Research Article

Alcohol Use and its Determinants among Youth Attending Mental Health Promotion Clinics in India: a State-Wide Case Record Analysis

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Abstract

Background: Alcohol consumption is one among the emerging public health concerns among youth. We estimated prevalence of alcohol use among youth and the factors associated with it among beneficiaries attending YMHPCs (Yuva Spandana Health Promotion Clinics) across Karnataka.

Methods: The cross-sectional case record analysis was performed among 10,340 beneficiaries attending youth mental health promotion clinics named Yuva spandana kendras (YSKs) between 2017 and 2020 across Karnataka (a state in southern India)

Results: Overall, the prevalence of alcohol drinking among beneficiaries was 4 %. The risk of alcohol drinking was significantly high among beneficiaries who were male, married, reported sleep issues, low self-awareness, issues related to goal setting, relationship issues with parents and feeling lonely. On the other hand, education status, beneficiaries reporting education and academic issues and having average relationship status with friends were found to be protective against alcohol drinking. Among the factors associated with high risk of alcohol consumption, beneficiaries having relationship issue with parents had highest odds (~6 times) followed by those reporting sleep issues (5 times), male beneficiaries (3.5 times), being married (2 times), had issues related to goal setting (1.9 times) and feeling lonely (1.6 times) compared to their respective counterparts

Conclusion: Triad of health education, health promotion and appropriate interventions like Yuva Spandana aiming at observed interaction of alcohol drinking and its determinants can be a useful way to identify youth at risk of alcohol use and intervene early.

Keywords: Alcohol use; Prevalence; Youth; Yuva Spandana; Substance abuse; Health promotion; Sleep issue Mental health

Introduction

Youth play pivotal role in growth and development of any country. India comprises around 253 million youth population, which is largest in the world [1].The expansion in socio political and economic sectors is been linked to them [2]. Karnataka being the sixth largest Indian state, shares the same picture. 39% youth constitute the critical segment of its total population [3]. This age is among the most crucial stages for laying the foundation of good health [4]. Substance use in adolescents and youth is serious worry for health authorities. Alcohol consumption is one among the emerging public health concerns [5].

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Alcohol misuse affects the health of millions and leading cause of death and disabilities [6]. Globally, approximately 3 million deaths per year are attributed to alcohol drinking [6] and 5.1% of the global burden of disease, equivalent to 139 million disability adjusted life years (DALYs) is attributed to it [7]. Alcohol use is on the rise in many developing countries [8] and India is no exception. A recent national representative survey revealed that approximately 18% and 16.5% men aged 15 years and above consume alcohol in India and Karnataka respectively [9,10].Existing literature throws light on rising trends of alcohol in females as well [11]. According to Indian National Mental Health Survey, the prevalence of alcohol use disorder was found to be 4.6% which is considerably high [12]. According to experts, the rapidly shifting pattern of alcohol consumption especially among younger age group impose huge health and economic burden on families and country [13]. It is estimated that between 2011 and 2050, health system will be bearing a burden of INR 3127 billion (US$ 48.11 billion) for the treatment of health conditions induced by alcohol [13]. Almost double i.e. INR 121,364 billion (US$ 1867 billion) is the estimated cost for social burden inclusive of health system cost, out of pocket expenditure and productivity loss [13]. Hence, by addressing the alcohol misuse not only millions of lives will be saved but also the government can divert that expenditure to other developmental projects of the country. Excessive alcohol drinking can have short term as well as long term health risks [14]. Short term ill effects of alcohol include injuries such as falls, motor vehicle crashes, violence (sexual/ homicide), miscarriage and still birth among pregnant women among others [15]. Chronic health issues like high blood pressure, cancer, learning and memory problem like dementia, alcohol use disorders are some of the long term health risks of alcohol drinking [15]. Relationship between alcohol and mental health is a complex one. Detangling this association is vital for making appropriate intervention and policy for alcohol regulation and use. In Karnataka (a state in southern India), measures are undertaken to put mental health at fore front. 'Yuva Spandana' is one such unique community-based mental health promotion programme, implemented across all districts of the state by the Department of Youth Empowerment and Sports, Government of Karnataka with technical support by Department of Epidemiology, Centre for Public Health, NIMHANS.[16] It is a unique initiative of Karnataka youth policy launched with a focus to provide behavioural, mental, and psychological support and guidance to youth having issues at 'Yuva Spandana Kendras'[16]. These YSKs serve as mental health promotion clinics providing counselling and referral services situated out of every district stadium in Karnataka. Evidence related to alcohol use among youth in India is limited. The United Nations, SDG 3.5 aims to "strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol" [17], the first and prime step to achieve this target is to fill the gap of knowledge regarding the determinants of alcohol use among youth. Data from clinic visits under programme Yuva Spandana provides this opportunity to understand determinants of alcohol use amongst youth and thus provide evidence to formulate interventions and appropriate public health action at state as well as country level. Our objective was to estimate the prevalence of alcohol use among youth and assess factors associated with alcohol use among beneficiaries attending YMHPCs across Karnataka.

