

Original Research Article

Alcohol and drug intake pattern among truckers of Haryana, India

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ABSTRACT

Background: Use of psychoactive substances by truckers is a common occurrence globally. Truckers have been the objects of a great deal of attention for their high-risk behaviour. Intake of drugs and alcohol by truckers is closely interlinked with high risk sex behaviour. Thus, the present study was pursued to know drug and alcohol consumption pattern.

Methods: Cross-sectional study among truckers for more than a year in occupation, aged 18 years and above having residence/operating base in Haryana. Sample of 4000 truckers, 1000 from each from four administrative divisions of Haryana, was taken.

Results: About three fourth truckers (77%) were less than 40 years. More than half of truckers (53.2%) consumed alcohol. Only 0.4% truckers confessed of using injectable drugs during last 12 months. 14.9% of truckers confessed of using non-injectable drugs. Ganja, Bhurki and Affim were some of the commonly consumed drugs.

Conclusions: Majority truckers (53.2%) consumed alcohol. Drug intake was comparatively less common (14.9%). Injectables were used the least. Directly proportional association of alcohol and drug intake with age, duration of job, non-veg diet among truckers primarily indicated as consequences of long, lonely and harsh occupational conditions. Hence, comprehensive interventions including, improvement in road conditions, entertainment and health facility at halt places, stringent driving license terms and conditions to ensure professional competency and better wages to make truckers life worth living. This will also make them amenable to health education promoting healthy and risk-free behavior among them.

Keywords: Alcohol intake, Drug intake, High-risk behaviour, Truckers

INTRODUCTION

Truck drivers are practically the circulatory system of the economy of the Nation. But it is painful to know that they still live very harsh and solitary lives- miles upon miles of endless roads in poor condition, days turning into nights, just they and their massive vehicles. To fight such boredom, fatigue, and loneliness, some resort to the company of sex workers; others turn to drugs and alcohol to keep on going. At times, truck drivers also get indulged

in substance abuse, but it is a serious problem that industry and government regulators are struggling hard to control. Many truckers take on extra shifts for the overtime pay, pushing themselves beyond their physical abilities and thus, they put their own well-being at risk. This loneliness makes them more vulnerable to various drugs and alcohol addictions and other risk behaviours. Thus, trucker's life is trapped in a vicious cycle. The impact of this vicious cycle is very serious as they too often put their own as well as of others health and safety

at risk. Thus, the use of psychoactive substances by truckers is a common occurrence globally.¹⁻⁴ The various studies in India as well as in abroad show great variations in drug and alcohol intake i.e. ranging from 9 percent of drivers in Pakistan to 91 percent in Brazil reporting that they drink alcohol.^{5,6}

Truck drivers are an important part of worldwide trade and economy. In the field of transportation, trucks are used in freight movement over land, transporting raw materials, livestock and finished goods from manufacturing plants to retail distribution centres. India has a large trucking population estimated at 5-6 million truckers and helpers. About 2-2.5 million truckers are classified as long-distance truckers^{7,8} and plying on about 3.3 million kilometres of road networks across the country. The trucking industry in India is largely unorganized and almost entirely in the private domain, structured around a loose system comprising truck operators, intermediaries and users. In the late 1990s, almost 77% of India's truck fleet was owned by operators with no more than five trucks, whereas only approximately 6% of trucks were owned by operators with more than 20 trucks.⁷ Truck drivers have been reported as a highly vulnerable working population due to various risk factors.^{5,9,10} Furthermore, they are prone to risky behaviours and lifestyles such as smoking, drinking, using psychoactive substances and having casual sexual contacts.¹¹ These risk factors and risky behaviours can have an adverse impact on their health and work ability, as well as work safety, increasing the risk of injuries and traffic accidents.^{5,9,10,12-14} Risk factors such as working long hours sleep deprivation, inadequate rest and relaxation, being away from home and support systems, and driving in hazardous conditions place the long distance truck drivers (LDTDs) at an increased risk for possible use or abuse of alcohol and drugs.¹⁴

