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RESEARCH ARTICLE

Understanding Mobile Dependency in Adolescents: The Interplay of Gender, Domicile, and Mental Health

S. RAJESWARI[1], K. MAHESWARI[2]

[1]*Assistant Professor, Department of Social Work, Jamal Mohamed College (Autonomous), (Affiliated to Bharathidasan University), Tiruchirappalli – 620 020, rajeswari@jmc.edu, ORCID id: 0000-0002-8688-2483*

[2]*Assistant Professor, Department of Social Work, Bharathidasan University, Khajamalai Campus, Tiruchirappalli – 620 023, maheshranjith006@bdu.ac.in ORCID id:0009-0002-2258-840X*

Corresponding author: maheshranjith006@bdu.ac.in

ABSTRACT

Adolescent mobile dependency has become an important public health and social issue, affecting the mental, social, and physical well-being of young people. Rising levels of anxiety, depression, reduced face-to-face interaction, and physical health complaints, particularly in the post-COVID-19 period, highlight the need for systematic investigation. This study examined the association between socio-demographic factors and mobile phone dependency and its dimensions among adolescent learners in a government-aided school in Tiruchirappalli district. A descriptive research design was adopted. Out of 204 adolescent students, 190 provided informed consent, and a representative sample of 100 participants was selected using a disproportionate random sampling method. Data were collected in August 2025 through a self-constructed questionnaire and the standardized Test of Mobile Dependency developed by Chóliz, which measures abstinence, loss of control, and tolerance. Interviews were used to obtain responses. Data analysis included descriptive statistics, the Kruskal Wallis test, and the Mann–Whitney U test. The findings revealed that 59 percent of participants exhibited high mobile dependency. A significant difference was observed across age groups with respect to the abstinence dimension of mobile dependency. No significant associations were found between other socio-demographic variables and mobile dependency. The study concludes that adolescent mobile dependency is prevalent and underscores the need for targeted interventions, awareness programs, and counselling initiatives within schools and communities.

Keywords: *Adolescents, Mobile dependency, Abstinence, Lack of control, Tolerance, Life skills.*

INTRODUCTION

In contemporary society, the increasing reliance of Adolescents on mobile devices has emerged as a critical behavioural and technological concern. Smartphones are essential for communication, learning, and information access, the intensifying dependence on these devices has raised questions concerning their psychological, social, and physical consequences, alongside broader socio - technical transformations. Recent Statistics indicate that a considerable proportion of Teenagers own smartphones and engage with them for extended durations each day (1). Digital connectivity enhances peer interaction and learning opportunities, excessive use remains a

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potential risk factor for multiple adverse outcomes. Griffiths and Kuss define mobile dependency as a behavioural tendency characterized by compulsive and habitual device use, often resulting in the neglect of essential tasks and responsibilities (2). Developmental Stage of Adolescence marked by social sensitivity, identity exploration, and emotional volatility amplifies susceptibility to such dependency. Smartphones through Instant messaging, Gaming, and Social networking, deliver immediate social gratification, reinforcing the need for peer validation. Emerging neurodevelopmental evidence indicates that Adolescents exhibit heightened reactivity to reward-based digital stimuli, thereby predisposing them to patterns of compulsive engagement. The design of mobile environments further accentuates this behaviour. Engagement-driven features such as notifications, algorithmic content recommendations, and infinite scrolling are intentionally structured to sustain user attention and diminish external cues for disengagement (3). These persuasive design mechanisms contribute substantially to dependency patterns, particularly among Adolescents with limited self-regulatory capacities (4). Adolescents demonstrating higher levels of mobile dependency experience multifaceted implications. Psychologically, excessive mobile use is associated with Anxiety, Depression related symptoms, and disturbed sleep. Socially, reliance on mobile communication may weaken direct interpersonal interactions and inhibit social skill development. Physically, sedentary behaviour associated with prolonged device use contributes to musculoskeletal problems and eye sight related strain. COVID-19 pandemic notably amplified these patterns, as prolonged remote learning and restricted socialization heightened dependence on mobile technology. Hence, the present study aims to examine connection between socio-demographic factors and various dimensions of mobile dependency among Adolescent students enrolled in a reputed government-aided school in the Tiruchirappalli district. This investigation seeks to contribute to evidence-based understanding of balanced mobile engagement and its implications for adolescent well-being in a rapidly evolving digital environment.

OBJECTIVES OF THE RESEARCH

This study aims to explore the relationship between socio-demographic characteristics and different dimensions of mobile dependency among adolescent students studying in a reputed government-aided school in Tiruchirappalli district.