Methods

This cross-sectional case record analysis was performed utilising registration and visit form data collected from 10,340 beneficiaries attending youth mental health promotion clinics named Yuva spandana kendras (YSKs) between 2017 and 2020 across Karnataka. Methods adopted for data collection and analysis in this study is similar to the methodology detailed elsewhere(18,19).To understand the determinants of alcohol drinking among youth of Karnataka, we developed a conceptual framework (Ref Figure.1) depicting interrelation between different variables. This was developed based on literature review and expert opinion. According to which, there are broadly 5 domains which influence the habit of alcohol use. These include: Sociodemographic profile, behaviour changes, relationship with people around, emotional status and personal issues. Although, most of these domains are interlinked to each other, for sound clarity we have looked at each domain separately.

Statistical analysis

Multiple logistic regression analysis was performed with beneficiaries reporting ever consumed alcohol as outcome and other hypothesized variables as exposure using a conceptual framework (Fig 1). Those variables that were significant in univariate model ($p < 0.10$) were included as eligible variables into the multivariate model using a forward stepping process. Independent variables having significance level of 5% and those changing the measure of effect (exposure odds ratio) of at least one preceding variable by 10% were retained in the final model. The significance of addition of each exposure variable into the model was tested using likelihood ratio test with appropriate degrees of freedom comparing the nested model with the previous model. Goodness of fit for the final model was tested using estat gof command in STATA 12.0 software for WINDOWS followed by fitting area under the curve using lroc command.

Ethical consideration

Ethical approval was obtained from the Institutional Ethics Committee at NIHMANS, Bangalore vide letter No. NIMH/DO/ETHICS COMMITTEE MEETING/2018, Dated 10th January 2019. Informed consent was sought from all participant at time of registration.

Results

The total beneficiaries visiting Yuva Spandana Kendras during study period were 10,340 (Table1). More than half of them were aged between 15 to 19 years (54.3%) and males (55.7%). The overall prevalence of alcohol drinking among beneficiaries was 4%. Large subset of beneficiaries was unmarried (90.2%), belonged to rural areas (67.5%), students (71%), consumed predominantly non-vegetarian (65.9%) diet and junk food (69.3%).

