influence on youth persons. Interventions targeting individual knowledge and behavior change have also produced behavior changes, particularly among youth. Comprehensive community intervention programs may want to include both types of activities.
 11. Government needs to review back the national policies on alcohol. Government plays an important institution in ensuring the policies become effective. First and foremost, government needs to impose heavier taxes on alcohol.
 12. Government should regularly make spot checks on the premises. If the premises break the rules and regulations, government should suspend their license. Besides, the government should restrict on hours and days of selling alcohol.
 13. One of the factors that lead to alcoholism among the youth that lives in Kollam region is the lack and poor of knowledge on the alcoholism itself. By having no knowledge or poor knowledge of the dangers that alcohol consumption will bring, people, especially youth will drink alcohol without having the fear of the harm that alcohol can do to them. The poor of knowledge of alcoholism are usually as a result of lacking in the exposure of the dangers and effects of the alcohol itself to the youth. Therefore, as the recommendation, it is important for the responsible body, such as the Health Department to take an effort in implementing various of education programs on the dangers of alcohol in order to increase the awareness of the public especially youth on the bad impacts of alcohol.
 14. The education programs on the dangers of alcohol should be implemented at various club levels and various places.
 15. Innovative Interventions to Strengthen Community Based Rehabilitation especially with the participation of experienced officials.
 16. The more effective workplace prevention programmes.
 17. To set up de addiction camps with free of costs as a part of this provide treatment cum rehabilitation services to the needy people.
 18. Set up drug awareness and counselling centers
 19. To support activities of non-governmental organisations, working in the areas of
 20. Prevention of addiction and rehabilitation of addicts. To create awareness and educating the people about the ill effects of alcoholism and substance abuse on the individual, the family and society at large.
 21. To develop culture-specific models for the prevention of addiction and treatment and rehabilitation of addicts.
 22. To evolve and provide a whole range of community based services for the identification, motivation, detoxification, counselling, after care and rehabilitation of addicts.

23. To promote community participation and public cooperation in the reduction of demand for dependence-producing substances.
24. To promote collective initiatives and self-help endeavours among individuals and groups vulnerable to addiction and considered at risk.
25. To establish appropriate linkages between voluntary agencies working in the field of Addiction and government organisations.

Conclusion: While the high rates of use and abuse of alcohol are devastating problems of national importance, the good news is that this nation is poised to capitalize on unprecedented Opportunities in alcohol research and prevention. These opportunities must be seized. Scientists are exploring new and exciting ways to prevent alcohol-associated accidents and violence and more prevention trials are developing methods to address problem alcohol use. Medications development is proceeding faster than any time in the past 50 years, with many new compounds being developed and tested. Furthermore, researchers have identified discrete regions of the human genome that contribute to the inheritance of alcoholism. Improved genetic research will accelerate the rational design of medications to treat alcoholism and also improve understanding of the interaction and importance of heredity and environment in the development of alcoholism

References

- [1] R.N. Parker and L. A. Rebhun, *Alcohol and Homicide: A Deadly Combination of Two American Traditions*, Albany: State Univ. NY Press, 1995.
- [2] J. Langley and K. Kypri, "Secondhand effects of alcohol use on university students," *British Medical Journal* no. 327, pp. 1023-1024 2003.
- [3] J. Williams, F. J. Chaloupka, and H. Wechsler, "Are there differential effects of price and policy on college students' drinking intensity? *Nat. Bureau Econ. Res.*, vol. 1, p. WP 8702, 2002.
- [4] *J. Stud. Alcohol*, Supplement No. 14: 226-240, 2002
- [5] Rothman, K.J. The Proportion of Cancer Attributable to Alcohol Consumption. *Preventive Medicine*9(2):174-179, 1980.
- [6] . American Cancer Society. *Cancer Facts and Figures* . 2010
- [7] Lamminpaa A. Alcohol intoxication in childhood and adolescence. *Alcohol & Alcoholism*. 1995;30(1):5-12.
- [8] Zeigler D, Wang CC, Yoast RA, Dickinson BD, McCaffree MA, Robinowitz CB, et al. The neurocognitive effects of alcohol on adolescents and college students. *Preventive Medicine* 2005;40(1):23-32.
- [9] Spear LP. Adolescent brain and the college drinker: Biological basis of propensity to use and misuse alcohol. *Journal of Studies on Alcohol*. 2002(Suppl. 14):71-81.
- [10] Windle M, Spear, LP, Fuligni, AJ, Angold, A, Brown, JD, Pine, D, et al. . Transitions into underage and problem drinking: developmental processes and mechanisms between 10 and 15 years of age. *Pediatrics* 2008;121(Suppl 4):S273-89.