The specific objectives of this study are as follows:

(i) To analyse the socio-demographic factors associated with the respondents.

(ii) To identify the purpose of mobile usage, time spent on mobile phone daily, impact of mobile phone usage on study time and physical and psychological problems encountered by the participants due to mobile phone use.

(iii) To assess both the overall and dimension-specific levels of mobile dependency among the respondents.

(iv) To study the difference between various socio-demographic variables and the level of mobile dependency across its different dimensions.

(v) To propose appropriate Life skills interventions aimed at reducing mobile dependency and enhancing the mental health of Adolescents.

REVIEW OF LITERATURE

A cross-sectional study conducted to investigate mobile dependency among adolescents by Ramaiah et al. (2020) found that approximately 75% of participants exhibited mobile phone dependency. However, the study reported no significant association between mobile dependency and depression. Yadav et al. (2021) found that excessive mobile phone use adversely influenced behavioural outcomes and academic performance among adolescents studying in selected schools of Uttarakhand, India. Jayalakshmi et al. (2017) examined online game addiction among adolescents in Pondicherry, India, and reported significant associations between online game addiction and diminished physical activity, sleep disturbance, nervousness, impaired social functioning, and depressed mood. Nisha et al.(2025) revealed that the capability of involving controlled gaming conditions as remedial apparatuses to upgrade profound and interactive abilities. Similarly, Mahalakshmi and Sivasubramanian (2023) reported that Indian adolescents spent an average of approximately 3.15 hours per day on smartphones, with excessive smartphone use contributing to adverse effects on sleep patterns and short-term memory. In Ahmedabad, Parekh and Desai (2025) reported a 67% prevalence of smartphone addiction among adolescents, with a slightly higher prevalence among girls. Gangadharan et al. (2022) found that mobile phone addiction was more prevalent among boys, adolescents with three or more siblings, those belonging to nuclear families, and late-onset users aged 16 years and above. Among children aged 5–12 years in South Kerala, Sulaiman et al. (2021) found that nearly half of

the participants exhibited mobile phone addiction. Higher socioeconomic status, educated fathers, normal weight, visual problems, headache, poor concentration, and disturbed sleep were significantly associated with mobile phone addiction. Soni et al. (2017) established a significant association between smart phone addiction, poor sleep quality, and behavioural problems among adolescents using standardized measures such as the Smartphone Addiction Scale, Depression Anxiety Stress Scales-21, and Pittsburgh Sleep Quality Index. In contrast, Das et al. (2024), in a study of young adults in Delhi, found no significant association between smart phone addiction and obesity, although an inverse relationship was observed between smart phone addiction and being underweight, suggesting possible nutritional and lifestyle implications. Among adolescents in Jammu, Dogra and Sharma (2024) reported higher susceptibility to smart phone addiction among female adolescents and urban residents. Similarly, Mittal and Shukla (2025) identified a significant relationship between smart phone addiction and mental health challenges among adolescents preparing for the National Eligibility cum Entrance Test (NEET) in Kota, Rajasthan. In a large population-based survey in rural Karnataka, Nagaraj et al. (2023) employed a stratified two-stage cluster sampling design and reported that approximately 60% of youth were cell-phone users, of whom 15.9% were at risk of mobile phone addiction. Gender, occupation, and marital status emerged as significant predictors of addiction risk. Using a descriptive correlational research design, Murthy and Tauro (2024) reported that 27.7% of adolescents were addicted to smart phones, with gender, academic class, duration of smart phone use, recent changes in vision, and type of internet package identified as important associated factors. International evidence has also highlighted the relationship between digital technology use and adolescent health. Bélanger et al. (2011) identified a U-shaped association between the intensity of Internet use and adolescent health, suggesting that both very low and very high levels of Internet use may be associated with poorer health outcomes. Martin and Maheswari (2025) found self esteem and assertiveness of adolescents are significantly influenced by emotional and psychological assistance from family and social connections than smart phones. Tripathi and Farooqi (2023) found that social media has limited effect on empathy and impulsiveness, and a significant relationship was found between social media engagement and passive aggression among the young adults. Chóliz (2012) examined mobile-phone dependence among adolescents through the Test of Mobile Phone Dependence (TMD), emphasizing the importance of assessing problematic mobile-phone use as a behavioural phenomenon. Griffiths and Kuss (2017) discussed adolescent social media addiction and highlighted its behavioural and psychological dimensions, while Alter (2018) described how digital technologies are designed to encourage prolonged and repeated engagement. More recently, Anderson et al. (2023) documented the widespread use of social media and technology among teenagers, demonstrating the increasingly central role of digital platforms in adolescent daily life. Indian studies have also examined the broader psychosocial context of adolescence. Rajeswari and Eljo (2013a) investigated the problems experienced by adolescent boys and girls and significant differences were found, while Rajeswari and Eljo (2013b) examined life skills among late-adolescent school students in Tiruchirappalli and found that little more than half(53%) had low level of capacity to cope with stress. More recently, Rajeswari and Eljo (2023) examined adolescent school students and life skills, further emphasizing the importance of psychosocial competencies during adolescence. Overall, the available literature indicates that excessive use of smartphones, mobile phones, the Internet, social media, and online games is associated with a range of behavioural, psychological, social, academic, and lifestyle-related concerns among adolescents. Reported outcomes include sleep disturbance, poor concentration, behavioural problems, reduced physical activity, impaired social functioning, mental health difficulties, and poorer academic performance. However, the strength and direction of these associations vary across populations and study settings, indicating the need for further context-specific research examining problematic digital technology use alongside psychosocial and developmental factors among adolescents.