All socio-demographic and behavioural characteristics were significantly associated ($p < 0.05$) with alcohol drinking except for beneficiaries who were aged 20-24 years, unemployed and were separated/divorced/widowed in univariate analysis. (REF- Table 1)

Table 1: Socio-demographic & behavioural characteristics of beneficiaries attending YSK in Karnataka between 2016-2020 (N=10,340)

Socio-Demographical and behavioral characteristics	Alcohol drinking				
	Yes	No	Total	OR [95% CI] [a]	p-value[b]
	n (%)	n (%)	N (%)		
Age					
15-19 years	191 (46.0)	5420 (54.6)	5611 (54.3)	Ref	
20-24 years	88 (21.2)	2592 (26.1)	2680 (25.9)	0.96 [0.75-1.24]	0.776
25-29 years	72 (17.3)	1169 (11.8)	1241 (12.0)	1.74 [1.32-2.3]	<0.001
30-35 years	64 (15.4)	744 (7.5)	808 (7.8)	2.44 [1.82-3.27]	<0.001
Gender					
Female	96 (23.1)	4483 (45.2)	4579 (44.3)	Ref	
Male	319 (76.9)	5442 (54.8)	5761 (55.7)	2.73 [2.17-3.45]	<0.001
Occupation					
Students	237 (57.1)	7109 (71.6)	7346 (71.0)	Ref	
Unemployed	70 (16.9)	1800 (18.1)	1870 (18.1)	1.16 [0.88-1.53]	0.266
Business/Salaried	42 (10.1)	401 (4.0)	443 (4.3)	3.14 [2.22-4.42]	<0.001
Others	66 (15.9)	615 (6.2)	681 (6.6)	3.21 [2.42-4.28]	<0.001
Marital status					
Unmarried	320 (77.1)	9011 (90.8)	9331 (90.2)	Ref	
Married	92 (22.2)	869 (8.7)	961 (9.3)	2.98 [2.34-3.79]	<0.001
Separated/Divorced/Widowed	3 (0.7)	45 (0.4)	48 (0.5)	1.87 [0.58-6.07]	0.293
Level of education					
Illiterate/ Less than primary complete	57 (13.7)	218 (2.2)	275 (2.7)	Ref	
Primary complete/Middle incomplete	31 (7.4)	463 (4.6)	494 (4.8)	0.25 [0.16-0.4]	<0.001
Middle complete/secondary incomplete	48 (11.6)	1652 (16.6)	1700 (16.4)	0.11 [0.73-0.16]	<0.001
High school and above	279 (67.2)	7592 (76.5)	7871 (76.1)	0.14 [0.1-0.19]	<0.001
Place of residence					
Urban	80 (19.3)	3282 (33.1)	3362 (32.5)	Ref	
Rural	335 (80.7)	6643 (66.9)	6978 (67.5)	2.06 [1.61-2.64]	<0.001
Predominant diet consumed					
Vegetarian	55 (13.3)	3340(33.7)	3395 (32.8)	Ref	
Non-Vegetarian	351 (84.6)	6466 (65.1)	6817 (65.9)	3.29 [2.47-4.39]	<0.001
Junk food consumption					
No	260 (62.7)	2767 (27.9)	3027 (29.3)	Ref	
Yes	145 (34.9)	7021 (70.7)	7166 (69.3)	4.59 [2.21-9.51]	<0.001
Total	**415 (4.0)**	**9925 (95.9)**	**10340 (100)**		

[a]**OR- Odds Ratio; CI- Confidence Intervals; [b] p-value for significance of association in univariate logistic regression analysis**
Note: Some percentages may not add to 100% due to rounding

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In univariate analysis, alcohol drinking was significantly associated (p<0.05) with beneficiaries reporting issues related to health and life style, relationship, education and academics and gender-based violence (REF- Table 2).

Alcohol drinking was found to be significantly associated (p<0.05) with beneficiaries reporting emotional experiences such as feeling anxious, feeling lonely, feeling worthless and those having average and not good relation with their friends compared to those who had good relations in univariate analysis (REF- Table 3).

