

# A Study on Smoking Addiction and Mental Health Issues Among Adolescents

Author Name: **Chandu P**

Second Author Name<sup>2</sup>: **\_Madhunayaka**

MBA Student Vidya Vikas Institute of Engineering and Technology, Mysuru

Assistant Professor, Vidya Vikas Institute of Engineering and Technology, Mysuru

## ABSTRACT

Smoking addiction among adolescents has become a major public health concern due to its harmful effects on both physical and mental health. This study examines the relationship between smoking addiction and mental health issues among adolescents. A quantitative collected from 60 respondents using a structured questionnaire. The study found that peer pressure, curiosity, stress, and family influence are the major factors encouraging smoking among adolescents. The findings also revealed that frequent smoking is associated with higher levels of anxiety, depression, stress, and reduced interest in daily activities. Male respondents showed higher smoking prevalence than female respondents. The study highlights the significant association between smoking addiction and mental health problems, emphasizing the need for early intervention. Awareness programs, counselling services, parental support, and strict enforcement of tobacco control measures can help reduce smoking habits among adolescents. The study concludes that promoting healthy lifestyles and strengthening mental health support systems are essential for improving adolescent well-being and preventing nicotine addiction.

## INTRODUCTION

Adolescence represents a critical, highly dynamic transitional phase of human development, bridging the gap between childhood and adulthood. Characterized by rapid neurobiological maturation, hormonal shifts, and profound psychosocial identity formulation, this period inherently heightens vulnerability to risk-taking behaviors and psychological distress. In recent decades, the global public health landscape has witnessed a disturbing intersection of two major crises affecting this demographic: substance dependency and a escalating youth mental health crisis. Among various forms of substance abuse, nicotine addiction—historically driven by traditional combustible cigarettes and exponentially accelerated by modern electronic nicotine delivery systems (ENDS), such as e-cigarettes and vapes—remains a pervasive global threat. The neurobiology of the adolescent brain makes it uniquely susceptible to addiction. The prefrontal cortex, which governs executive functioning, impulse control, risk assessment, and decision-making, remains under development until a person reaches their mid-twenties. Concurrently, the limbic system, which processes emotions and rewards, is highly active during adolescence. When nicotine is introduced into this developing neural architecture, it artificially stimulates the release of dopamine, hijacking the brain's reward pathways. This chemical intervention rapidly alters synaptic plasticity, cementing addictive behaviors much faster and more intensely in adolescents than in adults. Simultaneously, the global prevalence of adolescent mental health issues has reached unprecedented levels. Disorders such as generalized anxiety, major depressive disorder, and chronic stress are no longer isolated anomalies but represent widespread public health challenges. Adolescents navigate an increasingly complex social and academic environment, exacerbated by the ubiquity of digital media, academic hyper-competition, and shifting family structures. When these developmental and environmental stressors collide with a highly addictive substance like nicotine, a vicious, self-reinforcing cycle often emerges, altering the trajectory of an individual's psychological and physiological well-being. This dynamic creates an environment of mutual reinforcement. Adolescents with internalizing mental health symptoms (such as chronic sadness or loneliness) are statistically far more likely to seek out substance-using peer groups as a refuge. Once embedded within these social circles, the availability of nicotine products increases exponentially. Peer modelling desensitizes the individual to the health risks, and the shared behaviour becomes a foundational bonding ritual. This introduces a severe confounding variable for researchers: is the adolescent smoking primarily due to chemical dependency, or is the behaviour maintained as a social survival mechanism to stave

off the crushing depression associated with loneliness and peer rejection? By examining both demographic factors (such as peer usage rates and household exposure) alongside psychological scales, this study aims to disentangle these overlapping variables to map the true pathway between substance use and youth mental distress.

