A SYSTEMATIC SCOPING REVIEW OF PSYCHOLOGICAL FACTORS OF SUBSTANCE ABUSE AMONG ADOLESCENTS WITH SPECIAL REFERENCE TO INDIA

Mohd Zaid, M.Phil Psychiatric Social Work, Department of Psychiatry, Government Medical College and Hospital, Chandigarh, India
Fayaz Ahmad Paul, Ph.D Scholar, Department of Psychiatric Social work, LGB Regional Institute of Mental Health, Tezpur, Assam, India
Arham Hasan Rizvi, PhD Scholar, Department of Social Work, Aligarh Muslim University, Aligarh, India
Obaidullah, MSW, Department of Social Work, Aligarh Muslim University, Aligarh, India
Correspondence: Mohd Zaid. Email: zaidshahkhan@gmail.com

Abstract
Substance abuse is a maladaptive pattern of continuing substance use despite knowledge of impaired social, occupational, psychological, or physical functioning caused or exacerbated by the use. Substance abuse among adolescents usually occurs on a spectrum from experimentation to total dependence. There is no single, simple explanation for why some individuals develop problems with alcohol and other substances. There are multiple psychosocial causes or etiological pathways to behavior that involves alcohol and substance consumption. Multiple biological and psychosocial factors mutually influence each other in causing substance abuse. The paper posited how different factors may influence different aspects of drinking, such as initial experimentation, later maintenance of regular drinking, and the decision to stop drinking. The need for youths to seek the indulgence of alcohol in coping with the psychological aspect of life is of growing concern. This paper will discuss psychological factors of substance use among adolescents with special reference to India that is totally based on the secondary data review.

Keywords: Psycho-Social Factors, Alcoholism, Adolescents & Substance use.

Introduction
Adolescence is a transitional period, a bridge between childhood and adulthood. It is the time of rapid development of growing to sexual maturity, discovering one's real self, defining personal value and finding one's vocational and social direction.[1] Alcohol and other substance use are on the top among the youth across the globe. Studies indicate that substance abuse behaviors typically start in adolescence and their effects pose serious public health issues.[2] Substance abuse was minimal among 10 to 13-year-olds but was slightly more prevalent among 14 to 15-year-olds and at its highest among 16 to 19-year-olds.[3] In India, the choice of substances among the young varies from tobacco products, alcohol, opioids, and heroin to prescribed medications.[4-5] Gender differences among users were notable in terms of the severity of substance abuse but not in terms of substance preferences. Therefore, we must focus on the young population because substance abuse is associated with various psychological, social, physical, legal, and economic problems. Several psychosocial aspects of substance abuse have been associated with each other. Particularly, peer pressure, media portrayal of substance use by celebrities, attractive packaging, lucrative advertisements, and expectations of joy are consistently associated with the harmful use of substances by young adolescents.[6-7] In general, it is largely accepted that peers, social environment, family, and individual factors play a significant role in substance abuse behaviors among the young. A few studies have examined the variables linked to the emergence and maintenance of substance abuse among young people in India. The relatively limited data consistently shows two things. First, simply being aware of the negative consequences of substance abuse is insufficient to control substance use.[8] Second, peer influence was repeatedly mentioned as a motivating factor for both starting and continuing substance use.[9] It is also acknowledged that peer pressure performed a role in the onset of adolescent substance abuse, though other factors, such as sources of enjoyment (such as partying or celebrating festivals) as well as to escape away from stress related to love failures, parental pressure (especially from fathers) and

family issues, etc. Both peer and family played a crucial role in the beginning and continuation of substance abuse.[7] Western studies found that the most common reason for substance abuse was to relax, become intoxicated, keep awake at night while socializing, enhance activity and alleviate the depressed mood.[10] However, peer attitudes and behaviors were found to have a significant impact on socially unacceptable behaviors like substance abuse.[11-12] The emphasis in research on adolescent drug use has shifted from risk factors to one that also involves the skills individuals need to deal with environmental challenges.[13]. The purpose of drug abuse prevention is to eliminate, reduce, or mitigate risk factors based on a pure risk factor approach. On the other hand, a resilience approach places more emphasis on prevention by enhancing the behavioral traits that guard against vulnerability.[14] According to a criminology study, differences in the behavioral and cognitive factors that are part of the social learning process explain a significant portion of the variations in adolescent substance use and mediate a significant amount, or in some cases nearly all, of the effects of gender, socio economic status, age, family structure, and community size on these types of deviance (Lee, Akers, & Borg, 2004).[15-16]