RESEARCH GAP

A critical appraisal of the above literature shows a paucity of research addressing the intersection of socio-demographic determinants and Mobile or Smart - Phone dependency specifically among Adolescents studying in government-funded schools in both India and other countries. Hence, the present study is undertaken by the researcher for fulfilling the above identified empirical gap.

METHODOLOGY ADOPTED IN THE RESEARCH

(a) Research Design

Descriptive Research Design has been used in the present study, as it aims to systematically explore and delineate the characteristics, patterns, and influencing variables related to Mobile Dependency among Adolescent learners. This design is particularly suitable for providing a detailed depiction of existing phenomena without manipulating any variables.

(b) Study Population, Sample Size, and Sampling Technique Adopted

Study Population consisted of 204 Students, among whom 190 learners voluntarily provided informed consent to participate in the study. Out of these, a total of 100 respondents were selected using Simple Random Sampling Method. This approach was adopted to ensure adequate representation across varied subgroups within the target population, thereby enabling a more comprehensive and precise analysis of diverse Mobile Dependency behaviours among adolescents.

(c) Tool of Data Collection

A Self-prepared Questionnaire was developed to obtain Socio-demographic and Mobile Usage-related Information from the respondents. This instrument served as the contextual framework necessary to interpret patterns of Mobile Dependency with respect to variables such as Age, Gender, Educational Level, Birth Order, Monthly Family Income, Number of Siblings, Domicile, Study Time, Type of Family, Purpose of Mobile Usage, Hours Spent on Mobile Phone, and experienced Physical and Psychological Problems arising from Mobile Phone use. Test of Mobile Dependency (TMD) developed by Chóliz[18] was incorporated. It comprises 22 items categorized under 3 key dimensions namely Abstinence, Lack of Control, and Tolerance which collectively assess the multifaceted behavioural and psychological aspects of Mobile Dependency.

(d) Method Used for Data Collection

The data for this research were collected using Interview Method with each selected respondent. Direct Interview technique facilitated clarification of questionnaire items, thereby ensuring higher accuracy and completeness of responses. This approach also minimized response bias and significantly enhanced the Reliability of the collected data.

(e) Period of Data Collection

The data collection process was carried out during August 2025.

(f) Statistical Software Used

The quantitative data obtained from respondents were systematically analysed using the IBM SPSS Software, Version 31.0. This software enabled the researcher to perform precise statistical computations, derive meaningful interpretations, and present findings in an empirically sound manner.

(g) Statistical Tests Used and its Justification

Descriptive Statistics was used to frequency and percentage pertaining to Demographic characteristics of respondents, participants perception relevant to Mobile use and for knowing Low and High levels of Mobile dependency and its dimensions. Kruskal Wallis Test and Mann-Whitney U Test is used in this research.

Reasons for using Non – Parametric Statistical Tests is given below.