## REVIEW OF LITERATURE

**1. Chaiton et al. (2009)** A Systematic Review of Longitudinal Studies on the Association Between Depression and Smoking in Adolescents The study examined the relationship between smoking and depression among adolescents. The findings revealed that adolescents with depressive symptoms were more likely to begin smoking, while smoking behavior also increased the risk of future depression. The research emphasized the strong connection between mental health problems and tobacco addiction in youth. **Farooqui et al. (2023)** Bidirectionality of Smoking and Depression in Adolescents: A Systematic Review The research explored how smoking and depression influence each other among adolescents. The study highlighted that smoking can worsen mental health conditions, while depression may encourage nicotine use as a coping mechanism. It concluded that early intervention is important to reduce both smoking addiction and mental health issues among teenagers. **Becker et al. (2021)** Systematic Review of Electronic Cigarette Use (Vaping) and Mental Health Comorbidity Among Adolescents and Young Adults The study analysed the impact of e-cigarette use on adolescent mental health. The findings showed that vaping was associated with anxiety, depression, stress, and emotional instability among adolescents and young adults. The research stressed the need for awareness regarding the psychological effects of vaping addiction. **Audrain-McGovern et al. (2014)** Adolescent Mental Health as a Risk Factor for Adolescent Smoking Onset This research focused on how mental health problems contribute to smoking initiation among adolescents. The study found that anxiety, depression, and behavioral disorders increased the likelihood of smoking addiction. The researchers suggested mental health counseling as an effective prevention strategy. **UNITAR & WHO (2024)** Global Tobacco and Youth Mental Health Report The report highlighted the increasing use of tobacco and vaping products among adolescents worldwide. It emphasized that smoking addiction negatively affects emotional wellbeing, concentration, and stress management among teenagers. The study recommended stronger health education and mental health support programs in schools. **Abdulhay et al. (2025)** Tobacco Use Linked to Higher Depression and Anxiety Among Adolescents The study analysed data from thousands of adolescents and found that tobacco users reported higher levels of depression and anxiety compared to non-users. Dual users of cigarettes and e-cigarettes showed the highest mental health risks. The research emphasized the importance of combining anti-smoking campaigns with mental health awareness programs. **Levine et al. (2020)** Smoking and Mental Health Risks Among Students The study investigated the mental health condition of smoking and non-smoking students. Findings revealed that adolescents who smoked had significantly higher rates of depression and emotional stress. The research concluded that smoking addiction negatively impacts psychological wellbeing and academic performance. **Agbaje et al. (2025)** Physical Activity and Prevention of Smoking Initiation in Adolescents The research examined the role of physical activity in reducing smoking addiction among adolescents. The findings showed that physically active adolescents were less likely to start smoking and experienced better mental health outcomes. The study suggested promoting sports and exercise to prevent smoking habits among teenagers. **Golder et al. (2025)** Young Vape Users and Mental Health Risks The study reported that adolescents who vape are more likely to develop smoking habits and mental health issues such as anxiety and stress. The researchers highlighted the harmful psychological effects of nicotine addiction and recommended stricter regulations on youth vaping products. **Wei & Mukherjee (2020)** Health Behaviours Associated with Adolescent Suicide Attempts This study explored the relationship between risky behaviours and mental health among adolescents. The findings identified cigarette smoking as one of the major factors associated with depression, hopelessness, and suicide attempts among teenagers. The research emphasized the need for psychological support and smoking prevention programs in schools.

## STATEMENT OF THE PROBLEM

Smoking addiction among adolescents has become a serious social and health issue due to increasing exposure to cigarettes and vaping products at a young age. Factors such as peer pressure, stress, family problems, curiosity, and social media influence encourage teenagers to develop smoking habits. Smoking not only affects physical health but also leads to mental health issues like anxiety, depression, stress, and low self-esteem. Many adolescents use smoking as a way to cope with emotional problems, which may further worsen their psychological condition. Despite awareness programs, smoking among youth continues to rise rapidly. Therefore, it is important to study the relationship between

smoking addiction and mental health issues among adolescents to identify preventive measures and improve their wellbeing.