Evidence from other occupations and work settings suggests that identifying and then intervening to alter workplace conditions associated with alcohol misuse may be an important means of prevention.¹⁵⁻²⁰ Major international organizations such as the World Health Organization (WHO) the Council of the European Union, and the International Labour Organization (ILO) in several documents have maintained the need to actualize policies and programs focused on the issue of alcohol and work, pointing to the prevention of alcohol-related damage as a priority and encouraging actions to combat the alcohol use at the workplace by adopting specific measures.²¹⁻²³ The alcohol consumption in truck drivers, besides being detrimental for the health, represents an important public and occupational safety concern and thus, places this work category at high risk of occupational accidents and can jeopardize the safety of others. Nevertheless, in India the extent of the problems related to the use of alcohol and drug abuse in the occupational category of truck-drivers is still unknown in depth. Therefore, the aim of present study was to fill this gap of knowledge, and also the circumstances and factors

related to the harmful patterns of consumption of alcohol and drugs among truck drivers so as to initiate or advocate appropriate interventions to contain this problem.

Aims and objectives

- To know the drug and alcohol consumption pattern among truckers of Haryana.
- To find out the association between sociodemographic factors with drug and alcohol intake pattern.

METHODS

Study design: A cross-sectional study.

Study period: 10 months (23 January 2017 to 22 November 2017).

Study area

The study was carried out in all the four administrative Divisions of Haryana State, namely Ambala, Rohtak, Hisar, Gurugram Divisions. These administrative Divisions of Haryana also represent practically the socio-cultural division of Haryana to a larger extent having the influence of surrounding states in addition to their own characteristics.

Study subjects

Truckers in the occupation for more than a year, aged 18 years and above and having residence or operating base in Haryana.

Inclusion criteria

Adult truckers who consent for participation in the study after being briefed and are in the occupation for more than a year, and having residence or operating base in Haryana.

Exclusion criteria

Truckers below the age of 18 years, less than a year in occupation, not having residence or operating base in Haryana or those who deny to participate in the study.

Sample size

A sample of 4000 truckers i.e. 1000 from each of the four administrative divisions of Haryana, was taken to have better representative sample. The sample size of 4000 was calculated on the basis of conservatively assumed alcohol intake prevalence (p) of 30% among truckers on the basis of average of some studies in Haryana and nearby states. The above sample size (n) was calculated at 95% significance level with 5% allowable error (L) using the formula: $n=4pq/L^2$. ($q=1-p$)=3734, rounded off to total

4000 truckers and thus taking 1000 truckers each from four administrative division of Haryana.

Methodology for data collection

The required data collection was done by four teams, each comprising of one trained counsellor and one laboratory technician under the supervision of field supervisor. The complete process of data collection was controlled, monitored and supervised by the principal investigator and co-investigators. Visits were planned in the respective towns/cities at sites of possible availability of truckers i.e. truck unions, auto market, fruit and vegetable market, grain market, transporters' offices etc. First of all, the truck union presidents or other representatives or senior drivers of respective truck unions/sites were contacted and were told the details of the study. They were motivated to participate in the study. They were also requested to motivate other drivers to follow the same.

Each respondent was briefed about the study objectives and procedures, followed by taking an informed verbal consent. The required information was recorded on a pretested semi-structured schedule by trained counsellors and all the participant truckers were given pre-test and post-test counselling by the trained counsellors according to the information obtained and risk behaviour involved. The blood samples were collected by trained laboratory counsellor and the collected samples were tested on the site by highly sensitive rapid methods and those samples found positive were sent to respective laboratories for confirmation by Elisa test. The truckers found confirmed positive were motivated and guided to ART centres for further management. Consecutive sampling method was used to enroll the study subjects. The number of truckers enrolled for study was 4000.

Data analysis

The collected data were entered in Excel Sheet and analysed using R software. Mean, percentages and proportions were calculated. Chi square test and odds ratio were applied for assessing significance level. Univariate logistic regression and multivariate logistic regression tests were used as and where deemed necessary for correlation.

RESULTS

Out of total 4000 truckers, more than half (53.2%) consumed alcohol. About 14.9% (595) of truckers confessed of using non-injectable drugs (ganja, bhurki and affim etc.) and only 0.4% truckers confessed of using injectable drugs during last 12 months. Data is presented in Table 1 and 2.

