

Alcohol Addiction And Its Social Externalities: Insights From Kerala, India

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Abstract

Alcohol addiction is widely recognized as a major social and public health concern with far-reaching consequences beyond individual health. The present study examines the social problems associated with alcohol addiction in the state of Kerala by comparing the experiences of alcohol addicts and non-addicts. The study is based on primary survey data collected from 210 addicts of Alcoholic Anonymous groups, and same number of non-alcoholics of similar socio-economic backgrounds. Various statistical tools, including Chi-square tests, logistic regression, and the Mann–Whitney U test, were employed to examine the association between alcohol addiction and the selected social outcomes. The findings reveal that alcohol addiction is significantly associated with higher levels of interpersonal violence, risky driving behaviour, and have greater likelihood of encountering legal problems. Overall, the study highlights that alcohol addiction generates significant negative social externalities in Kerala.

Keywords: *alcohol addiction, interpersonal violence, road accidents, traffic violations, legal problems,*

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I. Introduction

Societal influence of alcohol is a prominent area of alcohol research. There are numerous studies considering the societal impact of alcohol (Klingemann & Gmel 2002). The large volume of alcohol consumption is responsible for the vast majority of problems and is the key determinant of harms to others (Bouchery et al., 2011). Heavy consumption of alcohol lead to impair the performance of certain tasks, loss of self-control and lead to aggression (Zador et al., 2000; Kerr et al., 2006; Naimi et al., 2003). There are a lot of studies that measure second-hand effects of alcohol studies observed that alcohol is the only substance which caused a greater harm to others than harm to the user (Geibrecht et al., 2012; Nutt D.J et al., 2010). Here, we try to delineate the impact of alcohol addiction on society.

Alcoholism has profound adverse effects not only on the drinker but also on family members and society at large. Harmful alcohol use contributes significantly to global morbidity and mortality and is associated with numerous social, economic, and legal consequences (WHO, 2018). The social consequences of alcoholism ranges from violent behavior to breaching of laws. At the individual level, excessive alcohol consumption impairs cognitive functioning, reduces judgment, and lowers self-control. Alcohol acts as a central nervous system depressant, diminishing inhibitory control and increasing impulsivity, which can escalate aggressive behavior (Bushman & Cooper, 1990). Drinking large volume can negatively influence inter-personal relationships and may lead to intentional as well as unintentional injuries due to aggression and violence. Excess use of alcohol lead to negative outcomes and it may enhance the possibility of injuries and accidents. Empirical research has consistently demonstrated a strong association between alcohol intoxication and interpersonal violence, including intimate partner violence, assault, and homicide (Room et al., 2001).

Alcohol related problems have implications across broader social contexts like road safety concerns, and law and order. Driving under intoxication considerably elevate the probability of road accidents, and associated injuries and deaths. According to the National Highway Traffic Safety Administration (NHTSA, 2022), alcohol-impaired driving remains a major cause of road traffic deaths worldwide. Alcohol induced driving may lead to delayed reaction times, impaired coordination, and diluted situational awareness, thereby posing serious risks on intoxicated drivers, pedestrians and other road users alike.

Besides, alcohol use disorders strongly related to different types of criminal behaviour and related legal complications. Alcohol intoxication is frequently associated with offenses such as assault, vandalism, disorderly

conduct, and breaches of public peace (WHO, 2018). Because of the reduced decision making, and violent behaviour, the alcoholics were more prone to face legal complications. The law-and-order problem due to the drinking behaviour enhances the cost for policing, legal institutions, etc. which increases the economic costs of society.