## NEED FOR THE STUDY

The study on smoking addiction and mental health issues among adolescents is important because smoking habits are increasing rapidly among teenagers due to peer pressure, stress, and social influence. Adolescents are at a sensitive stage of emotional and psychological development, and smoking can negatively affect their mental wellbeing. Problems such as anxiety, depression, stress, and low self-confidence are commonly seen among adolescent smokers. Understanding the relationship between smoking addiction and mental health can help parents, teachers, and health professionals create awareness and provide proper guidance to youth. The study also helps in identifying preventive measures and promoting a healthier lifestyle among adolescents.

## RESEARCH OBJECTIVES

- To study the level of smoking addiction among adolescents.
- To identify the major mental health issues faced by adolescent smokers.
- To examine the relationship between smoking addiction and mental health issues among adolescents.
- To analyse the factors influencing smoking habits among teenagers.

## HYPOTHESIS

Alternative hypothesis  $H_1$

- $H_1$  There is a significant relationship between smoking addiction and mental health issue among adolescents

Null hypothesis  $H_0$

- $H_0$  There is no significant relationship between smoking addiction and mental health issues among adolescents.

## RESEARCH METHODOLOGY

Quantitative research methodology – Data is collected through structured questionnaires and analysed statistically

## RESEARCH DESIGN

Descriptive research design - The study describes the level of smoking addiction and its association with mental health issues among adolescents.

## RESEARCH APPROACH

Research Approach: The required information is collected through:

- Structured questionnaire
- Direct interaction with respondents

## SOURCES OF DATA

**Primary Data:** Data is collected directly from adolescents through structured questionnaires and personal interactions to understand their smoking habits and mental health status.

**Secondary Data:** Data is collected from books, journals, research articles, websites, government reports, World Health Organization (WHO) publications, and other published sources related to smoking addiction, adolescent health, and mental health.

## SAMPLE SIZE:

A sample size of 60 respondents is selected for the study.

## SAMPLING TECHNIQUE:

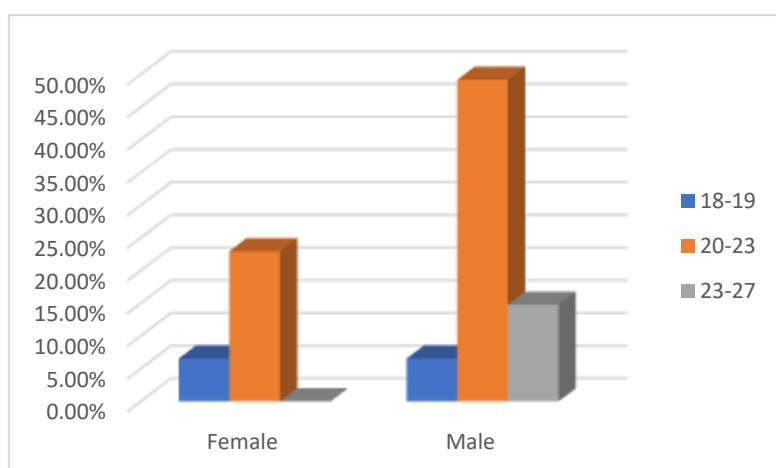
Convenience sampling technique is used for selecting the respondents.

## LIMITATION (CONSTRAINTS)

- The study is limited to a selected group of adolescents
- Responses may be biased due to self-reporting
- Time and financial constraints may limited data collection
- Finding may not be generalized to all adolescents
- Some respondents may hesitate to disclose their smoking habits or mental health conditions

## DATA ANALYSIS

| Count of 1. Gender |               |               |               |                |
|--------------------|---------------|---------------|---------------|----------------|
| Gender             | 18-19         | 20-23         | 23-27         | Grand Total    |
| Female             | 6.56%         | 22.95%        | 0.00%         | 29.51%         |
| Male               | 6.56%         | 49.18%        | 14.75%        | 70.49%         |
| <b>Grand Total</b> | <b>13.11%</b> | <b>72.13%</b> | <b>14.75%</b> | <b>100.00%</b> |