Time wise pattern of consumption of alcohol as per Table 3, it shows that more than one third of the alcohol using truckers (38.1%) consumed alcohol almost daily or

alternate day. About one fifth (21.3%) consumed weekly and the rest consumed fortnightly or occasionally. Quantity wise about one third of truckers consumed half quarter of alcohol and about half of them consumed one quarter. Around one fifth of truckers consumed half bottle of alcohol. Sociologically, about one fourth of truckers (23.1%) consumed alcohol in groups. Majority of truckers (58.3%) consumed alcohol alone or in groups and the rest consumed alone (18.6%).

Table 1: Confession rate of taking alcohol and drugs.

Particulars	N (%)
No. of truckers enrolled for study	4000
Truckers confessed for using alcohol	2129 (53.2)
Truckers who confessed for using non-injectable drugs	595 (14.9)
Truckers confessed of using injectable drugs during last 12 months	16 (0.4)

Table 2: Non-injectable types of drugs used by truckers (multiple responses) (n=595).

Drugs	Yes	Percentage
Charas	86	14.5
Ganja	176	29.6
Bhang	141	23.7
Heroine	7	1.2
Affim	84	14.1
BS	3	0.5
Bhurki	114	19.2
Others	103	17.3

Table 3: Pattern of alcohol intake among truckers.

	No. of truckers (n=2129)	Percentage
Frequency		
Almost daily	434	20.4
3-4 times/ week	377	17.7
Weekly	454	21.3
Fortnightly	137	6.5
Occasionally	727	34.1
Total	2129	100
Amount of alcohol		
Half quarter	720	33.8
Quarter	1039	48.8
Half bottle	370	17.4
Total	2129	100
Social pattern		
Alone	396	18.6
Group	492	23.1
Both	1241	58.3
Total	2129	100

Table 4 shows that about 80% of the study subjects were Hindus followed by Muslims (13.3%) and Sikhs (5.4%).

About 70% of truckers were from other castes followed by backward classes (18.4%) and scheduled castes (11.7%). More than three fourth of truckers (77%) were below the age of 40 years and about one third were in the age group of 21-30 years. Only 6.4% truckers were above the age of 50 years. The overall mean age of truckers was 33.51 ± 3.165 . About 47.9% of truckers were drivers and 30.4% were co-drivers. About one fifth (19.0%) of truck owners were driver as well. About 2.7% owners also accompanied in the truck for supervision purposes. About one third (33.2%) truckers were in the occupation for less than 5 years of duration and 34.3% of truckers were in the occupation for more than 15 years of duration. Mean duration of truckers in occupation was 3.40 ± 1.43 years. Above one fourth (26.1%) of truckers were unmarried.

Only 0.6% of truckers were either separated or widowers and the rest were married (73.3%). Nearly 13.7% truckers were illiterate and about 15% of truckers were literate above 10th standard including 3.6% graduate or above. Around one fourth (23.7%) of truckers had studied up to middle level and almost the same proportion up to matric level (22.8%). About 40.2% truckers were vegetarian and rest of the study subjects consumed non-vegetarian diets also. Distribution of alcoholic and non-alcoholic truckers according to age, religion, category, job status, duration of occupation, type of diet and drug intake wise found statistically significant. Marital status and literacy wise distribution of alcoholic and non-alcoholic truckers was not found statistically significant.

Table 4: Alcohol intake and their association with sociodemographic variables.

