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## Research Article

## A descriptive study to assess the level of knowledge on substance abuse among adolescents at selected government school Villupuram District

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### Abstract:

**Background:** Adequate knowledge regarding the harmful effects of substance abuse is considered an important protective factor against its initiation and progression. **Aim:** To assess the adolescents student knowledge regarding substance abuse in a selected school. **Methods:** The study employed a quantitative research methodology using a non-experimental, descriptive cross-sectional design. It was carried out among 150 adolescents aged between 13 and 17 years who were enrolled in grades 9 to 12 at a selected School. A purposive sampling method was selected to recruit the participants. The collected data were analyzed using both descriptive and inferential statistical methods. **Results:** The result revealed that 61.3% of adolescents had inadequate knowledge, 32.7% had moderate knowledge, and only 6.0% had adequate knowledge. Significant associations were found between knowledge levels and parental educational status ( $\chi^2 = 4.91$ ,  $p < 0.05$ ) as well as previous exposure to awareness programs ( $\chi^2 = 15.42$ ,  $p < 0.05$ ). **Conclusion:** The study identified a substantial knowledge deficit regarding substance abuse among adolescents. Parental education and prior participation in awareness programs significantly influenced knowledge levels.

**Key words:** Assess, Substance abuse, Adolescents, Knowledge, Government school

### INTRODUCTION

Substance abuse is one of the most critical public health, social, and economic challenges of the modern era, progressively penetrating the younger demographics of society. WHO states that substance abuse refers to the harmful or risky consumption of psychoactive substances, including alcohol, tobacco, and illegal drugs<sup>1</sup>. While substance abuse impacts individuals across all lifespans, its initiation and escalation during adolescence present a uniquely profound threat to global health security.

Adolescence is a transitional phase characterized by rapid physiological growth, psychological maturation, and neurodevelopmental changes. During this period, the prefrontal cortex—the region of the brain responsible for executive functions such as cognitive control, impulse regulation, and risk assessment—is still undergoing significant development (Spear, 2018)<sup>2</sup>. This neurological immaturity, combined with psychosocial stressors, curiosity, a desire for autonomy, and intense peer pressure, renders adolescents highly susceptible to risk-taking behaviours, prominently including substance experimentation.

Globally the study reports an alarming rise in early-onset substance utilization among school-going youth. In India, which houses one of the largest adolescent populations in the world, the epidemic has assumed distressing dimensions. According to data from the National Family Health Survey (NFHS-5), approximately 6.5% of adolescent boys aged years currently use tobacco, and 1% consume alcohol

15–19 years currently use tobacco, and 1% consume alcohol regularly. Furthermore, national comprehensive mapping indicates that millions of minors under the age of 18 are actively entangled in the use of alcohol, cannabis, inhalants, and prescription opioids (Ministry of Social Justice and Empowerment, 2018)<sup>3</sup>.

The state of Tamil Nadu exhibits parallel vulnerabilities. Recent regional studies conducted in neighbouring districts, such as Vellore, demonstrate that up to 33.8% of adolescent males in vulnerable or semi-urban communities engage in active substance use, with certain individuals initiating tobacco or cannabis consumption as early as 7 to 9 years of age (Rajamani et al., 2024)<sup>4</sup>.

Recognizing the gravity of this escalating threat, the Government of Tamil Nadu has actively initiated demographic-specific frameworks to map out substance patterns among youth to build targeted, localized action plans (The New Indian Express, 2024)<sup>5</sup>. The transition from experimentation to physiological dependence is heavily governed by an individual's level of awareness. Schools serve as the primary structured social environment where an adolescent's cognitive frameworks and health behaviours are modelled. Academic literature consistently highlights that a lack of factual knowledge regarding the long-term clinical, physical, and legal repercussions of substance abuse acts as a major catalyst for initial substance experimentation. needed to counter peer manipulation.

## AIM

To assess the adolescents student knowledge regarding substance abuse in a selected school.