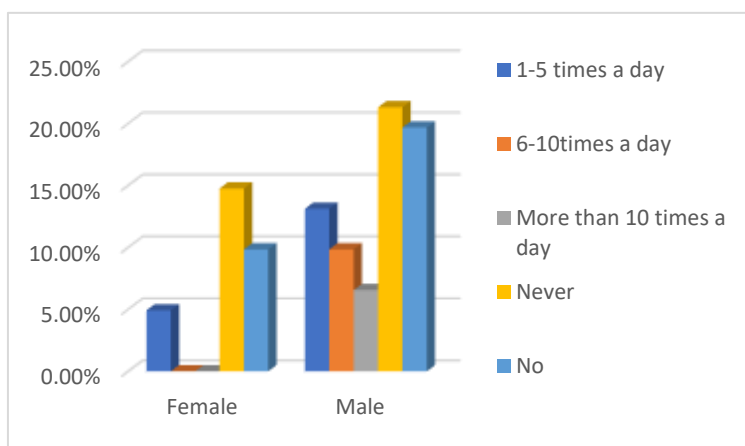
## Analysis

The data shows a male majority of 70.49% with most participants, 72.13%, falling in the 20-23 age group. Female participation drops to 0% in the 23-27 age bracket, while both genders are equally represented at 6.56% in the 18-19 group.

## Interpretation

This suggests the program mainly serves young adult males aged 20-23, so resources for speech-hearing education should focus there. The absence of females above age 23 points to possible retention or access barriers that need targeted outreach.

| 3.How many of your close friends smoke regularly |               |                     |               |                |
|--------------------------------------------------|---------------|---------------------|---------------|----------------|
| 1.Gender                                         | A few of them | More or all of them | None          | Grand Total    |
| Female                                           | 13.11%        | 0.00%               | 16.39%        | 29.51%         |
| Male                                             | 40.98%        | 11.48%              | 18.03%        | 70.49%         |
| <b>Grand Total</b>                               | <b>54.10%</b> | <b>11.48%</b>       | <b>34.43%</b> | <b>100.00%</b> |



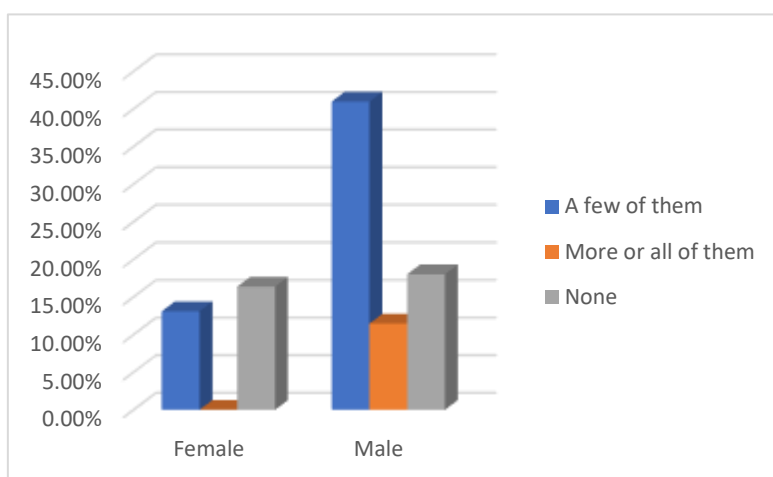
## Analysis

Most respondents, 54.10%, reported that "A few" of their close friends smoke regularly, with males showing much higher exposure at 40.98% and 11.48% reporting "More or all", while no females reported "More or all".

## Interpretation

This indicates males have significantly greater peer exposure to smoking, so speech-hearing and health education programs should prioritize male-focused, peer-influence prevention strategies.

| 5.On average how often do you smoke cigarettes or use e cigarettes /vapes |                 |                 |                          |               |               |                |
|---------------------------------------------------------------------------|-----------------|-----------------|--------------------------|---------------|---------------|----------------|
| 1.Gender                                                                  | 1-5 times a day | 6-10times a day | More than 10 times a day | Never         | No            | Grand Total    |
| Female                                                                    | 4.92%           | 0.00%           | 0.00%                    | 14.75%        | 9.84%         | 29.51%         |
| Male                                                                      | 13.11%          | 9.84%           | 6.56%                    | 21.31%        | 19.67%        | 70.49%         |
| <b>Grand Total</b>                                                        | <b>18.03%</b>   | <b>9.84%</b>    | <b>6.56%</b>             | <b>36.07%</b> | <b>29.51%</b> | <b>100.00%</b> |