Characteristics		Alcoholic	Non-alcoholic	Total	
		No. (%)	No. (%)	No. (%)	
Age group (years)	<20	100 (33.1)	202 (66.9)	302 (100)	Chi square value 65.986; df=6; p=0.001
	21-30	756 (51.3)	717 (48.7)	1473 (100)	
	31-40	737 (56.7)	565 (43.4)	1302 (100)	
	41-50	387 (57.8)	283 (42.2)	670 (100)	
	>50	149 (58.9)	104 (41.1)	253 (100)	
Religion	Hindu	1925 (95.8)	1294 (40.2)	3219 (100)	Chi square value 428.225; df=3; p=0.001
	Muslim	62 (11.6)	471 (88.4)	533 (100)	
	Sikh	121 (56.5)	93 (43.5)	214 (100)	
	Others	21 (61.8)	13 (38.2)	34 (100)	
Category	SC	297 (63.3)	172 (36.3)	469 (100)	Chi square value 25.378; df=2; p=0.001
	BC	359 (48.8)	377 (51.2)	736 (100)	
	Others	1473 (52.7)	1322 (47.3)	2795 (100)	
Diet type	vegetarian	660 (41.1)	945 (58.9)	1605 (100)	Chi square value 157.733; df=1; p=0.001
	Non-vegetarian	1469 (61.3)	926 (38.7)	2392 (100)	
Marital status	Married	1560 (53.1)	1378 (46.9)	2938 (100)	Chi square value 2.582; df=3; p=0.461
	Unmarried	555 (53.3)	487 (46.7)	1042 (100)	
	Widower	9 (75.0)	3 (25.0)	12 (100)	
	Divorcee	5 (62.5)	3 (37.5)	8 (100)	
Job status	Truck driver	1141 (59.6)	775 (40.4)	1916 (100)	Chi square value 114.260; df=3; p=0.001
	Co- driver	498 (40.9)	719 (59.1)	1217 (30.4)	
	Owner driver	440 (58.0)	318 (42.0)	758 (100)	
	Owner	50 (45.9)	59 (54.1)	109 (100)	
Duration in Occupation (years)	1-2	204 (42.5)	276 (57.5)	480 (100)	Chi square value 61.956; df=4; p=0.001
	3-5	283 (47.4)	314 (52.6)	847 (100)	
	6-10	428 (49.7)	434 (50.3)	612 (100)	
	11-15	398 (57.8)	291 (42.2)	689 (100)	
	>15	816 (59.5)	556 (40.5)	1372 (100)	
Literacy	Illiterate	283 (51.9)	262 (48.1)	545 (100)	Chi square value 6.459; df=5 p=0.264
	Up to primary	539 (54.4)	451 (45.6)	990 (100)	
	Middle	486 (51.4)	460 (48.6)	946 (100)	
	High	513 (56.0)	403 (44.0)	916 (100)	
	10+2	237 (51.6)	222 (48.4)	459 (100)	
	Graduation and above	71 (49.3)	73 (50.7)	144 (100)	
Drug intake	Yes	383 (64.4)	212 (35.6)	595 (100)	Chi square value 34.872; df=1 p=0.001
	No	1746 (51.3)	1659 (48.7)	3405 (100)	

The result of univariate logistic regression in Table 5 shows that the odds of alcohol intake among truckers increased significantly with advancement of age. Odds

ratio was 2.130 (95% CI: 1.641-2.764) for the age group 21-30 years, 2.635 (95% CI: 2.025-4.093) for the age group 31-40, 2.762 (95% CI: 2.078-3.671) for the age

group 41-50 and 2.894 (2.046-4.093) for the age groups of >50, as compare to age group less than 20 years. Odds of alcohol intake among Hindu, Muslim and Sikh was less but it was significantly less among Muslim community (OR=0.071, CI=0.032-0.159, P=0.001). Odds of alcohol consumption among SC's was more (OR=1.550, CI=1.266-1.897) and it was found statistically significant. Odds of alcohol intake among non-vegetarian truckers was significantly more (OR=2.271, CI=1.996-2.584) as compare to vegetarians. Odds of alcohol intake were more [OR=2.126 (1.836-2.460), OR=1.998 (1.6621-2.401), OR=1.224 (.825-1.814)] among truck drivers, owner drivers and owners

respectively but it was found statistically significant only among truck drivers and owner drivers. Odds of alcohol intake among truckers increased significantly OR=1.219 (.957-1.553), OR=1.334 (1.066-1.671), OR=1.850 (1.462-2.342), OR= 1.986 (1.608-2.451) as the duration in occupation of truckers increased 3-5 years, 6-10 years, 11-15 years, >15 years respectively. But statistically more significant was among those truckers who had duration of occupation 6-10 years, 11-15 years and >15 years. Odds of alcohol consumption among drug user truckers was significantly more (OR=1.717, CI=1.433-2.057) as compare to non-drug users.

Table 5: Univariate analysis (binomial analysis) of determinants of alcoholic and non-alcoholic truckers (n=4000).