Alcohol addiction and persistent use of alcohol are related to numerous social problems. Excessive alcohol use often leads to deterioration in social relationships, social isolation, loss of friendships, and declining social skills. People under intoxication tend to experience a reduced sense of personal inhibition and their feisty behavior may end up with tragic consequences. Among alcoholics the possibility for emotional fluctuations is very high. As a result, there is a greater chance for transforming silly disputes into violent outbursts. Due to certain constraints, the present paper confined with certain limited social issues like inter-personal violence, behavior of addicts in vehicles and roads, and legal problems faced by the alcoholics. Specific objectives of the paper is to compare inter-personal violence of alcohol addicts against non-addicts, to assess various problems related to driving of addicts against non-addicts, and to analyze legal problems faced by addicts against non-addicts

II. Methods

The present paper employed only primary information from members of different Alcoholics Anonymous (hereafter A.A) groups all over Kerala for analyzing the issue. Hence 2600 members of A.A from 236 groups are considered as the population of the study. To find out the social impacts of addiction a multi-stage sampling technique has been employed. In the first stage, Kerala is selected for the study since per-capita alcohol consumption of the state is very high. In the second stage, the state is further divided into three geographical regions viz, south, central and north Kerala by geographic location and distinct living conditions. In the third stage, some A.A groups were identified from the respective regions through snowball sampling. In the final step, alcohol addicts, that is, the sampling units were identified through simple random sampling from each of these groups. This step has been done based on the number of distributions of each group in such a way that more addicts were selected from larger groups and vice versa. Total of 210 addicts was selected for the study with a criterion of a minimum of 70 addicted peoples from a particular region to ensure proper representation of each region (Hyderali. K 2019).

To compare the impact of addiction, the same number of non-addicted samples was selected from the respective regions. This non-addicted control group is also selected based on many criteria. First of all, individuals were identified with the same socio-economic backgrounds of the addicted peoples. Then the identified persons were further screened to realize whether they are alcohol addicted persons or not. This stage has been done based on the CAGE questionnaire, which was used for the identification of problem drinkers (Ewing J. A., 1984). Two "yes" responses to CAGE questions were treated as the respondent is a problem drinker. If a person got a score of 2 or more for the CAGE questions were treated as addicts and avoid from the control group. Then search for a new sample with the same background to substitute this one. In this way, 70 non-addicted persons were selected from each region and thus making a total of 210 non-addicts to form the control group of the study (Hyderali. K 2019).

III. Results

Inter-personal Violence

Quarrel or violence of the addicted respondents against their neighbors or on other people were compared with non-addicted respondents in this section. Quarrel or violence of the respondents were measured on a five-point Likert scale, and is presented in Table 1

Table 1: Quarrel or Violence with Others <i>(Figures in brackets are Percentages)</i>		
Quarrel with Others	Respondents	
	Non-Addict	Addict
Never	136 (64.76)	64 (30.48)
Rare	71 (33.81)	5 (2.38)
Moderate	2 (0.95)	11 (5.24)
Usual	1(0.48)	13 (6.19)
Always	0 (0.0)	117 (55.71)
Total	210 (100)	210 (100)

Source: Primary Survey

The table shows that more than half of the addicted respondents were quarreling with others ‘always’; meanwhile nearly two-third of the non-addicted respondents were ‘never’ quarreling with others. That is, majority of the addicted respondents were engaged in quarreling or violence with other people, while a negligible part of the non-addicts reported frequent quarrel with others. Chi-square test and logistic regression have been performed to examine whether there was any significant association between alcohol addiction and quarrel with others in

Kerala. The results indicate that there was a statistically significant association between quarrel with others and addiction in Kerala, $\chi^2(4) = 216.75, p < .001$. Thus, the results indicate that addiction may significantly contribute to aggressive tendencies and interpersonal disputes. The logistic regression analysis examining the relationship between addiction status and violence also confirmed the result, $\beta = 1.433, p < .001, OR (Odds Ratio) = 4.193$. The results indicates that addiction status has a positive effect on the likelihood of involvement in violence. The odds ratio indicates that addicts are approximately 4.19 times more likely to be involved in violence compared to non-addicts.

The estimated mean value of compensation paid to the victims of fights or quarrels revealed that the mean compensation paid differs substantially between addicts and non-addicts. Addicts reported a markedly higher average compensation amount ($M = 6,723.81, SD = 29,724.69$) compared to non-addicts ($M = 83.33, SD = 781.95$). That is, addicts pay, on average, approximately 80 times more compensation than non-addicts. The performed Mann Whitney U test shows that a statistically significant difference in compensation paid between addicts and non-addicts ($U = 27,654.50, p < .001$), indicating that addicts incur significantly higher financial penalties resulting from interpersonal conflicts.

