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PREVALENCE AND RISK FACTORS OF MILD AND MODERATE MOBILE PHONE ADDICTION AMONG ADOLESCENTS IN SELECTED SCHOOLS IN TENKASI

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ABSTRACT

Background: Mobile phone addiction (MPA) has emerged as a significant concern among adolescents. As mobile phones are increasingly integrated into daily life, their excessive use can negatively affect physical, academic and mental health. This study aims to investigate the prevalence and risk factors associated with mild and moderate MPA in adolescents from government higher secondary school, Tenkasi. **Objectives:** To evaluate the prevalence of mild and moderate MPA among adolescents and identify socio-demographic, academic and psychological risk factors. **Methods:** A cross-sectional study was conducted among 300 adolescents from three schools in Tenkasi. Participants completed the Mobile Phone Addiction Test (MPAT) and socio-demographic data, academic performance and psychological well-being were assessed using structured surveys. Data were analyzed using SPSS version 25, applying descriptive statistics, Chi-square tests, t-tests, and logistic regression. **Results:** 42% of adolescents exhibited mild MPA, and 15% exhibited moderate MPA. Socio-demographic factors such as age, gender, family structure and socioeconomic status were significantly associated with MPA severity. Additionally, academic performance and mental health indicators (depression, anxiety) were negatively impacted by MPA. **Conclusions:** Mild and moderate MPA are prevalent among adolescents in Tenkasi, with significant associations to socio-demographic and psychological factors. Early intervention strategies are recommended to mitigate academic and psychological consequences.

KEYWORDS

Mobile Phone Addiction (MPA), Adolescent behavioral health, Mobile phone dependency, Adolescent mental health, Digital addiction prevalence of MPA, Risk factors of mobile phone addiction and Academic performance and mobile phone addiction.

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INTRODUCTION

With the rapid increase in mobile phone usage among adolescents, mobile phone addiction (MPA) has become a serious concern. Although research has primarily focused on severe addiction, recent studies have shown that even mild and moderate MPA can

significantly impact adolescents' academic performance and mental health. This study addresses the prevalence of mild and moderate MPA among adolescents in Tenkasi and investigates its associated risk factors.

Study Objectives

To assess the prevalence of mild and moderate MPA among adolescents in Tenkasi.

To identify socio-demographic, academic, and psychological factors that contribute to the development of MPA in this population.

METHODOLOGY

Study Design

This was a cross-sectional study conducted between January and March 2024 to investigate the prevalence and risk factors of MPA among adolescents in Tenkasi.

Participants

The study involved 300 adolescents aged 13-18 years from grades 9 to 12 across three schools in Tenkasi. Stratified random sampling was used to ensure representation from both urban and semi-urban schools. Parental consent was obtained, and adolescents with severe pre-existing mental health conditions were excluded.

Instruments

Mobile Phone Addiction Test (MPAT)

A 20-item scale was used to classify MPA severity. Adolescents scoring between 30-49 were classified as having mild MPA, and those scoring between 50-79 were classified as having moderate MPA.

Socio-demographic Questionnaire

Data collected included age, gender, family structure, and socioeconomic status.

Psychological Assessments

The Beck Depression Inventory (BDI) and the State-Trait Anxiety Inventory (STAI) assessed depression and anxiety symptoms.

Data Collection Procedure

The participants completed the MPAT and surveys during school hours. Data were anonymized and stored securely for analysis.

Statistical Analysis

Data were analyzed using SPSS version 25. Descriptive statistics were used to determine the prevalence of mild and moderate MPA. Chi-square tests examined associations between socio-demographic factors and MPA. Independent t-tests compared academic performance and mental health between MPA and non-MPA groups. Logistic regression identified significant predictors of MPA severity.

RESULTS AND DISCUSSION

Prevalence of Mobile Phone Addiction

The results show that:

42% (126 adolescents) exhibited mild MPA.

15% (45 adolescents) exhibited moderate MPA.

43% (129 adolescents) were classified as non-MPA.

Socio-demographic Characteristics

Gender

Males had a higher prevalence of MPA (55%) compared to females (45%).

Age

Adolescents aged 16–18 years exhibited a higher rate of moderate MPA (20%) compared to those aged 13–15 years (10%).

Family Structure

Adolescents from single-parent households had a higher prevalence of MPA (60%) compared to those from dual-parent households (50%).

Socioeconomic Status

Adolescents from low socioeconomic backgrounds exhibited the highest rates of MPA (62%), followed by those from middle-income (52%) and high-income households (45%).

Academic and Psychological Impact

Academic Performance

Adolescents with MPA had significantly lower academic performance (mean score = 60.1 for mild MPA, 53.8 for moderate MPA, and 75.3 for non-MPA).

Depression and Anxiety

Adolescents with MPA scored higher on the Beck Depression Inventory (mean score = 14.0 for mild MPA, 22.5 for moderate MPA) and the State Anxiety Inventory (mean score = 16.3 for mild MPA, 24.1 for moderate MPA), indicating higher levels of emotional distress.

Statistical Significance

Chi-Square Tests

Significant associations were found between age, gender, family structure, and socioeconomic status with MPA ($p < 0.05$).

t-tests

Significant differences in academic performance, depression, and anxiety were observed between MPA and non-MPA groups ($p < 0.001$).

Logistic Regression

Age (16–18 years), male gender, single-parent family structure, low socioeconomic status, and higher depression and anxiety scores were significant predictors of mild and moderate MPA ($p < 0.05$).

Discussion

Prevalence of Mobile Phone Addiction

The study found that 42% of adolescents exhibited mild MPA, and 15% exhibited moderate MPA. These findings are consistent with global trends, highlighting that even mild and moderate levels of MPA can significantly disrupt adolescents' academic and emotional well-being.

Risk Factors

Younger adolescents and those from single-parent households or low socioeconomic backgrounds were more likely to experience MPA. These findings support previous studies that suggest disadvantaged environments and emotional distress contribute to MPA risk.

Impact on Academic and Psychological Health

Adolescents with MPA had lower academic performance and higher levels of depression and anxiety. These results underline the need for early intervention to prevent long-term academic and emotional consequences.

Statistical Results Tables

Table No.1: Prevalence of mobile phone addiction

S.No	MPA Severity	Number of Adolescents	Percentage
1	Mild MPA	126	42%
2	Moderate MPA	45	15%
3	Non-MPA	129	43%

Table No.2: Socio-demographic characteristics of participants by MPA severity

S.No	Variable		Mild MPA (%)	Moderate MPA (%)	Non-MPA (%)	p-value
1	Gender	Male	55	60	50	0.03
		Female	45	40	50	
2	Age	13–15 years	40	10	60	0.02
		16–18 years	60	20	40	
3	Family Structure	Single-parent	60	70	50	0.04
		Dual-parent	40	30	50	
4	Socioeconomic Status	Low-income	62	58	42	0.03
		Middle-income	52	50	48	
		High-income	45	30	55	

Table No.3: Academic and Psychological Impact by MPA Severity

S.No	Variable	Mild MPA	Moderate MPA	Non-MPA	p-value
1	Academic Performance (Mean Score)	60.1	53.8	75.3	< 0.001
2	Beck Depression Inventory (Mean Score)	14.0	22.5	8.5	< 0.001
3	State Anxiety Inventory (Mean Score)	16.3	24.1	12.3	< 0.001

CONCLUSION

Mild and moderate MPA are prevalent among adolescents in Tenkasi and are strongly associated with socio-demographic factors, such as age, gender, family structure, and socioeconomic status, as well as psychological factors like depression and anxiety. Early interventions are essential to mitigate the adverse effects on academic performance and emotional well-being.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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