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**Original Research Article**

# Perception about substance abuse among the medical students in Visakhapatnam, India: a qualitative research

**Pissey Saikiran Santosh[1]*, Nivetha Arvind[1], Devi Madhavi Bhimarasetty[2], Jalakam Venkata Sivapriya[3]**

[1]Department of Community Medicine, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India
[2]Department of Community Medicine, Rangaraya Medical College, Kakinada, Andhra Pradesh, India
[3]Department of Community Medicine, Panimalar Medical College Hospital and Research Institute, Chennai, Tamil Nadu, India

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***Correspondence:**
Dr. Pissey Saikiran Santosh,
E-mail: pisseysaikiransantosh@gmail.com



## ABSTRACT

**Background:** Substance abuse is an emerging disorder of global concern. In India about 14.6% of the population (between 10 and 75 year of age) uses alcohol. Also, 28.6 percent (266.8 million) of adults in India, aged 15 and above currently use tobacco in some form. Youth period is an important transition period where students may begin to consume alcohol, tobacco, and other substances.
**Methods:** A Qualitative approach using systematic methods i.e., Free listing & Pile sorting, Conducted among third professional year students in a Medical College of North coast Andhra Pradesh. Analysed by Cultural domain analysis using Visual Anthropac Pile sort version1.0.1.36 based on salience scores.
**Results:** A total of 13 medical students were included. Among them 9 (69%) were females and 4(31%) were males. Stress was found to be the major cause for substance abuse with salience score of 0.418, followed by peer pressure (0.402). The solutions for among them parental guidance is the best solution for substance abuse with highest salience score of 0.412, followed by awareness about consequences (0.409).
**Conclusions:** Our study reveals that it is necessary to bring positive behavioural changes through adoption of comprehensive interventions, counselling methods and health education in medical universities.

**Keywords:** Qualitative method, Substance abuse, Medical students.

## INTRODUCTION

Substance abuse is an emerging disorder of global concern. World Health Organization (WHO) defines the term substance abuse as "Persistent or sporadic use of drug inconsistent or unrelated to acceptable medical practice".[1] Both legal and illegal drugs have chemicals that can change how our body and mind works. They can give us a pleasurable "high," alleviating or easing our stress, or help in avoiding problems in life and altering or avoiding the reality.[2] The usage of these substances might cause several physical, psychological, emotional, and social problems and also cause psychiatric problems, cognitive and functional impairments and behavioural changes that ultimately affects student health and education. Studies also shown that, substance abuse is one of the risk factor for non-communicable diseases.[3,4] Systematic reviews and meta-analyses showed that the risk for type 2 diabetes mellitus increases in heavy drinkers. India is popularly known as diabetic capital, there is an urgent need to prevent not only alcohol-associated comorbidities but also alcohol addiction.[5] In worldwide, 269 million people were

using drugs in 2019 and 35million people are estimated to be suffering from drug use disorders, among these 5.1% of the global burden of disease and injury attributed to alcohol according to World Drug report 2020.[6] Alcohol and tobacco are legal substances that are often abused in India, results in about 14.6% of the population (between 10 and 75 year of age) uses alcohol and 28.6 percent (266.8 million) of adults aged 15 and above were currently in use of tobacco in some forms.[7,8] Currently, electronic cigarettes known as e-cigarettes and flavoured tobacco products are on the rise in India and across the world.[9] Youth period is an important transition period where students may begin to consume alcohol, tobacco, and other substances. Studies reveal that substance use among medical students is high. In developed countries like USA, 93% medical students consume alcohol and in developing countries like India, Iran, Ethiopia also shows up-to 60% consumed by medical students.[10] In Nepal, substance abuse among medical students varies from 40% to 67%.[11,12] Hence there is a strong need to explore qualitatively the causes and solutions for substance abuse among medical students as they hold greater responsibility for better society tomorrow. The present study was taken to explore the various perceived causes for the substance abuse and possible solutions to address it among the medical students. Therefore, by identifying the risk and protective factors can help in prevention of substance abuse.

## METHODS

A study design of qualitative approach using systematic methods i.e., Free listing and Pile sorting were used. It was conducted among third year MBBS students at Government Medical College, Visakhapatnam during the month of January 2021. A purposive sample of 13 students were selected for study assuming that they were knowledgeable about the primary stimulus question for causes and its solution. Consent was taken from each student after explaining about the study. Confidentiality of information was assured. A primary stimulus question was written down separately for causes and solutions. For listing out causes: "Today substance use including alcohol and tobacco is increasing among student community. List all the causes for this in your own opinion?" For listing out solutions: "List all possible solutions to eradicate/ decrease the substance abuse among students' community".