Traffic Problems

Studies observed that there is a positive relation between alcohol consumption and traffic fatalities. Here, we analyze different traffic problems due to alcoholism. The number of respondents engaged in drunken driving among addicts shows that more than three-fourth (76.2%) of the respondents always driving vehicle with intoxication. Only 20 percent of the respondents never drive vehicles under intoxication, of which majority either did not own a vehicle or could not drive a vehicle. The frequency of fine for various traffic violation by addicts and non-addicts compared and presented in Table 2.

Table 2: Fine for Traffic Violation		
(Figures in brackets are Percentages)		
Traffic Fine	Respondents	
	Non-Addict	Addict
Never	152 (72.38)	109 (51.90)
Rare	57 (27.14)	17 (8.10)
Moderate	1 (0.48)	27 (12.86)
Usual	0 (0.0)	23 (10.95)
Always	0 (0.0)	34 (16.19)
Total	210 (100)	210 (100)

Source: Primary Survey

The table shows that among non-addicts, a substantial majority (72.38%) reported that they *never* paid a traffic fine, and 27.14% stated that they *rarely* paid fines. Only a negligible proportion (0.48%) reported paying fines at a moderate level, while none reported usual or frequent violations. In contrast, the pattern among addicts is markedly different. Although 51.90% reported *never* paying fines, a considerable proportion reported repeated violations: 12.86% indicated *moderate* fines, 10.95% reported *usual* fines, and 16.19% stated that they *always* paid fines for traffic violations. The results indicate a strong association between addiction and traffic-related offenses, with addicts exhibiting significantly higher levels of repeated traffic violations compared to non-addicts. Chi-square test and logistic regression have been performed to examine the association between alcohol addiction and getting a traffic ticket. The Chi-square analysis revealed a significant association between addiction and traffic fine frequency, $\chi^2(4) = 109.85, p < .001$. Logistic regression further confirmed that addiction significantly predicts traffic violations ($\beta = 0.887, p < .001$), with addicts being 2.43 times more likely to incur fines compared to non-addicts ($OR = 2.428$). These findings indicate that addiction substantially increases the likelihood of engaging in traffic-related offenses.

Increasing number of road accidents are treated as a major problem of alcohol consumption. The frequency of involvement in road accidents by addicted and non-addicted respondents were presented in Table 3

Table 3: Road Accidents		
(Figures in brackets are Percentages)		
Road Accidents	Respondents	
	Non-Addict	Addict
Never	183 (87.14)	103 (49.05)
Mild	17 (8.10)	18 (8.57)
Moderate	8 (3.81)	31 (14.76)
High	1 (0.48)	41 (19.52)

Severe/Death	1 (0.48)	17 (8.10)
Total	210 (100)	210 (100)
<i>Source: Primary Survey</i>		

Among non-addicts, majority (87.14%) reported that they had *never* been involved in a road accident. Only small proportions reported mild (8.10%) or moderate (3.81%) accidents, while very few reported high (0.48%) or severe/death-related accidents (0.48%). In contrast, the distribution among addicts shows significantly higher involvement in accidents. Comparatively higher proportion reported moderate (14.76%), high (19.52%), and severe/death-related accidents (8.10%). More than one-fourth of the addicted respondents either exposed to a ‘high’ or a ‘severe’ accident that led to death or high disability. This shows that very high relationship between addiction and road accident involvement.

Chi-square test and logistic regression have been performed to examine whether there was any significant association between alcohol addiction and road accidents among addicts in Kerala. The Chi-square test reveals a statistically significant association between addiction status and road accident severity, $\chi^2 (4) = 88.29, p < .001$. The Logistic regression further confirmed that addiction significantly predicts severity of accidents ($\beta = 1.952, p < .001$), with addicts being 7 times more likely to be involved in road accidents compared to non-addicts (OR = 7.041). Thus, the findings confirm that addiction is a highly risk factor for the occurrence and severity of road accidents.