According to health professionals, alcohol and substance abuse is "persistent physical, social, or occupational problems that have become associated with alcohol and substance use". The National Institutes of Health defines alcoholism as "a physical addiction to alcohol in which people continue to drink even though the drinking causes physical, mental and social problems1, including problems with job responsibilities and relationships"[17]. Current perspectives on youth development emphasize that behavior is influenced by multiple factors within the individual and their developmental and environmental context (Bronfenbrenner & Morris, 2006; Masten, Faden, Zucker, & Spear, 2008). [18-19] Similarly, research on youth alcohol and drug use identifies several factors organized across the individual, social, and environmental contexts that influence alcohol and drug use (Hawkins, Catalano, & Miller, 1992; Stone, Becker, Huber, & Catalano, 2012).[20-21]. From this perspective, the relationship between sport and alcohol and illicit drug use is likely impacted by psychological and social factors, and the sports context (i.e., the environment). [22] Although we have chosen to focus on youth drug and alcohol use, there is a good chance that a variety of youth health behaviors are also impacted by the psychological and social factors related to alcohol and drug use (Fishbein, 2000; Wade, 2001) [23-24].

Need of the Study: The researcher conducted a scoping review of the published literature from 1999 to 2021 on the psychological and social factors among adolescents and youths to answer the following research questions. First, are psychological and social outcomes relevant to adolescents alcohol and drug use. This research question can identify promising avenues for future research that will help elucidate the connections between psychosocial factors and adolescents' alcohol and drug use. The second research question is: Micro and macro level influences psychosocial outcomes among adolescents. We sought to include literature that includes the psychosocial factors and influences of substance use among adolescents to address this question. We chose to conduct a scoping review given that the literature in this area is broad (e.g., multi-disciplinary, multi-method). Unlike a systematic review or meta-analysis, a scoping review allows flexibility to include many different kinds of publications, allowing for a comprehensive review of the area, focused on theory in addition to empirical findings.

Material and Methods

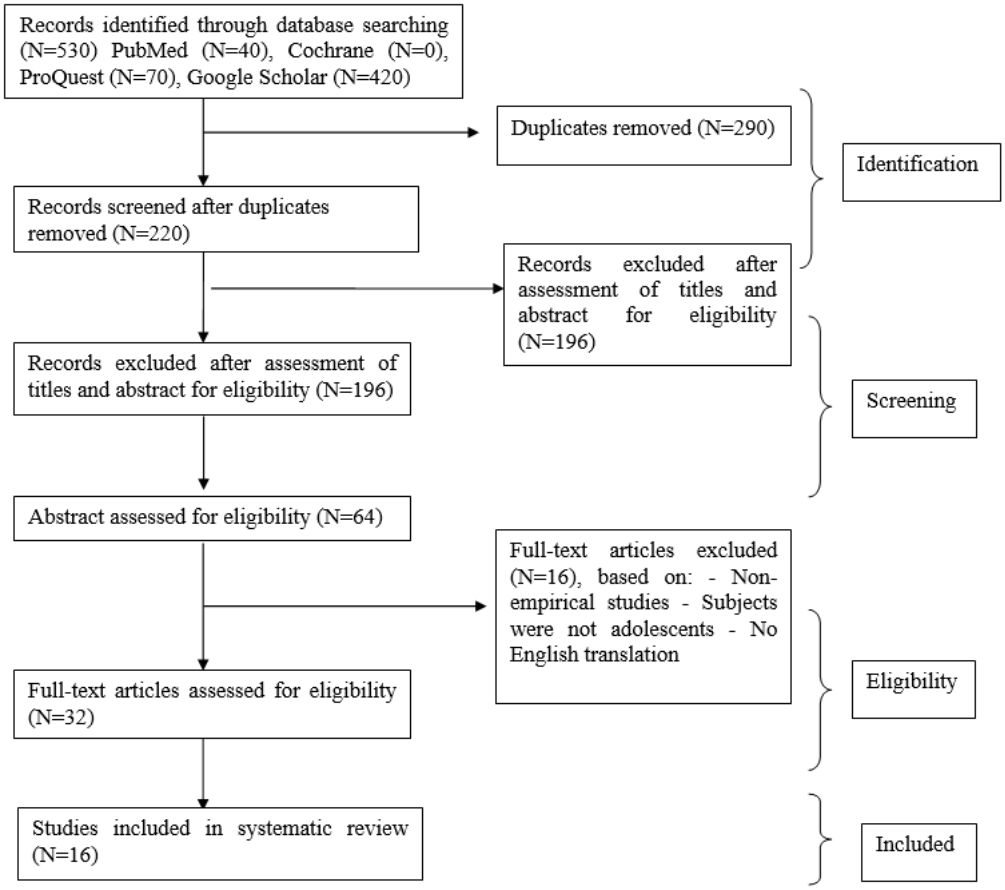
Research Design: The researcher followed guidelines on methodology of reviews (Roe, 2007), as well as Cochrane Handbook guidelines (Higgins et al., 2019). Between January 1999 and June 2021, we conducted an online search of the literature exploring the psychosocial factors and its causes in substance use among adolescents. We were only interested in articles of reliable journals that considered among adolescents and youth.[25]