In multivariate analysis, male beneficiaries had 3.4 times higher odds [aOR = 3.39, 95% CI=2.57- 4.45] of alcohol drinking as compared to female beneficiaries. Married beneficiaries had nearly twice the risk of alcohol drinking compared to those unmarried [95 % CI = 1.6-2.97]. Sleep issues increased the risk of alcohol drinking by almost 5 folds [95 % CI =3.6-6.62]. Increased odds of alcohol drinking were found in beneficiaries reported with low self-awareness [aOR =1.93, 95 % CI=1.39-2.68] and emotional status like feeling lonely [aOR =1.68, 95 % CI=1.13-2.52]. The odds of alcohol drinking were much higher [aOR =6.09, 95 % CI= 4.45-8.32] in beneficiaries having relationship issues with parents. Goal setting issue increase the odds of alcohol drinking by about 1.5 times [aOR =1.64, 95 % CI= 1.2-2.2]. Educational status including majority of the issues related to it except goal setting were in inverse relation with alcohol drinking habit. Average relationship with peers were found to be protective against alcohol drinking [aOR = 0.44, 95 % CI= 0.24-0.8] (REF- Table 4).

Table 2: Personal Issues of beneficiaries attending YSK in Karnataka between 2017- 2020 (N =10,340)

Personal issues	Alcohol drinking				
	Yes	No	Total		
	n (%)	n (%)	N (%)	OR [95% CI] [a]	p-value[b]
Health & lifestyle					
Sleep issues	283 (68.2)	1083 (10.9)	1366 (13.2)	17.5 [14.1-21.72]	<0.001
Physical illness	53 (12.8)	795 (8)	848 (8.2)	1.68 [1.24-2.26]	0.001
Psychological health	71 (17.1)	650 (6.5)	721 (7.0)	2.94 [2.25-3.84]	<0.001
Self-Development Issues					
Low self-awareness	276 (66.5)	1570 (15.8)	1846 (17.9)	10.56 [8.55-13.04]	<0.001
Low self-esteem	98 (23.6)	927 (9.3)	1025 (9.9)	3.00 [2.36-3.8]	<0.001
Emotional issues	71 (17.1)	942 (9.5)	1013 (9.8)	1.96 [1.51-2.56]	<0.001
Lack of skills to handle negative emotions	11 (2.7)	306 (3.1)	317 (3.1)	0.85 [0.46-1.57]	0.617
Education & academic issues					
Goal setting	282 (68.0)	3189 (32.1)	3471 (33.6)	4.47 [3.62-5.52]	<0.001
Concentration/ memory	77 (18.6)	3413 (34.4)	3490 (33.8)	0.43 [0.33-0.55]	<0.001
Time- management	66 (15.9)	2203(22.2)	2269 (21.9)	0.66 [0.5-0.86]	0.003
Exam-anxiety	29 (7.0)	1387 (14.0)	1416 (13.7)	0.46 [0.31-0.67]	<0.001
Education Stress/ fear of Failure	25 (6.0)	1690 (17.0)	1715 (16.6)	0.31 [0.2-0.46]	<0.001
Bullying/ ragging/ scare	2 (0.5)	207 (2.1)	209 (2.0)	0.22 [0.56-0.91]	0.038
Suicidality					
Suicidal ideation/ attempts	17 (4.1)	290 (2.9)	307 (2.9)	1.14 [0.86- 2.33]	0.169
Family member attempting suicide	17 (4.1)	443 (4.5)	460 (4.4)	0.91 [0.55-1.49]	0.722
Friend attempting suicide	24 (5.8)	473 (4.8)	497 (4.8)	1.22 [0.8-1.87]	0.343
Gender sex & sexuality					
Gender discrimination issue	6 (1.4)	70 (0.7)	76 (0.7)	2.06 [0.89-4.78]	0.09
Gender based violence	9 (2.2)	68 (0.7)	77 (0.7)	3.21 [1.59 -6.48]	<0.01

[a]OR- Odds Ratio; CI- Confidence Intervals; [b]p-value for significance of association in univariate logistic regression analysis

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Table 3: Relationship and emotional issues reported of beneficiaries attending YSK in Karnataka between 2017- 2020 (N =10,340)