The expenditure incurred due to road accidents, including compensation payments, was considerably higher among addicts compared to non-addicts. The average amount spent by addicts was Rs. 23,546.19, whereas non-addicts reported a much lower average expenditure of Rs. 2,363.64. This implies that addicts spent nearly ten times more on accident-related costs than their non-addict counterparts. To assess whether this observed difference was statistically significant, the Mann–Whitney U test was employed. The test results revealed a statistically significant difference in accident-related spending between addicts and non-addicts in Kerala (U = 31,850.00, $p < .001$). The findings clearly indicate that alcohol addiction is associated with a substantially greater financial burden arising from road accidents, thereby highlighting the broader social and economic costs imposed by alcohol-related risk-taking behavior on roads.

Legal Problems

This section analyses the legal problems encountered by addicted and non-addicted respondents. Particular attention is given to issues such as payment of penalties, detention in police custody, and imprisonment. These legal consequences often arise from behaviours associated with substance use and may reflect the broader social and institutional implications of addiction. The Table 4 presents the distribution of respondents according to the different types of legal problems faced, classified by addiction status.

Table 4: Various Legal Problems Faced by the Respondents		
(Figures in brackets are Percentages)		
Legal Problems	Respondents	
	Non-Addict	Addict
No Legal Problems	153 (72.86)	75 (35.71)
Paid penalty	54 (25.71)	64 (30.48)
Stayed in the police station	1 (0.48)	6 (2.86)
Imprisonment	0 (0.0)	18 (8.57)
Both penalty and Imprisonment	2 (0.95)	47 (22.38)
Total	210 (100)	210 (100)
<i>Source: Primary Survey</i>		

The table reveals notable differences between addicts and non-addicts in terms of their exposure to legal issues. Among non-addicts, a large majority (72.86%) reported that they had no legal problems, indicating relatively low involvement with legal authorities. About 25.71% reported that they had paid penalties, while only a very small proportion had more serious legal encounters such as staying in a police station (0.48%) or both paying penalties and facing imprisonment (0.95%). None of the non-addicted respondents reported experiencing imprisonment alone. In contrast, the situation among addicts appears considerably more severe. Only 35.71% of addicts reported having no legal problems, which is significantly lower than that of non-addicts. A substantial proportion of addicts reported various forms of legal difficulties. Around 30.48% indicated that they had paid penalties, 2.86% had stayed in a police station, and 8.57% had experienced imprisonment. Notably, a considerable share (22.38%) reported facing both penalties and imprisonment, highlighting the serious legal consequences associated with addiction. Overall, the distribution clearly suggests that addicted respondents are far more likely

to experience legal problems than non-addicted respondents. These findings indicate that addiction may significantly increase the likelihood of encounters with the legal and judicial system, reflecting the broader social consequences of substance abuse.

To examine whether alcohol addiction is associated with legal problems among respondents in Kerala, both the Chi-square test and logistic regression analysis were performed. The Chi-square test revealed a statistically significant association between addiction status and the legal problems faced by respondents, $\chi^2(4) = 90.43, p < .001$. This result indicates that the distribution of legal problems differs significantly between addicts and non-addicts, suggesting that individuals with alcohol addiction are more likely to encounter legal issues than their non-addicted counterparts. The logistic regression analysis further confirmed this relationship. The regression coefficient for addiction was positive and statistically significant ($\beta = 1.575, p < .001$), indicating that addiction increases the likelihood of facing legal problems. The odds ratio (OR = 4.832) shows that addicts are approximately 4.83 times more likely to experience legal problems compared to non-addicts. These findings clearly demonstrate that alcohol addiction is a strong predictor of legal complications, including penalties, police detention, and imprisonment.