Search procedures and criteria: We conducted a scoping review of studies published between 1999 and 2021 in English only that reported or reviewed the association between psychological and

social outcomes relevant to adolescents alcohol and drug use. An initial online search was undertaken using the broad keywords 'adolescent', 'psychosocial factors', 'substance use' and 'youth'. Databases searched included Google Scholar, and PsycINFO. The initial, exploratory searches were conducted and yielded thousands of results. Revised search criteria were developed based on the exploratory search. First, keywords were refined and used in different combinations (e.g., 'adolescents, substance use'; 'psychological factors, adolescent, drug use'; 'youth, alcohol and drug use, psychosocial factors').

Inclusion and exclusion criteria: The following filters included in the databases were used: (1) available in full-text; (2) English language; and (3) published from 1999–2021. It is important to note that this method does not include unpublished literature, literature not available in full text, or published prior to 1999. Despite these limitations the method does capture a broad representation of the recent literature on the relationship psychosocial factors among substance use in adolescence. The exclusion criteria in this search were (a) non-adolescent-based analyses, (b) case studies, and (c) non-English articles. For the purpose of this review, we defined youth broadly and included ages 18–24. While many studies reported on grades, these were converted to a corresponding age range. We were also interested in identifying articles on socio-structural literature on adolescents. The main settings include school, community, de-addiction centres, and rehabilitation home.

Flow Chart



Results of the Systematic and Scoping Review

The initial search found 530 studies for review, but after removing duplicates and applying the criteria listed above, we narrowed the pool to 16 articles, all of which are quantitative in their study design. The studies include two prospective cohort studies [26-27], and twelve cross-sectional studies. [26–28]After careful discussion all reviewer panels decided to add one qualitative study [29] to help explain the reasoning behind the quantitative findings. The chosen qualitative paper was picked because it covered nearly every area of the risk and protective factors identified in this review. Table

1 contains a summary of all 16 articles. One study each from Canada, Australia, the United Kingdom, Nigeria, Macau, Morocco, Iran, Beirut, and India made up the remaining two studies, and six articles, which were all from US [30–31, 26–32, 26, 33–28]. While the qualitative paper used a total of 100 interviewees, the number of sample participants varied greatly between the studies, ranging from 70 samples (minimum) to 700, and 178 samples (maximum). All research findings (risk and protective factors) from the review were grouped into three main categories after detailed discussions and evaluation: individual factors, family factors, and community factors. Drug addiction provides a concise summary of the conceptual framework. This study also demonstrated that the impulsivity trait alone was an independent risk factor that increased the odds of using any drug by two to four times in comparison to the non-impulsive group. The researchers discovered that people who exhibited traits of emotional regulation impairment developed opioids dependence earlier in life. In addition, a case-control study of young people in outpatient care discovered that adolescents who abused cannabis exhibited significant alexithymia traits in contrast to the control group[34].

TableNo 1:

No	Year	Author/Country	Aim of the Study	Substance Abuse	Conclusion
1	1999	Morton et al. [27] (US)	to examine associations between alcohol use and psychosocial variables in a sample of sixth- to eighth-grade youth	Alcohol	Self-control and high parental expectations may diminish alcohol expectancies or protect youth from drinking even in the presence of positive expectancies
2	2003	Johnson et al. [34] (Canada)	To address the need for a better understanding of the perspective of Canadian youths on tobacco dependence.	Tobacco	adolescents described smoking cigarettes as a means of meeting a variety of needs occurring both regularly and irregularly
3	2006	Nation et al. [29] (US)	To describe the relationships among the most common risk factors among adolescents and to determine the collective importance of these risk factors on problems with substance use	Alcohol, binge , and marijuana	Implications are that treatment programs target different psychosocial factors depending on the substance being used, and put extra effort on understanding and altering the relationship between an adolescent's choice of peers and their own attitudes toward delinquency and drug use.
4	2007	Epstein et al. [17] (US)	Longitudinally predict interactions on poly-drug use intensity and future smoking among inner-city adolescents.	Poly drug smoking substance	Refusal assertiveness hampered perceived friends' drug use and siblings' smoking, while low risk-taking undetermined perceived friends' drug use
5	2011	Kelly et al. [12] (Australia)	To longitudinally predict interactions on poly-drug use intensity and future smoking among inner-city adolescents.	Alcohol	Family factors unidirectionally impact on growth in adolescent alcohol use and effects vary with child gender.
6	2016	Cecil et al. [30] (UK)	1) To determine DNAm patterns at birth that are associated with adolescent substance use? 2) To identify DNAm markers that are	Cannabis	Tobacco exposure during pregnancy may increase the risk of future substance use.

