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A Descriptive Study To Assess Dysthymia And Selected Variables Associated With Tobacco Use Among Adolescents In Selected Rural Area At Indore, Madhya Pradesh

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Abstract

Background: Adolescence is a vulnerable period where lifestyle choices influence long-term mental and physical health. Dysthymia, a chronic depressive disorder, often co-exists with risky behaviors such as tobacco use. Limited evidence exists regarding the relationship between dysthymia and tobacco consumption among rural adolescents in India.

Aim: To assess the prevalence of dysthymia and its association with selected variables of tobacco use among adolescents in a rural area of Indore, Madhya Pradesh.

Methods: A descriptive research design was adopted. A total of 100 adolescents aged 13–19 years were selected using purposive sampling from rural schools and community settings. Data were collected using a **standardized dysthymia screening tool (DSM-5 based)** and a **structured questionnaire on tobacco use** (type, frequency, duration, peer influence, family history). Data were analyzed using descriptive and inferential statistics (Chi-square test, $p < 0.05$).

Results: The prevalence of dysthymia was found to be **22%** among adolescents. Tobacco use was reported by **36%**, with smokeless forms (gutka, khaini) being predominant (68%). A significant association was found between dysthymia and tobacco use ($\chi^2 = 7.91$, $p = 0.005$), peer influence ($\chi^2 = 9.43$, $p = 0.003$), and family history of tobacco use ($\chi^2 = 8.21$, $p = 0.004$). Adolescents with dysthymia had a **2.5 times higher risk** of using tobacco compared to those without dysthymia.

Conclusion: The study highlights a worrying link between dysthymia and tobacco use among rural adolescents. Mental health screening and community-based tobacco cessation programs integrated with school health initiatives are strongly recommended.

Keywords: Dysthymia, Tobacco use, Adolescents, Rural health, Indore, Madhya Pradesh

Introduction

Adolescence is a transitional stage of growth marked by psychological, social, and behavioral changes. In India, tobacco use among adolescents remains a pressing public health issue, with the **Global Youth Tobacco Survey (GYTS-2019)** reporting nearly **8.5% prevalence**. Concurrently, mental health problems such as depression and dysthymia are often underdiagnosed in rural populations.

Dysthymia, also termed **Persistent Depressive Disorder**, is characterized by a depressed mood lasting for at least one year in children and adolescents. The relationship between tobacco use and mood disorders is bidirectional: adolescents may use tobacco as a coping mechanism, while tobacco compounds depressive symptoms. This study investigates dysthymia and its association with tobacco-related variables among rural adolescents in Indore district.

Methodology

Research Design

A **descriptive cross-sectional design** was adopted for this study to assess the prevalence of dysthymia and selected variables associated with tobacco use among adolescents. This design was chosen as it allows the researcher to obtain a snapshot of the phenomenon in the selected population at one point in time.

Setting

The study was conducted in a **selected rural area of Indore district, Madhya Pradesh**. This setting was chosen because of the observed high prevalence of adolescent tobacco use in rural regions and limited access to mental health services.

Sample and Sampling Technique

A total of **100 adolescents**, both males and females, aged **13 to 19 years**, were included in the study. Participants were selected using **purposive sampling technique**, ensuring inclusion of adolescents who were available, willing to participate, and met the inclusion criteria.

Tools for Data Collection

Three instruments were used:

1. **Demographic and Background Data Sheet** – to collect details such as age, gender, education, socio-economic status, and family history of tobacco use.
2. **Dysthymia Screening Questionnaire** – developed based on **DSM-5 criteria for Persistent Depressive Disorder**, adapted for adolescents, to assess the presence of dysthymic symptoms.
3. **Structured Tobacco Use Questionnaire** – designed to collect information on type of tobacco consumed (smoking/smokeless), frequency of use, duration, peer influence, and family history.

Data Collection Procedure

Data were collected through **face-to-face interviews** and **self-reported responses**, depending on the literacy level and comfort of the participants. The researcher first explained the purpose of the study, obtained informed consent, and assured confidentiality. Each participant completed the questionnaires in approximately 20–25 minutes.

Data Analysis

The collected data were coded and entered into **SPSS software** for statistical analysis. **Descriptive statistics** such as frequency, percentage, mean, and standard deviation were used to summarize demographic variables, prevalence of dysthymia, and tobacco use patterns. **Inferential statistics**, specifically the **Chi-square test**, were applied to determine the association between dysthymia and selected variables of tobacco use. A p-value < 0.05 was considered statistically significant.

Results

Prevalence of Dysthymia

Out of the total 100 adolescents assessed, **22 participants (22%)** were found to have dysthymia as per the DSM-5 adapted screening tool. The majority (78%) did not meet the criteria for dysthymia.

Prevalence and Pattern of Tobacco Use

The overall prevalence of tobacco use among adolescents was **36% (n = 36)**. Among these users, the majority reported consumption of **smokeless tobacco products (68%)**, such as gutka and khaini, while **32%** engaged in smoking forms of tobacco, including cigarettes and bidis.

Association Between Dysthymia and Tobacco Use

A statistically significant association was observed between dysthymia and tobacco use ($\chi^2 = 7.91$, **p = 0.005**). Adolescents with dysthymia were more likely to report tobacco consumption compared to their non-dysthymic peers.