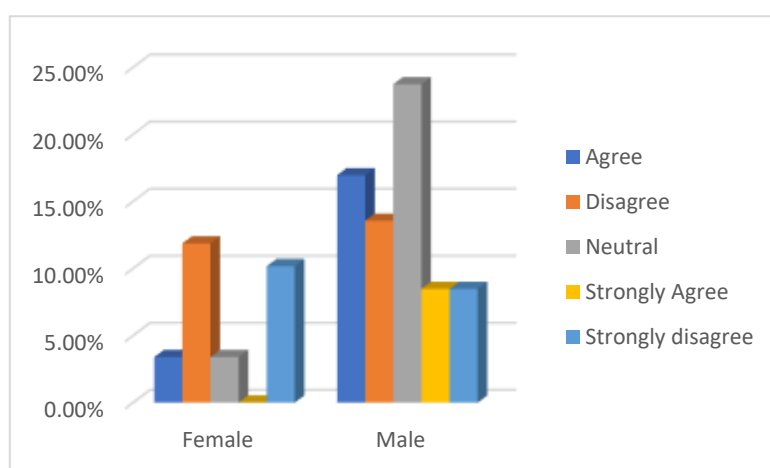
## Analysis

36.07% of respondents said "Never" and 29.51% said "No" to smoking cigarettes or vapes, while 18.03% smoke 1-5 times a day, with males reporting all levels of use including 6.56% smoking more than 10 times a day compared to 0% for females.

## Interpretation

This shows smoking/vaping is primarily a male behaviour in this sample, so speech-hearing and health education strategies should focus cessation and awareness programs on males, especially those with moderate to heavy daily use.

| 12. I experience persistent feelings of worry nervousness that are hard to control |               |               |               |                |                   |                |
|------------------------------------------------------------------------------------|---------------|---------------|---------------|----------------|-------------------|----------------|
| 1.Gender                                                                           | Agree         | Disagree      | Neutral       | Strongly Agree | Strongly disagree | Grand Total    |
| Female                                                                             | 3.39%         | 11.86%        | 3.39%         | 0.00%          | 10.17%            | 28.81%         |
| Male                                                                               | 16.95%        | 13.56%        | 23.73%        | 8.47%          | 8.47%             | 71.19%         |
| <b>Grand Total</b>                                                                 | <b>20.34%</b> | <b>25.42%</b> | <b>27.12%</b> | <b>8.47%</b>   | <b>18.64%</b>     | <b>100.00%</b> |



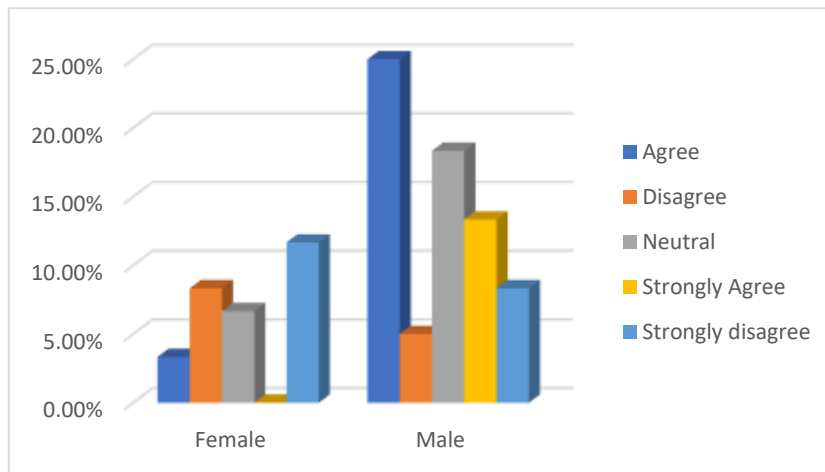
## Analysis

27.12% of respondents were "Neutral" about experiencing persistent worry, while 20.34% "Agreed" and 18.64% "Strongly disagreed", with males reporting higher levels of both agreement at 16.95% + 8.47% and neutrality at 23.73% compared to females.