			associated with genetic and environmental influences		
7	2016	Ogunsola et al. [31] (Nigeria)	To compare the prevalence of substance use among in-school adolescents in urban and rural areas of Osun State, Nigeria, and identified risk and protective factors	Substance use	The risk and protective factors for adolescent substance use somewhat differ for rural and urban areas
8	2017	Li et al. [32] (China)	To identify culturally relevant predictors of synthetic drug use among adolescents in Macao.	Ketamine Ecstasy/MDMA Methamphetamine Tranquilizers Hybrid synthetic drugs	The investigated risk factors contribute to adolescent drug abuse.
9	2017	Kobulsky [30] (USA)	To examine the relations between child physical and sexual abuse and early substance use among youths investigated by child protective services	Marijuana Inhalants Hard drugs NMPD	Significant gender differences in the effect of early substance from physical abuse.
10	2017	Chuang et al. [26] (USA)	To examine the potential relationship between two selfreported risk factors (impulsivity and the presence of one or more behavioral addiction	Marijuana	High impulsivity was related to behavioral addictions in adolescents, and a combination of these two factors increased risk for drug use
11	2018	El Kazdouh et al. [29] (Morocco)	To explore and understand factors that protect or influence substance use in adolescents.	Any illicit drug	The risk of developing drug abuse problems and safeguarding adolescents against drug abuse are both influenced by a number of interrelated factors. Key prevention initiatives need to be focused at each level to ensure that adolescents engage in healthy behaviours.
12	2019	Marin S et al. [33] (Iran)	To examine the relationship between optimistic explanatory style and cigarette smoking, hookah smoking, and illicit drug use among high school students in Sonqor county, Iran	Opium Cannabis Ecstasy Methamphetamine	Optimism was found to be a protective factor against substance abuse.
13	2020	Afifi et al. [28] (Beirut)	To explore the association between bullying victimization and substance use in	Substance use	Religiosity may be a potential moderator of the association between being bullied and substance use

			adolescents with low and high levels of religiosity.		
14	2020	Spillane et al. [35] (USA)	To examines the role of perceived availability and engagement in structured and unstructured activities on adolescent alcohol and marijuana use controlling for substance availability	Marijuana	Perceived availability of and engagement in unstructured activities may present a risk, while perceived availability of and engagement in structured activities may serve as a protective factor for youth substance use
15	2021	Fernandes et al. [36] (India)	to determine the prevalence of adverse childhood experiences and its association with substance misuse	Substance use	ACEs such as abuse and domestic violence are strongly associated with substance misuse, most commonly tobacco, in adolescent and young adult males in India. The results suggest enhancing current ACE resilience programmes and 'trauma-informed' approaches to tackling longer-term impact of ACEs in India
16	2021	Srivastava et al. [37] (India)	The study examined whether substance use among family members and in the community is associated with the substance use behavior of adolescent boys in Uttar Pradesh and Bihar.	Substance use	substance use in the family and community increases the likelihood of substance use among adolescent boys. There is a need for household- and community-level programmatic interventions to alleviate the risk of substance use among adolescents

Discussion

This review's objective was to recognise and categorise the psychological and social factors that influence adolescents' drug use across the three key spheres of the individual, family, and community. No findings were at odds with one another because each was supported by independent arguments. The results of our review revealed that specific factors were most frequently emphasised. These include personal characteristics, significant negative childhood experiences, psychiatric diagnoses, prior drug and alcohol use, as well as attitudes and risk perceptions. Articles were discovered to contribute to the sub domain of personal/individual traits within the individual factor domain. [31–26, 28–37, 31, 38] All of the papers discovered statistically significant results for the potential risk factors of adolescent drug abuse despite the heterogeneity of the study designs and the substances under investigation. High levels of impulsivity, trouble controlling one's emotions, and alexithymia are all undesirable character traits. Due to their inability to control their emotions, these adolescents frequently externalise their behaviours in an effort to avoid or stifle uncomfortable emotions. [27, 39, 40]