	Yes	No	Total		
	n (%)	n (%)	N (%)	OR [95% CI] [a]	p-value[b]
Relationship issues					
Relationship with Parents	274 (66.0)	745 (7.5)	1019 (9.9)	23.94 [19.28-29.73]	<0.001
Intergenerational issues	59 (14.2)	227 (2.3)	286 (2.8)	7.08 [5.21-9.6]	<0.001
Marital relationship/ romantic relationship	41 (9.9)	243 (2.4)	284 (2.7)	4.36 [3.08-6.17]	<0.001
Peer relationship	20 (4.8)	160 (1.6)	180 (1.7)	3.09 [1.92-4.97]	<0.001
Virtual relationship	6 (1.4)	55 (0.6)	61 (0.6)	2.63 [1.12-6.14]	0.025
Communication issues	28 (6.7)	179 (1.8)	207 (2.0)	3.93 [2.61-5.94]	<0.001
Relationship with					
Family members					
Good	390 (94.0)	9370 (94.4)	9760 (94.4)	Ref	
Average	20 (4.8)	502 (5.1)	522 (5.0)	0.95 [0.6-1.51]	0.852
Not good	5 (1.2)	53 (0.5)	58 (0.6)	2.26 [0.9-5.7]	0.082
Relatives					
Good	378 (91.1)	8998 (90.7)	9376 (90.7)	ref	
Average	34 (8.2)	861 (8.7)	895 (8.7)	0.94 [0.65-1.34]	0.735
Not good	3 (0.7)	66 (0.7)	69 (0.7)	1.08 [0.33-0.34]	0.894
Friends					
Good	395 (95.2)	9199 (92.7)	9594 (92.8)	ref	
Average	15 (3.6)	690 (7.0)	705 (6.8)	0.5 [0.3-0.85]	0.01
Not good	5 (1.2)	36 (0.4)	41 (0.4)	3.23 [1.26-8.28]	0.014
Neighbours					
Good	358 (86.3)	8707 (87.7)	9065 (87.7)	ref	
Average	53 (12.8)	1093 (11.0)	1146 (11.1)	1.17 [0.87-1.58]	0.273
Not good	4 (1.0)	125 (1.3)	129 (1.2)	0.77 [0.28-2.11]	0.624
Emotional status					
Feel anxious	112 (27)	2117 (21.3)	2229 (21.6)	1.36 [1.09-1.7]	0.006
Feel depressed	34 (8.2)	733 (7.4)	767(7.4)	1.11 [0.78-1.6]	0.539
Not interested to do any work	33 (8.0)	793 (8.0)	826(8)	0.99 [0.69-1.43]	0.978
Feel tired or helpless	34 (8.2)	865 (8.7)	899(8.7)	0.93 [0.65-1.33]	0.711
Worry about problems	30 (7.2)	786 (7.9)	816(7.9)	0.9 [0.62-1.32]	0.609
Feel like lost everything in life	18 (4.3)	418 (4.2)	436(4.2)	1.03 [0.63-1.67]	0.901
Incapable to make decisions	26 (6.3)	880 (8.9)	906(8.8)	0.68 [0.45-1.02]	0.068
Feel lonely	38 (9.2)	587 (5.9)	625(6)	1.6 [1.13-2.26]	0.007
Unable to trust anyone	17 (4.1)	275 (2.8)	292(2.8)	1.49 [0.93-2.47]	0.113
Forget things that just happened	11 (2.7)	325 (3.3)	336(3.2)	0.8 [0.43-1.47]	0.483
Difficulty in concentrating	12 (2.9)	338 (3.4)	350(3.4)	0.84 [0.47-1.51]	0.571
Feel like running away	12 (2.9)	170 (1.7)	182(1.8)	1.7 [0.94-3.09]	0.077
Feel like committing suicide	8 (1.9)	115 (1.2)	123(1.2)	1.67 [0.81-3.45]	0.161
Feels like it would have been good if I had died	6 (1.4)	114 (1.1)	120(1.2)	1.26 [0.55-2.88]	0.581
Angry with people around	16 (3.9)	388 (3.9)	404(3.9)	0.98 [0.59-1.64]	0.956
Failed in managing responsibilities	7 (1.7)	295 (3)	302(2.9)	0.56 [0.26-1.19]	0.133
Feel guilty	14 (3.4)	467 (4.7)	481(4.7)	0.7 [0.41-1.21]	0.09
Feel worthless	25 (6)	358 (3.6)	383(3.7)	1.71 [1.12-2.6]	0.012