Characteristics		Alcoholic	Non-alcoholic	Unadjusted OR (95%CI)	P value
		No. (%)	No. (%)		
Age group (years)	<20	100 (33.1)	202 (66.9)	1	0.000
	21-30	756 (51.3)	717 (48.7)	2.130 (1.641-2.764)	0.000
	31-40	737 (56.7)	565 (43.4)	2.130 (1.641-2.764)	0.000
	41-50	387 (57.8)	283 (42.2)	2.762 (2.078-3.671)	0.000
	>50	149 (58.9)	104 (41.1)	2894 (2.046-4.093)	0.000
	Others	21 (61.8)	13 (38.2)	1	
Religion	Hindu	1925 (59.8)	1294 (40.2)	0.921 (0.459-1.846)	0.816
	Muslim	62 (11.6)	471 (88.4)	0.081 (0.039-0.171)	0.000
	Sikh	121 (56.5)	93 (43.5)	0.805 (0.383-1.693)	0.568
	Others	1473 (52.7)	1322 (47.3)	1	
Category	SC	297 (63.3)	172 (36.3)	1.550 (1.266-1.897)	0.000
	BC	359 (48.8)	377 (51.2)	0.855 (0.726-1.005)	0.058
Diet type	Vegetarian	660 (41.1)	945 (58.9)	1	
	Non-vegetarian	1469 (61.3)	926 (38.7)	2.271 (1.996-2.584)	0.000
Job status	Co- driver	498 (40.9)	719 (59.1)	1	
	Owner	50 (45.9)	59 (54.1)	1.224 (0.825-1.814)	0.315
	Owner driver	440 (58.0)	318 (42.0)	1.998 (1.662-2.401)	0.000
	Truck driver	1141 (59.6)	775 (40.4)	2.126 (1.836-2.460)	0.000
Duration in occupation (years)	1-2	204 (42.5)	276 (57.5)	1	
	3-5	283 (47.4)	314 (52.6)	1.219 (0.957-1.553)	0.108
	6-10	428 (49.7)	434 (50.3)	1.334 (1.066-1.671)	0.012
	11-15	398 (57.8)	291 (42.2)	1.850 (1.462-2.342)	0.000
	>15	816 (59.5)	556 (40.5)	1.986 (1.608-2.451)	0.000
Drug intake	Yes	383 (64.4)	212 (35.6)	1.717 (1.433-2.057)	0.000
	No	1746 (51.3)	1659 (48.7)	1	

On multivariate logistic regression when the variables whose p was less than 0.5 were analysed, increasing age, diet type, job status, duration in occupation and drug intake were found to be significant factors for alcohol intake. Truckers in age group of 21-30 years were 1.799 times more likely to take alcohol (AOR 1.799, 95% CI 1.307-2.477), who were in 31-40 years age group 1.900 times more likely to take alcohol (AOR 1.900, 95% CI 1.340-2.692), in age group 41-50 years 1.845 times (AOR 1.845, 95% CI 1.251-2.720) and in age group >50 years 1.920 times (AOR 1.920, 95% CI 1.233-3.015) more

likely to take alcohol. Non-vegetarian truckers were 4.330 times more likely to take alcohol than vegetarian truckers (AOR 4.330, 95% CI 3.719-5.042). Truck drivers, owner drivers and owners were more likely to take alcohol as compare to co-drivers. Adjusted odds ratio for truck drivers was 1.951 (95% CI 1.633-2.332, p=0.001), for owner drivers was 1.729 (95% CI 1.395-2.142, p=0.000) and for owners was 1.039 (95% CI .659-1.638, p=0.315). Table 6 shows that adjusted odds ratio of alcohol consumption among drug user truckers was significantly 1.367 times more (AOR=1.367, 95% CI 1.113-2.1.679) as compare to non-drug user truckers.

Table 6: Multivariate analysis (binomial analysis) of determinants of alcoholic and non-alcoholic truckers (n=4000).