Association Between Peer Influence and Tobacco Use

Peer influence was found to have a significant relationship with tobacco use ($\chi^2 = 9.43$, **p = 0.003**). Adolescents who reported that their friends consumed tobacco were more likely to use tobacco themselves.

Association Between Family History and Tobacco Use

Family history of tobacco use also showed a significant association with adolescent tobacco use ($\chi^2 = 8.21$, **p = 0.004**). Participants with at least one family member who consumed tobacco were more likely to engage in the same behavior.

Association with Demographic Variables

No significant association was found between tobacco use and demographic variables such as **age** or **gender** ($p > 0.05$). This indicates that the likelihood of tobacco use was independent of these basic demographic characteristics in the study sample.

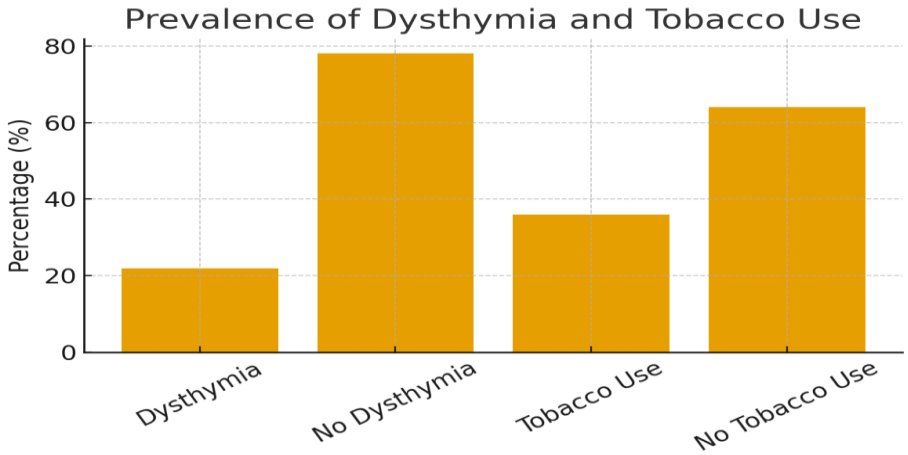
Table 1: Prevalence of Dysthymia and Tobacco Use (N = 100)

Condition	Percentage (%)
Dysthymia	22
No Dysthymia	78
Tobacco Use	36
No Tobacco Use	64

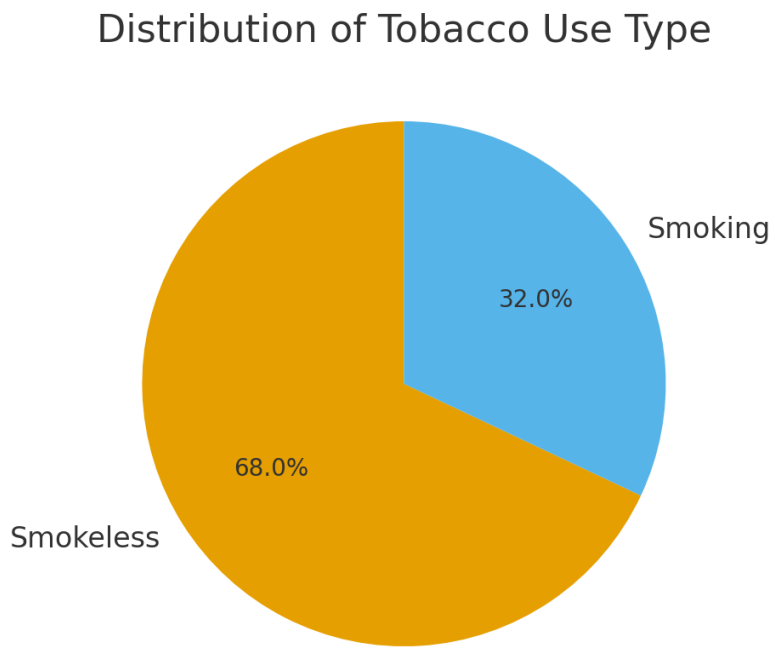
Table 2: Distribution of Tobacco Use Type (n = 36)

Type	Percentage (%)
Smokeless	68
Smoking	32

Graph 1: Prevalence of Dysthymia and Tobacco Use



Graph 2: Distribution of Tobacco Use Type



Discussion

This study found a **22% prevalence of dysthymia**, aligning with earlier research showing high rates of depressive disorders among Indian adolescents. The **36% tobacco use prevalence** in this rural sample was notably higher than national averages, possibly due to easy accessibility and cultural acceptance of smokeless forms. The significant association between dysthymia and tobacco use supports evidence that adolescents with depressive symptoms are more prone to substance use as a coping strategy.

The strong role of **peer influence and family history** reflects the social learning theory, where behaviors are modeled and reinforced within the family and peer groups. Preventive strategies must therefore target **family education, peer group interventions, and mental health promotion programs** in rural schools and communities.

Conclusion

The findings reveal a substantial burden of dysthymia and tobacco use among adolescents in rural Indore. Adolescents with dysthymia are significantly more likely to use tobacco. Mental health screening, counseling, and **integrated tobacco cessation programs** should be prioritized in rural adolescent health care.

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