## METHODOLOGY

A quantitative research approach was used for this study to measure, quantify and statistically evaluate the existing baseline knowledge scores of the target population regarding substance abuse. The research design selected for this study was a non-experimental descriptive cross-sectional design. This design was chosen because it allows the investigator to collect data from the adolescents at a single point in time to describe the frequency and distribution of knowledge levels without manipulating any variables or introducing an active intervention.

The study was conducted at a selected School. This setting was chosen due to its accessibility, the availability of the target population, and the cooperation of school administrative authorities. Government school settings in this semi-urban/rural pocket provide a representative mix of adolescents from varied socioeconomic backgrounds. The target population for the study comprises adolescents aged 13 to 17 years who are currently enrolled and studying in standards 9th, 10th, 11th and 12th at the selected school in Villupuram district.

The sample consists of adolescent students who fulfil the designated inclusion criteria. The total sample size selected for this study is 150 adolescents. A purposive sampling technique was utilized to select the school and the specific sections/classrooms. This method ensures that the investigator can deliberately select classrooms with students within the required age bracket (13–17 years) who are available during the scheduled data collection timeline.

The study included male and female adolescent students studying in grades 9 to 12 who were present during the data collection period. Students who were absent on the day of data collection or who were unwilling to participate were excluded from the study. The investigator-developed tool included socio-demographic variables and a structured 20-item questionnaire assessing knowledge of substance abuse. Data were collected over one week after obtaining informed consent and assuring confidentiality. The collected data were coded and analysed using descriptive and inferential statistics with SPSS.

## RESULT

The demographic data revealed that the majority of the participants (53.3%) fell in the 15–16 years age group, and 54.7% were male. Notably, a vast majority (85.3%) had never attended any formal awareness programs regarding substance abuse, and their primary source of information was heavily driven by social media (41.3%) and television (36.7%). (Table 1)

Table 2 indicates that most adolescents (61.3%) had inadequate knowledge about the harmful effects of substance abuse, 32.7% had moderate knowledge, and only 6.0% demonstrated adequate knowledge, reflecting an overall low level of awareness among the participants.

The study revealed that 61.3% of the school adolescents possessed inadequate knowledge regarding substance abuse, 32.7% had moderate knowledge, and only 6.0% possessed an adequate knowledge. Among the selected demographic variables, educational status of the parents and previous exposure to awareness were found to be statistically significant.

## DISCUSSION

The study found that the majority of adolescents (61.3%) had inadequate knowledge regarding substance abuse, while only 6.0% had adequate knowledge, indicating a considerable gap in awareness. These findings may be attributed to the lack of formal awareness programs, as 85.3% of participants had never attended one. Social media and television were the primary sources of information, which may not always provide accurate or comprehensive knowledge. Parental educational status and previous exposure to awareness programs were significantly associated with knowledge levels, suggesting that family education and health education initiatives play an important role in improving adolescents' awareness. These findings emphasize the need for regular, school-based substance abuse awareness programs to enhance knowledge and prevent risky behaviors among adolescents.

## CONCLUSION

The study concludes that the majority of adolescents had inadequate knowledge regarding substance abuse. Parental educational status and previous exposure to awareness programs significantly influenced knowledge levels. The findings emphasize the need for regular, structured school-based awareness and counselling programs to improve adolescents' knowledge and promote substance abuse prevention.

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**Table 1: Frequency and Percentage Distribution of Socio-Demographic Variables (N = 150)**