[a]OR- Odds Ratio; CI- Confidence Intervals; [b]p-value for significance of association in univariate logistic regression analysis

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Table 4: Multivariate analyses of factors associated with alcohol drinking among beneficiaries attending YSK in Karnataka between 2017- 2020 (N =10,340)

Variables	Adjusted OR [95% CI] [a]	p-value[b]
Gender		
Female	Ref	
Male	3.39 [2.57-4.45]	<0.001
Marital status		
Unmarried	Ref	
Married	2.18 [1.6-2.97]	<0.001
Separated/Divorced/ Widowed	0.92 [0.23-3.65]	0.905
Education status		
Illiterate /Less than primary complete	Ref	
Primary complete/Middle incomplete	0.44 [0.24-0.81]	0.008
Middle complete/ secondary incomplete	0.32 [0.19-0.53]	<0.001
High school and above	0.37 [0.24-0.56]	<0.001
Health & lifestyle		
Sleep issues	4.88 [3.6-6.62]	<0.001
Self-development issues		
Low self-awareness	1.93 [1.39-2.68]	<0.001
Education & academic issues		
Goal setting	1.64 [1.2-2.23]	0.002
Concentration/ memory	0.47 [0.35-0.64]	<0.001
Time- management	0.41 [0.29-0.59]	<0.001
Exam-anxiety	0.55 [0.34-0.88]	0.012
Education Stress/ Fear of Failure	0.5 [0.31-0.8]	0.004
Relationship issues		
Relationship issues with Parents	6.09 [4.45-8.32]	<0.001
Relationship with Friends		
Good	Ref	
Average	0.44 [0.24-0.8]	0.006
Not good	1.57 [0.47-5.26]	0.465
Emotional experiences		
Feel lonely	1.68 [1.13-2.52]	0.011

[a]OR- Odds Ratio; CI- Confidence Intervals; [b]p-value for significance of association in univariate logistic regression analysis

Discussion

This cross-sectional case record analysis of 10,340 beneficiaries revealed the prevalence of alcohol consumption amongst youth attending YMHPCs across Karnataka as 4%. The results outlined in this paper indicates that the risk of alcohol drinking was significantly high among beneficiaries who were male, married, reported sleep issues, low self-awareness, issues related to goal setting, relationship issues with parents and feeling lonely. On the other hand, education status, beneficiaries reporting education and academic issues and having average relationship status with friends were found to be protective against alcohol drinking.

Among the factors associated with high risk of alcohol consumption, beneficiaries having relationship issue with parents have highest odds (~6 times) followed by those reporting sleep issues (5 times), male beneficiaries (3.5 times), being married (2 times), had issues related to goal setting (1.9 times) and feeling lonely (1.6 times) compared to their respective counterparts.