On the other hand, some articles claim that certain personality traits can prevent teenagers from abusing drugs. Youth who displayed traits of optimism, mindfulness, and social anxiety were less likely to develop a drug addiction.[30,32] These results demonstrate that personal characteristics can either protect against or increase the risk of adolescent drug use. Since it can be inferred that negative personality traits are associated with high-risk behaviours like drug abuse, any adolescent with negative personality traits should be closely monitored and given health education, motivation, counselling, and emotional support [41]. Additionally, our research revealed a positive correlation

between adolescent drug abuse and a history of mistreatment. Adolescents who experienced maltreatment were thought to have experienced negative growth exposure because traumatic events in their early years had a negative impact on them. Although the former factor was only present in females, there were some significant correlations between maltreatment and adolescent drug abuse.[30] The different sample populations, which only included foster care and child welfare centres could be one explanation for the gender-specific results that differed. Maltreatment can occur anywhere, regardless of the setting, based on the presence of the perpetrators.[30, 33] These results emphasise the value of ongoing monitoring and follow-ups with young people who have experienced maltreatment in the past and have ever visited a welfare centre.

Based on the results of several studies addiction can occasionally cause the onset of another addiction.[26, 38] The effects of e-cigarettes on the emergence of other substance abuse disorders, particularly those connected to marijuana, alcohol, and frequently prescribed drugs, were the subject of a preliminary study. The use of e-cigarettes was found to increase the severity of drug addiction possibly by normalising the behaviour.[42] However, in a thorough study published in 2017, Chuang et al., examined the combined effects of multiple addictions alone as well as a combination of multiple addictions and the impulsivity trait.[26] The reported outcomes were intriguing and offer the chance for focused intervention. The likelihood of drug abuse increased significantly from 3.46 to 10.13 due to the synergistic effects of impulsivity and three other substance addictions (tobacco, alcohol, and marijuana). Therefore, ensuring that one addiction does not trigger another through proper rehabilitation is a key strategy. As more people believe there are little to no harmful risks associated with drugs, the likelihood of drug abuse rises. On the other hand, a higher perceived risk continues to be a deterrent for marijuana abuse.[46] Another study, however, found that perceptions of the drug's availability were a more important factor in predicting adolescent drug abuse.[29,39] Both perceptions are consistent with one another when viewed in a larger context, which may influence drug use.

Family structures were found to have both positive and negative associations with drug abuse among adolescents within the family factor domain. Paternal knowledge was repeatedly found to be a protective factor against substance abuse, as stated in one study.[27] With the right information, the father can act as the family's guardian, keeping an eye out for potential problems and shielding his kids from them.[40] Luk et al., 2016., found that maternal psychological associations with drug abuse were positively correlated.[27] The same paternal psychological control effect was also seen by the authors, though it was statistically insignificant. The authors claimed that this construct relates to parenting style and that parenting style may have a significant impact on the outcomes being investigated. While an earlier literature review also mentioned the existence of such a correlation, a more recent study found a less pronounced relationship between neglectful parenting practises and worse substance abuse outcomes.[43,44] However, it was mentioned in another study that, rather than the parenting style itself, the adolescents' perception of a neglectful parenting style increased their odds of developing alcohol abuse.[45] Families as a whole have a significant impact on the likelihood that adolescents will abuse substances.[41] Therefore, any effort to prevent adolescents from beginning to use drugs or to reduce their current drug use must involve parents, particularly through improved parent-child interaction and parental oversight of their children's activities.

Finally, drug abuse is also influenced by the community peers have an impact on other teenagers by subtly encouraging them to fit in. [29] Peer pressure as a risk factor for teen drug abuse may be explained by peer selection and peer socialisation processes.[46] According to another study, strong religious convictions that are ingrained in society are extremely important in preventing adolescent drug abuse.[29] The majority of religions downplay behaviours like substance abuse that may have detrimental effects on one's health.[47] Therefore, adolescents may benefit from having spiritual beliefs. This idea has been thoroughly explored in numerous studies and as a result, religious organisations could use it to help address the problem of adolescent drug abuse.[48, 49–50]

Despite the enormity of the problem in India, systematic research has not been undertaken to clearly document the combined social, economic, health and psychological impact of substance abusers. However, even the limited available data indicate the association of substance abuse related problems with several spheres of life. Worldwide the harmful use of alcohol results in 2.5 million

deaths each year. 320,000 young people between the age of 15 and 29 die from alcohol-related causes, resulting in 9% of all deaths in that age group. At least 15.3 million persons have drug use disorders. Injecting drug use reported in 148 countries, of which 120 report HIV infection among this population.[51] Substance abuse (alcohol, tobacco and other drugs) is associated with a range of physical, psychological, social and occupational problems.[52] It is a complex problem having medical and social ramifications which impacts all social strata. It affects not only the user and their families but all sections of the society.[53] Young people who persistently abuse substances often experience an array of problems, including academic difficulties, health-related problems (including mental health), poor peer relationships, and involvement with the juvenile justice system. Additionally, there are consequences for family members, the community, and the entire society.