The empirical analysis consistently demonstrates that alcohol addiction is strongly associated with a range of adverse social and legal outcomes. The results indicate that addicts exhibit significantly higher levels of interpersonal violence compared to non-addicts. Similarly, addiction is significantly related to traffic violations, with addicts showing a greater tendency to incur traffic fines and being more than twice as likely to engage in such violations. The findings also reveal that addiction substantially increases the risk of road accidents. In addition to these behavioural and economic consequences, the analysis indicates that addicts are far more likely to encounter legal problems such as payment of penalties, detention in police custody, and imprisonment. Overall, the results clearly highlight that alcohol addiction not only affects individual health but also contributes significantly to social disorder, traffic-related risks, economic burdens, and legal complications in society.

IV. Discussions

The findings of the present study reveal a strong association between alcohol addiction and several adverse social and legal outcomes. The empirical results demonstrate that individuals with alcohol addiction experience significantly higher levels of interpersonal violence, traffic violations, road accidents, financial losses due to accidents, and legal problems compared to non-addicted respondents. These findings reinforce the broader understanding that alcohol misuse has far-reaching consequences that extend beyond individual health concerns to affect public safety, social stability, and legal systems.

One of the key findings of the study is the significantly higher prevalence of interpersonal violence among addicted respondents. The analysis indicates that addicts are substantially more likely to engage in quarrels and aggressive behaviour compared to non-addicts. This result is consistent with previous research showing that alcohol consumption increases the likelihood of aggressive and violent behaviour. Alcohol intoxication reduces self-control and impairs cognitive functioning, which may lead individuals to misinterpret social cues and respond aggressively to minor provocations (Bushman & Cooper, 1990). Similarly, research has shown that alcohol plays a major role in interpersonal violence, including domestic disputes and community-level conflicts (Room et al., 2001). The findings of the present study therefore support the argument that alcohol-related aggression is an important social concern with implications for community safety and social harmony.

Another important finding of the study relates to traffic violations. The results indicate that addicts are significantly more likely to incur traffic fines compared to non-addicts. This suggests that alcohol consumption is associated with a greater tendency to violate traffic regulations. Alcohol impairs judgment, slows reaction time, and reduces motor coordination, thereby increasing the likelihood of risky driving behaviour (National Highway Traffic Safety Administration, 2022). Drivers under the influence of alcohol often underestimate risks and overestimate their driving abilities, which contributes to unsafe driving practices and violations of traffic rules. The higher incidence of traffic fines among addicted respondents observed in this study is therefore consistent with the well-established link between alcohol consumption and impaired driving behaviour.

The relationship between alcohol addiction and road accidents also emerged as a significant finding in the present study. The results indicate that addicts are considerably more likely to be involved in road accidents, and the severity of accidents is also higher among them. Logistic regression analysis shows that addicts are several times more likely to experience road accidents compared to non-addicts. This finding aligns with global evidence that alcohol consumption is one of the major risk factors contributing to road traffic accidents. According to the World Health Organization, alcohol-impaired driving is a major contributor to road traffic injuries and fatalities worldwide (World Health Organization, 2018). Alcohol affects attention, perception, and decision-making ability, all of which are crucial for safe driving. Consequently, individuals who drive under the influence of alcohol are more likely to be involved in severe and fatal accidents.

In addition to behavioural consequences, the study also highlights the economic burden associated with alcohol-related accidents. The analysis shows that addicts incur substantially higher financial costs due to

accident-related compensation and damages compared to non-addicts. This finding indicates that alcohol misuse imposes considerable financial costs on individuals and society. Previous research has similarly documented the significant economic burden associated with alcohol consumption, including medical expenses, property damage, productivity losses, and legal costs (Rehm et al., 2009). The higher expenditure on accident-related compensation among addicted respondents observed in this study reflects the broader economic impact of alcohol-related risk-taking behaviour.

The study also provides important insights into the legal consequences associated with alcohol addiction. The findings reveal that addicts are far more likely to face legal problems such as payment of penalties, detention in police custody, and imprisonment compared to non-addicts. Logistic regression analysis further confirms that addiction significantly increases the likelihood of encountering legal sanctions. This result supports previous research suggesting that alcohol consumption is frequently associated with criminal behaviour and legal complications (Room et al., 2001). Alcohol intoxication often reduces inhibitions and increases impulsive behaviour, which may lead individuals to engage in activities that violate legal and social norms.