Characteristics	Alcoholic	Non-alcoholic	Adjusted OR (95%CI)	P value	
	No (%)	No (%)			
Age group (years)	<20	100 (33.1)	202 (66.9)	1	
	21-30	756 (51.3)	717 (48.7)	1.799 (1.307-2.477)	0.000
	31-40	737 (56.7)	565 (43.4)	1.900 (1.340-2.692)	0.000
	41-50	387 (57.8)	283 (42.2)	1.845 (1.251-2.720)	0.002
	>50	149 (58.9)	104 (41.1)	1.920 (1.233-3.015)	0.005
Religion	Others	21 (61.8)	13 (38.2)	1	
	Hindu	1925 (59.8)	1294 (40.2)	1.237 (0.582-2.630)	0.580
	Muslim	62 (11.6)	471 (88.4)	0.071 (0.032-0.159)	0.000
	Sikh	121 (56.5)	93 (43.5)	0.739 (0.332-1.649)	0.461
Category	Others	1473 (52.7)	1322 (47.3)	1	
	SC	297 (63.3)	172 (36.3)	1.007 (0.800-1.267)	0.953
	BC	359 (48.8)	377 (51.2)	0.732 (0.605-0.885)	0.001
Diet type	Vegetarian	660 (41.1)	945 (58.9)	1	
	Non-vegetarian	1469 (61.3)	926 (38.7)	4.330 (3.719-5.042)	0.000
Job status	Co- driver	498 (40.9)	719 (59.1)	1	
	Owner	50 (45.9)	59 (54.1)	1.039 (0.659-1.638)	0.315
	Owner driver	440 (58.0)	318 (42.0)	1.729 (1.395-2.142)	0.000
	Truck driver	1141 (59.6)	775 (40.4)	1.951 (1.633-2.332)	0.001
	Duration in occupation (years)	1-2	204 (42.5)	276 (57.5)	1
Duration in occupation (years)	3-5	283 (47.4)	314 (52.6)	0.852 (0.634-1.144)	0.286
	6-10	428 (49.7)	434 (50.3)	0.809 (0.606-1.080)	0.0150
	11-15	398 (57.8)	291 (42.2)	1.043 (0.764-1.423)	0.792
	>15	816 (59.5)	556 (40.5)	1.100 (0.803-1.507)	0.553
Drug intake	Yes	383 (64.4)	212 (35.6)	1.367 (1.113-1.679)	0.003
	No	383 (64.4)	212 (35.6)	1	

DISCUSSION

The mean age of truckers in present study was 33.51 ± 3.165 . Whereas in the findings of Pandey et al, the median age of truckers was 30 years, with a range of 18-70 years and in findings by Baishali et al, reported mean age of transport workers as 31 years (range 17-66 years) on the Siliguri-Gawahati highway in India.^{24,25} Thus, the reported mean age in the present study was almost similar though on a slightly higher side to that reported in other studies. The present study shows that 73.3% truckers were married where as it was 76.3% and 82.2% in other studies.^{24,26}

More than half of Haryana truckers (53.2%) consumed alcohol as observed in the present study. It was almost similar (55.48%) to study conducted by Chaturvedi et al.²⁷ The proportions of alcohol consuming truckers reported by other studies are 64.7%, 69.3%, 70.1%.²⁸⁻³⁰ So, the observations of alcohol intake in the present study are slightly lower than reported in other studies. The most probable reason for this difference is that most of other studies are mainly highway-based studies whereas the present study covered all short and long-distance truckers. The short distance truckers return home very frequently and are subjected to typical harsh life of a trucker.

In present study about 14.9% (595) of truckers confessed of using non-injectable drugs and most commonly drugs used are Ganja, Bhurki and Affim and only 0.4% truckers confessed of using injectable drugs during last 12 months. Whereas in the study by et al, substance abuse among long distance truck drivers was reported as 33% with no IDU and opium was the most commonly used drug.²⁶ This difference in substance abuse could be due to easy availability, laws of the land etc.

The intake of non-veg diet was also associated with more intake of alcohol. Similarly, there was a direct proportional association of alcohol and drug intake with increasing age or duration of job, and job as driver than helper. These types of observations basically reflect cumulative effect of the persistent adverse factors or harsh job conditions responsible for the same.

CONCLUSION

The higher proportion of truckers taking alcohol (53.2%) and non-injectable drugs (14.9%) indirectly indicated that working conditions of truckers are very harsh and boring. The fact is again supported by the directly proportional association of alcohol and drug intake with long, harsh and lonely occupational conditions. Therefore, truckers' friendly occupational conditions are required to be

created. Hence, a comprehensive approach including stringent driving license terms and conditions, better wages, betterment of road conditions, provision of Air-Conditioned vehicles, provision of adequate number of proper halt spots with adequate facilities for rest, recreation, information, counselling and medical care. With such interventions, the trucking, the economic lifeline occupation of the Nation, can be made safe, pleasant and lucrative. Such job conditions will also make the truckers less prone to risk behaviour. Further interventional studies are required to establish more evidence based and robust conclusion.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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