Limitationsof the Study: We used a review methodology to compile the available data on the risk and mitigating factors of adolescent drug abuse. There are some potential limitations to this work, despite the fact that it builds on the findings of a thorough review of studies in various contexts. Due to the fact that we only included English articles and limited our article extraction to the mentioned three search engines, we might have overlooked some other crucial elements. However, this review concentrated on international drug abuse studies rather than the more general context of substance abuse, which includes alcohol and tobacco, making this paper more narrowly focused.

Conclusions: This review has discussed some recent findings concerning adolescent drug use risk and prevention factors that are personal, familial, and social. Since the majority of findings were discussed in relation to individual factors, we propose that more focus should be placed on them. It will be crucial to concentrate research on this area specifically because of the rising trend of drug abuse. Localized studies, particularly those that focus on demographic factors, may be better able to produce results that are relevant to particular regions and, as a result, may be more useful for planning and evaluating regional control and prevention initiatives. Examples of interventions that can be used include acknowledging the distinctive developmental milestones that are unique to adolescents and using various theory-based psychotherapies. Alcoholism and Substance abuse have direct relationship with the elements of psychosocial factors of the society. Sometimes the society is responsible for psychosocial determinants of an individual and substance abuse. Thereafter the substance abuse does influence the psychosocial milieu. Origin of substance abuse in society creates stigma, prejudices, misconception and stereotypes in common man. Persons with dependence and their relatives develop a sense of shame, guilt or misattribution. Thus the normal functioning of such people becomes either inadequate or extremely compromised. The cost of abuse is very high, not only socially, but in monetarily too.

Conflicts of interest: None
Acknowledgement: None
Financial support and sponsorship: Nil.

Reference

1. Srivastava, P., Kumar, P., & Kiran, M. (2015). Perceived stress and Self Esteem among school going adolescents: A Gender Perspective. Journal of Disability Management and Rehabilitation, 38-41.
2. Tripodi SJ, Bender K, Litschge C, Vaughn MG. Interventions for reducing adolescent alcohol abuse: A meta-analytic review. Arch Pediatr Adolesc Med 2010;164:85-91
3. Ahmad A, Khalique N, Khan Z, Amir A. Prevalence of psychosocial problems among school going male adolescents. Indian J Community Med 2007;32:219-21.
4. Kapil U, Goindi G, Singh V, Kaur S, Singh P. Consumption of tobacco, alcohol and betel leaf amongst school children in Delhi. Indian J Pediatr 2005;72:993.
5. SrivastavaAH, Pal SN, Dwivedi A, Pandey JN. National Household Survey of Drug and Alcohol Abuse in India. New Delhi: Ministry of Social Justice and Empowerment,