| Sl. No | Variables                               | Category                               | Frequency (f) | Percentage (%) |
|--------|-----------------------------------------|----------------------------------------|---------------|----------------|
| 1      | Age in Years                            | a) 13–14                               | 45            | 30.00%         |
|        |                                         | b) 15–16                               | 80            | 53.30%         |
|        |                                         | c) 17                                  | 25            | 16.70%         |
| 2      | Gender                                  | a) Male                                | 82            | 54.70%         |
|        |                                         | b) Female                              | 68            | 45.30%         |
| 3      | Current Standard / Grade                | a) 9 <sup>th</sup>                     | 40            | 26.70%         |
|        |                                         | b) 10 <sup>th</sup>                    | 42            | 28.00%         |
|        |                                         | a) 11 <sup>th</sup>                    | 33            | 22.00%         |
|        |                                         | b) 12 <sup>th</sup>                    | 35            | 23.30%         |
| 4      | Family type                             | a) Small                               | 112           | 74.70%         |
|        |                                         | b) Joint                               | 38            | 25.30%         |
| 5      | Educational Status                      | a) Illiterate                          | 32            | 21.30%         |
|        |                                         | b) Primary                             | 58            | 38.70%         |
|        |                                         | c) High school                         | 48            | 32.00%         |
|        |                                         | d) Graduate and above                  | 12            | 8.00%          |
| 6      | Previous Exposure to Awareness Programs | a) Yes                                 | 22            | 14.70%         |
|        |                                         | b) No                                  | 128           | 85.30%         |
| 7      | Primary Source                          | a) Television / Movies                 | 55            | 36.70%         |
|        |                                         | b) Social Media                        | 62            | 41.30%         |
|        |                                         | c) Friends / Peers                     | 23            | 15.30%         |
|        |                                         | d) Parents / Teachers / Health Workers | 10            | 6.70%          |

**Table 2 : Distribution of Overall Knowledge Levels among Adolescents (N = 150)**

| Level of Knowledge   | Score Range | Frequency (f) | Percentage (%) |
|----------------------|-------------|---------------|----------------|
| Inadequate Knowledge | 0 – 9       | 92            | 61.30%         |
| Moderate Knowledge   | 10 – 15     | 49            | 32.70%         |
| Adequate Knowledge   | 16 – 20     | 9             | 6.00%          |

**Table 3: Association of demographic variables with level of knowledge**

| Sl. No | Variables                     | Category                                        | Inadequate (n=92) | Moderate to Adequate (n=58) | df | $\chi^2$ | Statistical Significance (p<0.05) |
|--------|-------------------------------|-------------------------------------------------|-------------------|-----------------------------|----|----------|-----------------------------------|
| 1      | Age in Years                  | a) 13–14                                        | 32                | 13                          | 2  | 4.12     | Not Significant                   |
|        |                               | b) 15–16                                        | 47                | 33                          |    |          |                                   |
|        |                               | c) 17 years & above                             | 13                | 12                          |    |          |                                   |
| 2      | Gender                        | a) Male                                         | 48                | 34                          | 1  | 0.58     | Not Significant                   |
|        |                               | b) Female                                       | 44                | 24                          |    |          |                                   |
| 3      | Current Standard / Grade      | a) 9 <sup>th</sup> & 10 <sup>th</sup> Standard  | 54                | 28                          | 1  | 1.71     | Not Significant                   |
|        |                               | b) 11 <sup>th</sup> & 12 <sup>th</sup> Standard | 38                | 30                          |    |          |                                   |
| 4      | Type of Family                | a) Nuclear Family                               | 68                | 44                          | 1  | 0.04     | Not Significant                   |
|        |                               | b) Joint / Extended Family                      | 24                | 14                          |    |          |                                   |
| 5      | Educational Status of Parents | a) Illiterate / Primary                         | 62                | 28                          | 1  | 4.91     | Significant                       |
|        |                               | b) High School & Above                          | 30                | 30                          |    |          |                                   |
| 6      | Prior Exposure to Awareness   | a) Yes                                          | 4                 | 18                          | 1  | 15.42    | Significant                       |
|        |                               | b) No                                           | 88                | 40                          |    |          |                                   |
| 7      | Primary Source of Information | a) Media (TV/Movies/Social)                     | 76                | 41                          | 1  | 2.22     | Not Significant                   |
|        |                               | b) Interpersonal (Peers/Health)                 | 16                | 17                          |    |          |                                   |

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