### *Data collection method*

Study was done in phases. In first phase: Free listing and Pile sorting of causes was done and in second phase: Free listing and pile sorting of solutions done. After Free listing of causes and solutions, content analysis was done using Anthropac software version 1.0.1.36 to compute Smith's Salience Score for items. From salience score, a total of 16 items were selected for pile sorting for causes and solutions. The pile sorted items were subjected to Cultural domain analysis Visual Anthropac Pile sort version1.0.1.36.

## RESULTS

A total of 13 medical students were included. Among them 9 (69%) were females and 4 (31%) were males. Stress was perceived to be the major cause for substance abuse with salience score of 0.418, followed by peer pressure (0.402), out of curiosity (0.33), influence of movies (0.30), for euphoria (0.20), thinking it's cool (0.19), dependence (0.18), showing off (0.18), away from home (0.18), lack of parental guidance (0.17), peer acceptance (0.17), Easy availability (0.11), heroism (0.09), no focus (0.09), more money (0.09), parental use (0.09) (Table 1, Figure 1).

**Table 1: Causes for substance abuse as mentioned by medical students.**

| Item | % | Average rank | Salience score |
|---|---|---|---|
| **Stress** | 69.2 | 5.67 | 0.418 |
| **Peer pressure** | 53.8 | 4 | 0.402 |
| **Out of curiosity** | 53.8 | 6.29 | 0.337 |
| **Influence of movies** | 46.2 | 5.5 | 0.309 |
| **Easy availability** | 30.8 | 8.75 | 0.122 |
| **Dependence** | 30.8 | 6 | 0.187 |
| **For euphoria** | 30.8 | 5.25 | 0.204 |
| **Lack of parental guidance** | 30.8 | 6 | 0.179 |
| **Thinking it's cool** | 30.8 | 4.5 | 0.197 |
| **Peer acceptance** | 23.1 | 4 | 0.179 |
| **Showing off** | 23.1 | 3.67 | 0.186 |
| **Away from home** | 23.1 | 4 | 0.183 |
| **Heroism** | 15.4 | 1.5 | 0.148 |
| **No focus** | 23.1 | 8.67 | 0.098 |
| **More money** | 15.4 | 6 | 0.098 |
| **Parental use** | 30.8 | 10 | 0.097 |

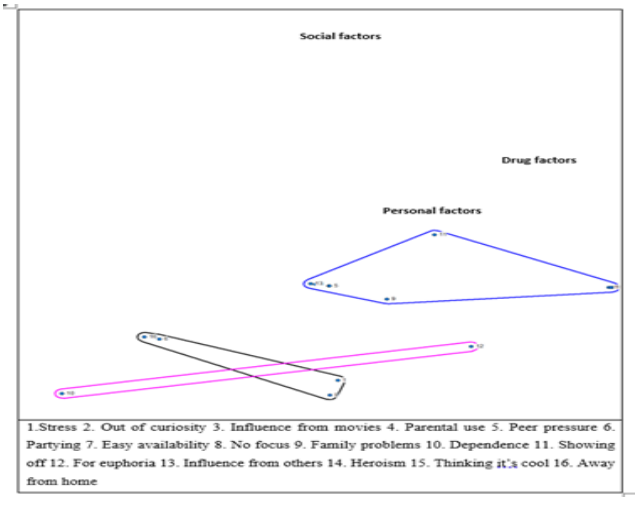


**Figure 1: Cognitive mapping reveals the distribution of various causes into three major categories.**

Pile 1 named as social factors which includes out of curiosity, influence from movies, parental use, easy availability, family problems, peer pressure, showing off

influence from others, heroism, thinking it's cool. pile 2 named as personal factors which includes stress, no focus, partying, dependence, away from home. Pile 3 named as Drug related factors includes Dependence and for euphoria. The solutions for substance abuse among the medical students were also listed (Table 2).