Government of India and UN Office for Drug and Crime, Regional Office of South Asia; 2004.
6. Malhotra C, Sharma N, Saxena R, Ingle GK. Drug use among juveniles in conflict with the law. Indian J Pediatr 2007;74:353-6.
7. Kangule D, Darbastwar M, Kokiwar P. A cross sectional study of prevalence of substance use and its determinants among male tribal youths. Int J Pharm Biomed Sci 2011;2:61-4. Available from http://www.pharmainterscience.com/Docs/ IJPBS-2011-02-21.pdf.
8. Jayant K, Notani PN, Gulati SS, Gadre VV. Tobacco usage in school children in Bombay, India. A study of knowledge, attitude and practice. Indian J Cancer 1991;28:139-47.
9. Chowdhury AN, Sen P. Initiation of heroin abuse: The role of peers. Indian J Psychiatry 1992;34:34-5.
10. Boys A, Marsden J, Strang J. Understanding reasons for drug use amongst young people: A functional perspective. Health Educ Res 2001;16:457-69.
11. Kelly AB, O'Flaherty M, Toumbourou JW, Connor JP, Hemphill SA, Catalano RF. Gender differences in the impact of families on alcohol use: A lagged longitudinal study of early adolescents. Addiction 2011;106:1427-36.
12. Gopiram, P., & Kishore, M. T. (2014). Psychosocial attributes of substance abuse among adolescents and young adults: A comparative study of users and non-users. Indian journal of psychological medicine, 36(1), 58-61.
13. Norman, E. (1994). Personal factors related to substance misuse: Risk abatement and/or resiliency enhancement. In T. P. Gullotta, G. R. Adams, & R. Montemayor (Eds.), Substance misuse in adolescence (pp. 15−35). Thousand Oaks, CA: Sage Publications
14. Akers, R. L. (1998). Social learning and social structure: A general theory of crime and deviance. Boston: Northeastern University Press.
15. Lee, G., Akers, R. L., & Borg, M. J. (2004). Social learning and structural factors in adolescent substance use. Western Criminology Review, 5, 17−34.
16. Epstein, J. A., Bang, H., & Botvin, G. J. (2007). Which psychosocial factors moderate or directly affect substance use among inner-city adolescents?. Addictive behaviors, 32(4), 700-713.
17. National Collaborating Centre for Mental Health (Great Britain), National Institute for Health, & Clinical Excellence (Great Britain). (2011). Alcohol use disorders: The NICE guideline on the diagnosis, assessment and management of harmful drinking and alcohol dependence.
18. Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. Hoboken, NJ: John Wiley & Sons.
19. Masten, A. S., Faden, V. B., Zucker, R. A., & Spear, L. P. (2008). Underage drinking: A developmental framework. Pediatrics, 121, S235–S251. doi:10.1542/peds.2007-2243A
20. Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. Psychological Bulletin, 112(1), 64–105. doi:10.1037/0033-2909.112.1.64
21. Stone, A. L., Becker, L. G., Huber, A. M., & Catalano, R. F. (2012). Review of risk and protective factors of substance use and problem use in emerging adulthood. Addictive Behaviors, 37, 747–775. doi:10. 1016/j.addbeh.2012.02.014
22. Clark, H. J., Camiré, M., Wade, T. J., & Cairney, J. (2015). Sport participation and its association with social and psychological factors known to predict substance use and abuse among youth: A scoping review of the literature. International review of sport and exercise psychology, 8(1), 224-250.
23. Fishbein, M. (2000). The role of theory in HIV prevention. AIDS Care, 12, 273–278. doi:10.1080/ 09540120050042918
24. Wade, T. J. (2001). Delinquency and health among adolescents: Multiple outcomes of a similar social and structural process. International Journal of Law and Psychiatry, 24, 447–467. doi:10.1016/ S0160-2527(01)00078-4