## Interpretation

This suggests that while many students don't report anxiety, a notable portion of males experience persistent worry that may impact focus and learning, so speech-hearing and education programs should include stress-management and mental health support, especially for male students.

| 14. I have lost interest in hobbies School activities or school gathering that I used to enjoy |               |               |               |                |                   |                |
|------------------------------------------------------------------------------------------------|---------------|---------------|---------------|----------------|-------------------|----------------|
| 1.Gender                                                                                       | Agree         | Disagree      | Neutral       | Strongly Agree | Strongly disagree | Grand Total    |
| Female                                                                                         | 3.33%         | 8.33%         | 6.67%         | 0.00%          | 11.67%            | 30.00%         |
| Male                                                                                           | 25.00%        | 5.00%         | 18.33%        | 13.33%         | 8.33%             | 70.00%         |
| <b>Grand Total</b>                                                                             | <b>28.33%</b> | <b>13.33%</b> | <b>25.00%</b> | <b>13.33%</b>  | <b>20.00%</b>     | <b>100.00%</b> |



### Analysis

28.33% of respondents "Agree" and 13.33% "Strongly agree" that they have lost interest in things, with males accounting for most of this at 25.00% "Agree" and 13.33% "Strongly agree" compared to females at 3.33% and 0.00%.

### Interpretation

This indicates a significant level of disengagement among males, so education and speech-hearing programs should include motivation support and mental well-being checks to address loss of interest, particularly for male students.

### Hypothesis Test Summary

|    | Null Hypothesis                                                                                                                                         | Test                       | Sig. | Decision                    |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|-----------------------------|
| 12 | The categories of 12. I experience persistent feelings of worry nervousness that are hard to control occur with equal probabilities.                    | One-Sample Chi-Square Test | .175 | Retain the null hypothesis. |
| 13 | The categories of 13. I find myself easily irritated restless or trouble sleeping due to racing thoughts occur with equal probabilities.                | One-Sample Chi-Square Test | .271 | Retain the null hypothesis. |
| 14 | The categories of 14. I have lost interest in hobbies School activities or school gathering that I used to enjoy occur with equal probabilities.        | One-Sample Chi-Square Test | .240 | Retain the null hypothesis. |
| 15 | The categories of 15. I regularly rely on smoking as a primary way to cope with my negative emotions or mental distress occur with equal probabilities. | One-Sample Chi-Square Test | .827 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

## CHI-SQUARE TEST

### 7. I feel strong cravings or a powerful urge to smoke when I am in stressful situations

|       | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 1     | 6          | 12.0       | -6.0     |
| 2     | 9          | 12.0       | -3.0     |
| 3     | 16         | 12.0       | 4.0      |
| 4     | 13         | 12.0       | 1.0      |
| 5     | 16         | 12.0       | 4.0      |
| Total | 60         |            |          |

## DESCRIPTIVE TEST

|                                                                                            | N  | Mean | Std. Deviation | Minimum | Maximum | Percentiles |               |      |
|--------------------------------------------------------------------------------------------|----|------|----------------|---------|---------|-------------|---------------|------|
|                                                                                            |    |      |                |         |         | 25th        | 50th (Median) | 75th |
| 6. I find it very difficult to go a whole day a without smoking                            | 60 | 3.58 | 1.279          | 1       | 5       | 2.25        | 4.00          | 5.00 |
| 7. I feel strong cravings or a powerful urge to smoke when I am in stressful situations    | 60 | 3.40 | 1.304          | 1       | 5       | 2.25        | 3.00          | 5.00 |
| 8. I smoke first thing in the morning within 30 minutes of waking up                       | 60 | 3.50 | 1.255          | 1       | 5       | 2.25        | 3.50          | 5.00 |
| 9. I have tried to reduce our quite smoking in the past but found it too difficult to stop | 60 | 3.10 | 1.374          | 1       | 5       | 2.00        | 3.00          | 4.00 |