**Table 2: Solutions for substance abuse mentioned by medical students.**

| Item | % | Average rank | Salience score |
|---|---|---|---|
| **Stop projection as status** | 61.5 | 4.25 | 0.329 |
| **Awareness program** | 61.5 | 4.63 | 0.312 |
| **Parental guidance** | 61.5 | 3.25 | 0.412 |
| **Awareness about consequences** | 53.8 | 2.71 | 0.409 |
| **Censoring scenes from movies** | 46.2 | 3.83 | 0.256 |
| **Impose strict rules** | 38.5 | 4.8 | 0.185 |
| **Counselling for students** | 30.8 | 2 | 0.246 |
| **Peer help** | 30.8 | 4.25 | 0.15 |
| **Friendly environment** | 23.1 | 4.67 | 0.115 |
| **Monitoring of students** | 23.1 | 4 | 0.15 |
| **Restriction of pocket money** | 23.1 | 2.67 | 0.167 |
| **Reaching out for help** | 15.4 | 3.5 | 0.094 |
| **Action on suppliers** | 15.4 | 2.5 | 0.125 |
| **Establish rehabilitation centres** | 15.4 | 6 | 0.058 |
| **Extra-curricular activities** | 15.4 | 4.5 | 0.058 |
| **Discipline** | 15.4 | 3.5 | 0.09 |

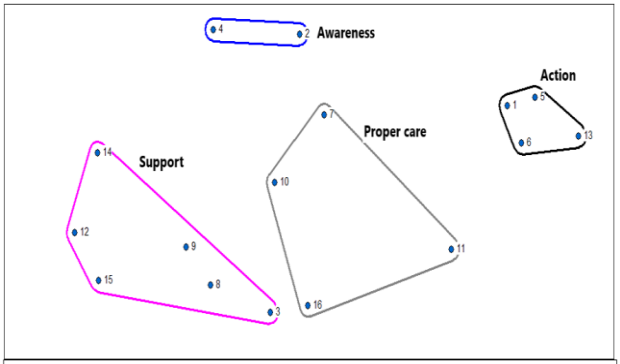


**Figure 2: Cognitive mapping reveals the distribution of various solutions into four major categories.**

Among them parental guidance is the best solution for substance abuse with highest salience score of 0.412, followed by awareness about consequences (0.409), censoring scenes from movies (0.25), counselling for students (0.24), impose strict rules (0.18), restriction of pocket money (0.16), peer help (0.15), monitoring students (0.15), action on suppliers (0.12), friendly environment (0.11), reaching out for help (0.09), discipline (0.09), establish rehabilitation centres (0.05), extra-curricular activities (0.05) (Table 2, Figure 2). Pile1 named as Awareness includes awareness programs and awareness about consequences. Pile2 named as Support includes establish rehabilitation, friendly environment, peer help, parental guidance, extra-curricular activities, reaching out help. Pile3 named as Proper care includes counselling for students, monitoring of students, discipline, restriction of pocket money. Pile 4 named as Action includes stop projection as status, impose strict rules, action on suppliers.

## DISCUSSION

Lifestyle of health care professionals also plays an important role in substance abuse.[13] Although more studies on prevalence and consequences of substance use among adolescents and young adults, there is few studies regarding the contextual and cultural variables of substance use. Healthcare professionals holds the essential role in this regard as they are the key workers in implementing measures and programs against substance abuse. But if the future physicians themselves use substances, the deleterious effects are two fold both to themselves as well as to the health care system (as they cease to set good example and lose credibility). Thus, the medical students should be one of the key populations for sensitization on prevention of substance use or drug de addiction programs if needed. In our study, the predominant causes for substance abuse were stress, peer pressure and curiosity. Study by Bartwal showed that the cause for initiating tobacco use was mainly to relieve stress. Ganesh et al, Aggarwal et al, Kumari et al, Basu et al the peer pressure was observed to be the main cause for initiation.[14-18] Chatterjee et al reported curiosity as the main cause for initiation of tobacco use.[19] Our findings was consistent with Panthee et al study where easy availability of drugs was also found to be one of the major cause in addition to above two causes.[11] Poudel et al study revealed that early onset users displayed significantly higher scores on substance use disorder such as change in behaviour pattern, psychiatric disorder, alter social competence, problems in family.[3] The main solutions for substance abuse as perceived by the medical students in our study were stopping projection of substance use as a status symbol, creating awareness program and parental guidance. One of the key findings in Alhyas study was role of parents in prevention of substance abuse. An Indian study, the researchers observed that family members and friends were found to be a crucial member not only on initiation but also important sources for money and for substance.[20] Easy availability in the neighbourhood was also an important correlate to continuation of

substances.[18,21,22] In addition to this, students also suggested to impose strict rules and conducting awareness programs regarding consequences. Functional family communication and their support, effective family socialisation and the ability to notice early warning signs for substance use by the parents will help the medical students to overcome from this abuse.

## CONCLUSION

Current study reveals that it is necessary to bring positive behavioural changes through adoption of comprehensive interventions, counselling methods and health education in medical universities.

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