Compare and contrast findings

The prevalence of alcohol use among youth in our study is lesser compared to the prevalence of 6 % in Karnataka(20). This variation could be due to inclusion of broader age group (10- 75 years) while our beneficiaries were aged 15- 35 years. "For every one woman who consumes alcohol, there are 17 alcohol using men" the statement quoted by the recent report of Ministry of Social Justice and Empowerment [20] reflects the gender disparity in alcohol use in India similar to what is observed in our study. Interestingly, Married beneficiaries in this study were at higher risk of alcohol drinking. Evidence suggests that being widowed/separated/divorced has higher risk of alcohol use in contrast to this study [21,22]. The type of beneficiaries, their age distribution and them being clinic attendees makes the relationship between alcohol and marital status complex and calls for further exploration. Result of present study give out positive association between alcohol drinking and sleep issues which is line with the existing literature [23]. It is known that higher usage of alcohol is associated with low self-awareness [24]. Similar results were found in our study. Relationships are known to influence alcohol and substance use [24,25]. Relationship issues with parents among adolescents can act as a facilitator of substance use (25).although among youth, present study throws light on similar association with alcohol. Drinking along with friends (peer pressure) is one among the key influencer of alcohol use [26]. Similarly, this study reveals that good relationship with friends increases the odds of alcohol drinking compared to those who reported average relationship. Probable reason could be peer pressure. Larger and closer the circle of friends more are the chances of social drinking. Interestingly, the beneficiaries reported poor relationship with friends also had higher risk of alcohol drinking. Evidence suggest that break ups and poor relationship with friends are linked to feeling of loneliness thus makes one prone for alcohol drinking [27].Higher odds of alcohol drinking were found in beneficiaries reporting feeling of loneliness similar to other studies [28,29]. It is hard to ascertain temporality of feeling lonely and alcohol use due to lack of data related to onset. Lack of onset related information limits the understanding and highlights the need for further exploration. Education status is having inverse relation with alcohol drinking similar to other studies (30,31). Education widens individual's

knowledge regarding the ill effect of heavy drinking and help them build individual capacity to manage it [31]. We found education and academic issues such as exam anxiety, education stress, time management and memory issues to be protective against alcohol drinking. Studies have shown that anxiety can significantly reduce alcohol consumption provided appropriate social support, [32] however we did not include social support parameter in the current study. Time management and memory issues generally appears during exam times. A study done among college students revealed that alcohol drinking decreased during the last week of exams, because of better options (e.g. studying) to cope up with above mentioned issues were available to students [33]. This may also be indicative of exam anxiety. However, this requires further investigation. Despite being case record analysis, wide geographical coverage and large sample size are the biggest strengths of this study and has considerable scope for generalisability. Collection of information through a standardised real time CMIS along with quality processes inbuilt into the programme, assures overall quality of data used for the study. Assessing multiple potential variables for association with alcohol using a conceptual framework is another key strength of this study. The study provides fresh insights on some unique behavioural and infrequently inspected emotional factors. This gives a holistic perspective towards alcohol drinking and its determinants among youth. Our results should be interpreted within the context of certain study limitations. First is regarding the temporality of alcohol drinking to independent variables. It can't be analysed due to the cross-sectional nature of the study. Second, self-report of sensitive information like alcohol drinking, emotional and behavioural factors might be influenced by social desirability. However, it is likely to be minimum as data was collected by trained personnel. However, such influences cannot be completely ruled out.

Recommendations and Conclusion

This study gives overall view on positive and negative relation of alcohol drinking with different behavioural and social determinants among youth. Alcohol contributes to the loss of skills, ability and even sometimes life of this productive age group (youth). It is of paramount importance to protect the youth from alcohol use. Triad of health education, health promotion and appropriate interventions like Yuva Spandana aiming at observed interaction of alcohol drinking and its determinants can be a useful way to identify youth at risk of alcohol use and intervene early.

Contributors

Conception/design, P.B.,G.M.,M.A. ;Data curation, P.B,G.M,A.B.,S.V., V.H.G.,M.A,L.G.; Formal analysis, P.B., G.M.,A.B.,S.V., Funding acquisition, P.B.,G.M.,A.B.,V.N.,V.H.G.,G.A.,L.G..; Investigation, P.B., G.M., A.B.; Methodology P.B., S.N.,V.D.,S.V.,V.N.,V.H.G.,M.A., L.G.;

Conflict of interest

All other authors declare no conflict of interest.

Data sharing statement

Not applicable

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