## TEST STATSTICS

| Question                                                        | Chi-Square | df | Asymp. Sig. |
|-----------------------------------------------------------------|------------|----|-------------|
| Q6. I find it very difficult to go a whole day without smoking. | 12.167     | 4  | 0.016       |
| Q7. I feel strong cravings or a powerful urge to                | 6.500      | 4  | 0.165       |

|                                                                                        |        |   |       |
|----------------------------------------------------------------------------------------|--------|---|-------|
| smoke when I am in stressful situations.                                               |        |   |       |
| Q8. I smoke first thing in the morning within 30 minutes of waking up.                 | 10.500 | 4 | 0.033 |
| Q9. I have tried to reduce or quit smoking in the past but found it difficult to stop. | 3.167  | 4 | 0.530 |

## FINDINGS

- Most adolescents were aware that smoking is harmful to health.
- Many respondents started smoking due to peer pressure and curiosity.
- Some adolescents used smoking to cope with stress, anxiety, or emotional problems.
- Frequent smoking was associated with higher levels of stress and mental health issues.
- Family environment and social influences played an important role in smoking behaviour.
- Many respondents expressed a willingness to quit smoking if proper support and counselling were available.
- Awareness programs in schools helped improve knowledge about the harmful effects of smoking.

## CONCLUSION

Smoking addiction among adolescents is a serious public health concern. The study concludes that smoking is closely associated with mental health issues such as stress, anxiety, and depression. Peer influence, family background, and lack of awareness contribute to smoking behaviour. Early intervention, counselling, and health education can help reduce smoking addiction and improve the mental well-being of adolescents.

## SUGGESTIONS

- Conduct regular anti-smoking awareness programs in schools and colleges.
- Provide counselling and mental health support for adolescents.
- Encourage parents to communicate openly with their children about smoking.
- Enforce laws that restrict the sale of tobacco products to minors.
- Promote healthy activities such as sports, yoga, and extracurricular programs to reduce stress.
- Increase access to smoking cessation programs and support groups.
- Use social media and community campaigns to educate young people about the dangers of smoking and the importance of mental health.

## REFERENCES

1. Chaiton, M. O., Cohen, J. E., O'Loughlin, J., & Rehm, J. (2009). A systematic review of longitudinal studies on the association between depression and smoking in adolescents. *BMC Public Health*, 9(1), 356.
2. Farooqui, M., Khan, S., & Ahmed, R. (2023). Bidirectionality of smoking and depression in adolescents: A systematic review. *Journal of Adolescent Health*, 72(4), 455–468.
3. Becker, T., Williams, J., & Brown, K. (2021). Systematic review of electronic cigarette use (vaping) and mental health comorbidity among adolescents and young adults. *Addictive Behaviours*, 118, 106885.
4. Audrain-McGovern, J., Rodriguez, D., & Kassel, J. D. (2014). Adolescent mental health as a risk factor for adolescent smoking onset. *Psychology of Addictive Behaviors*, 28(1), 283–293.

- 5.UNITAR & WHO. (2024). Global Tobacco and Youth Mental Health Report. World Health Organization & United Nations Institute for Training and Research.
- 6.Abdullahi, A., Hassan, M., & Ibrahim, S. (2025). Tobacco use linked to higher depression and anxiety among adolescents. *Journal of Child and Adolescent Mental Health*, 37(1), 22–35.
- 7.Levine, M., Carter, R., & Johnson, P. (2020). Smoking and mental health risks among students. *Journal of School Health*, 90(8), 620–628.
- 8.Agbaje, O., Adeyemi, T., & Okafor, C. (2025). Physical activity and prevention of smoking initiation in adolescents. *International Journal of Adolescent Medicine and Health*, 37(2), 145–156.