Overall, the findings of the present study highlight that alcohol addiction has extensive social, economic, and legal implications. The results demonstrate that addiction is strongly associated with increased aggression, unsafe driving behaviour, higher accident involvement, greater financial losses, and greater exposure to legal sanctions. These outcomes emphasize the need to address alcohol addiction not only as a public health problem but also as a broader social and policy concern.

From a policy perspective, the findings suggest the importance of strengthening alcohol control policies, improving enforcement of traffic regulations, and promoting public awareness regarding the risks associated with alcohol consumption. Preventive strategies such as stricter monitoring of drunk driving, educational campaigns on responsible drinking, and effective rehabilitation programs for individuals with alcohol dependence may help reduce the social and legal problems associated with alcohol addiction. Addressing alcohol misuse through comprehensive policy interventions could therefore contribute significantly to improving road safety, reducing violence, and minimizing the broader societal costs associated with alcohol consumption.

V. Conclusion

This paper deals with certain social nuisances made by the alcoholics in the state of Kerala. The work discusses most of the social issues created by alcohol addicts except family issues due to certain constraints. Interpersonal violence, traffic problems and legal problems made by the alcoholics were analyzed here by comparing these issues made by the non-alcoholics. Violence other than family members, compensation paid for the atrocities and physical attack got back by the addicts are issues discussed under inter-personal violence. The analysis shows that all these three issues were very high among alcoholics in comparison with non-alcoholics. Number of alcoholics used their vehicles under intoxication, traffic fine for driving, number of road accidents and compensation for road accidents were analyzed under traffic problems. From the analysis it is inferred that almost all the alcoholics who can drive used their vehicle under intoxication. Moreover, alcoholics were far higher than that of non-alcoholics in terms of obtaining traffic fine, subjected to road accidents and compensation paid for road accidents. Different types of legal breaching and types of punishment received were analyzed under legal problems. The analysis shows that legal problems done by the addicts and number of arrests or remanded cases were quite high among alcoholics than that of non-alcoholics. Thus, it is concluded that alcoholism generates adverse social impacts and negative externality in Kerala.

This study examined the social problems associated with alcohol addiction in the state of Kerala by comparing the experiences of alcohol addicts and non-addicts. Due to certain constraints, the analysis focused primarily on selected social issues such as interpersonal violence, traffic-related problems, and legal complications, while family-related issues were not included within the scope of the study. The findings of the study reveal that alcohol addiction is strongly associated with a higher incidence of interpersonal violence. Issues such as quarrels with others, physical assaults, and compensation paid for violent incidents were found to be significantly more prevalent among alcoholics than among non-alcoholics. These results indicate that alcohol consumption often contributes to aggressive behaviour and social conflicts outside the household environment. The study also highlights the substantial impact of alcohol addiction on traffic-related problems. The analysis shows that a large proportion of alcoholics who are capable of driving reported operating vehicles while intoxicated. Consequently, alcoholics were found to be significantly more likely than non-alcoholics to incur traffic fines, experience road accidents, and pay compensation for accident-related damages. These findings emphasize the serious implications of alcohol consumption for road safety and public welfare.

Furthermore, the study demonstrates that alcohol addiction is closely linked with various legal problems. Addicted respondents reported higher involvement in legal issues such as payment of penalties, detention in police custody, and imprisonment compared to non-addicts. The higher incidence of arrests and legal sanctions among alcoholics indicates that alcohol misuse often leads to behaviours that violate legal and social norms. Overall, the results of the study suggest that alcohol addiction generates significant adverse social consequences in Kerala.

These outcomes represent a form of negative social externality, imposing considerable costs not only on individuals but also on society at large. The findings therefore highlight the need for effective policy interventions, stricter enforcement of traffic and legal regulations, and increased public awareness to mitigate the broader social impacts of alcohol consumption.

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