25. Clark, H. J., Camiré, M., Wade, T. J., & Cairney, J. (2015). Sport participation and its association with social and psychological factors known to predict substance use and abuse among youth: A scoping review of the literature. International review of sport and exercise psychology, 8(1), 224-250.
26. Chuang CWI, Sussman S, Stone MD, Pang RD, Chou CP, Leventhal AM, et al. Impulsivity and history of behavioral addictions are associated with drug use in adolescents. Addict Behav. 2017;74:41–7.
27. Luk JW, King KM, McCarty CA, McCauley E, Stoep A. Prospective effects of parenting on substance use and problems across Asian/Pacific islander and European American youth: Tests of moderated mediation. J Stud Alcohol Drugs. 2017;78(4):521–30.
28. Afifi RA, El Asmar K, Bteddini D, Assi M, Yassin N, Bitar S, et al. Bullying victimization and use of substances in high school: does religiosity moderate the association? J Relig Health. 2020;59(1):334–50.
29. El Kazdouh H, El-Ammari A, Bouftini S, El Fakir S, El Achhab Y. Adolescents, parents and teachers' perceptions of risk and protective factors of substance use in Moroccan adolescents: a qualitative study. Substance Abuse Treat Prevent Policy. 2018;13(1):–31.
30. Kobulsky JM. Gender differences in pathways from physical and sexual abuse to early substance use. Child Youth Serv Rev. 2017;83:25–32. https://doi.org/10.1016/j.childyouth.2017.10.027.
31. Guttmannova K, Skinner ML, Oesterle S, White HR, Catalano RF, Hawkins JD. The interplay between marijuana-specific risk factors and marijuana use over the course of adolescence. Prev Sci. 2019;20(2):235–45.
32. Ogunsola OO, Fatusi AO. Risk and protective factors for adolescent substance use: a comparative study of secondary school students in rural and urban areas of Osun state, Nigeria. Int J Adolesc Med Health. 2016;29(3).
33. Marin S, Heshmatian E, Nadrian H, Fakhari A, Mohammadpoorasl A. Associations between optimism, tobacco smoking and substance abuse among Iranian high school students. Health Promot Perspect. 2019;9(4):279–84.
34. Johnson, J. L., Bottorff, J. L., Moffat, B., Ratner, P. A., Shoveller, J. A., & Lovato, C. Y. (2003). Tobacco dependence: adolescents' perspectives on the need to smoke. Social science & medicine, 56(7), 1481-1492.
35. Spillane NS, Schick MR, Kirk-Provencher KT, Hill DC, Wyatt J, Jackson KM. Structured and unstructured activities and alcohol and marijuana use in middle school: the role of availability and engagement. Substance Use Misuse. 2020;55(11):1765–73.
36. Fernandes, G. S., Spiers, A., Vaidya, N., Zhang, Y., Sharma, E., Holla, B., & Benegal, V. (2021). Adverse childhood experiences and substance misuse in young people in India: results from the multisite cVEDA cohort. BMC public health, 21(1), 1-13.
37. Srivastava, S., Kumar, P., Paul, R., & Dhillon, P. (2021). Does substance use by family members and community affect the substance use among adolescent boys? Evidence from UDAYA study, India. BMC Public Health, 21(1), 1-10.
38. Miech RA, O'Malley PM, Johnston LD, Patrick ME. E-cigarettes and the drug use patterns of adolescents. Nicotine Tob Res. 2015;18(5):654–9.
39. Kandel D, Kandel E. The gateway hypothesis of substance abuse: developmental, biological and societal perspectives. Acta Paediatrica. 2014;104(2):130–7.
40. Muchiri BW, dos Santos MML. Family management risk and protective factors for adolescent substance use in South Africa. Substance Abuse. 2018;13(1):24.
41. Martínez-Loredo V, Fernández-Artamendi S, Weidberg S, Pericot I, López- Núñez C, Fernández-Hermida J, et al. Parenting styles and alcohol use among adolescents: a longitudinal study. Eur J Invest Health Psychol Educ. 2016;6(1):27–36.
42. Krishnan-Sarin S, Morean M, Kong G, et al. E-Cigarettes and "dripping" among high-school youth. Pediatrics. 2017;139(3).

43. Becoña E, Martínez Ú, Calafat A, Juan M, Fernández-Hermida JR, Secades- Villa R. Parental styles and drug use: a review. In: Drugs: Education, Prevention and Policy: Taylor & Francis; 2012.
44. Berge J, Sundel K, Ojehagen A, Hakansson A. Role of parenting styles in adolescent substance use: results from a Swedish longitudinal cohort study. BMJ Open. 2016;6(1):e008979.
45. Opara I, Lardier DT, Reid RJ, Garcia-Reid P. "It all starts with the parents": a qualitative study on protective factors for drug-use prevention among black and Hispanic girls. Affilia J Women Soc Work. 2019;34(2):199–218.
46. Baharudin MN, Mohamad M, Karim F. Drug-abuse inmates maqasid shariah quality of lifw: a conceotual paper. Hum Soc Sci Rev. 2020;8(3):1285–94.
47. Henneberger AK, Mushonga DR, Preston AM. Peer influence and adolescent substance use: a systematic review of dynamic social network research. Adolesc Res Rev. 2020;6(1):57–73.
48. Luckett T, NewtonJohn T, Phillips J, et al. Risk of opioid misuse in people with cancer and pain and related clinical considerations:a qualitative study of the perspectives of Australian general practitioners. BMJ Open. 2020; 10(2):e034363
49. Gomes FC, de Andrade AG, Izbicki R, Almeida AM, de Oliveira LG. Religion as a protective factor against drug use among Brazilian university students: a national survey. Rev Bras Psiquiatr. 2013;35(1):29–37.
50. Moon SS, Rao U. Social activity, school-related activity, and anti-substance use media messages on adolescent tobacco and alcohol use. J Hum Behav Soc Environ. 2011;21(5):475–89.
51. WHO Management of substance abuse: Facts and figures. [cited 2011 17 November] Available from: http://www.who.int/substance_abuse/facts/en.
52. Pratima Murthy S. Bala Shanthi Nikketha (Editors) Introduction in Psychosocial Interventions for Persons with Substance Abuse: Theory and Practice National Institute of Mental Health And Neuro Sciences (NIMHANS), Bangalore, India 2007, 1.
53. Teaotia R. Joint Secretary Ministry of Health and Family Welfare Government of India. Foreword massage in Drug use disorder Manual for physicians. Rakesh Lal(edit.) theNational Drug Dependence Treatment Centre, AIIMS, India. 2005.