Shapiro–Wilk test showed a significant deviation from Normality for Mobile dependency (Dependent Variable scores) with all 3 Age groups (W = 0.637, 0.600, 0.628; and all p values < 0.001); 3 categories of Number of Siblings (W = 0.618, 0.625, 0.641; and all p values < 0.001); 3 Monthly income groups (W = 0.635, 0.619, 0.552; and all p values < 0.001), 2 categories of Number of hours spent on mobile phone daily (W = 0.638, 0.595; and all p values < 0.001), 3 Mobile phone usage purpose groups (W = 0.643, 0.592, 0.624; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (W = 0.598, 0.638, 0.643 ; and all p values < 0.001), 3 Education groups (W = 0.635, 0.612, 0.621; and all p values < 0.001), 3 categories of Birth order (W = 0.624, 0.635, 0.579; and all p values < 0.001), 2 Gender groups (W = 0.631, 0.609; and all p values < 0.001), 2 categories of Domicile (W = 0.618, 0.600; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (W = 0.621, 0.632; and all p values < 0.001) and 2 categories of Study time (W = 0.643, 0.622; and all p values < 0.001). Similarly, Kolmogorov-Smirnov test also shows that data was Non – normally distributed for Mobile dependency (Dependent Variable scores) with all 3 Age groups (D = 0.345, 0.420, 0.383; and all p values < 0.001); 3 categories of Number of Siblings (D = 0.397, 0.388, 0.391; and all p values < 0.001); 3 Monthly income groups (D = 0.357, 0.396, 0.473 and all p values < 0.001), 2 categories of Number of hours spent on mobile phone daily (D = 0.338, 0.425; and all p values < 0.001), 3 mobile phone usage purpose groups (D = 0.350, 0.428, 0.392; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (D = 0.422, 0.346, 0.350; and all p values < 0.001), 3 Education groups (D = 0.359, 0.406, 0.392; and all p values < 0.001), 3 categories of Birth order (D = 0.388, 0.358, 0.440; and all p values < 0.001), 2 Gender groups (D = 0.372, 0.410; and all p values < 0.001), 2 categories of Domicile (D = 0.398, 0.435; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (D = 0.393, 0.370; and all p values < 0.001) and 2 categories of Study time (D = 0.350, 0.392; and all p values < 0.001). 1 category of Number of hours spent on mobile phone

daily is omitted in above results of Shapiro–Wilk test and Kolmogorov-Smirnov test. There was a significant deviation from Normality and hence we used Non – Parametric Statistical Tests. Kruskal Wallis Test was used to examine significant difference in Independent Variables namely Age, Number of Siblings, Number of hours spent on mobile phone daily, Mobile phone usage purpose, Physical problems experienced due to mobile phone usage, Education and Birth Order having 3 categories and Mobile dependency (Dependent Variable). Mann-Whitney U Test was used to investigate significant variation in Independent Variables namely Gender, Domicile, Psychological problems groups faced due to mobile phone usage and Study time having 2 categories and Mobile dependency (Dependent Variable).

Shapiro–Wilk test showed a significant deviation from Normality for Abstinence dimension of Mobile dependency (Dependent Variable scores) with all 3 Age groups (W = 0.631, 0.554, 0.640; and all p values < 0.001); 3 categories of Number of Siblings (W = 0.618, 0.634, 0.566; and all p values < 0.001); 3 Monthly income groups (W = 0.635, 0.629, 0.552; and all p values < 0.001), 2 categories of Number of hours spent on mobile phone daily (W = 0.606, 0.632; and all p values < 0.001), 3 Purpose of mobile phone usage groups (W = 0.630, 0.630, 0.638; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (W = 0.632, 0.628, 0.630 ; and all p values < 0.001), 3 Education groups (W = 0.637, 0.612, 0.621; and all p values < 0.001), 3 categories of Birth order (W = 0.634, 0.618, 0.642; and all p values < 0.001), 2 Gender groups (W = 0.635, 0.609; and all p values < 0.001), 2 categories of Domicile (W = 0.624, 0.600; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (W = 0.634, 0.615; and all p values < 0.001) and 2 categories of Study time (W = 0.630, 0.622; and all p values < 0.001). Similarly, Kolmogorov-Smirnov test also shows that data was Non - normally distributed for Abstinence dimension of Mobile dependency (Dependent Variable scores) with all 3 Age groups (D = 0.373, 0.457, 0.336; and all p values < 0.001); 3 categories of Number of Siblings (D = 0.397, 0.367, 0.455; and all p values < 0.001); 3 Monthly income groups (D = 0.357, 0.377, 0.473; and all p values < 0.001), 2 categories of Number of hours spent on mobile phone daily (D = 0.414, 0.368; and all p values < 0.001), 3 Purpose of mobile phone usage groups (D = 0.385, 0.374, 0.363; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (D = 0.367, 0.382, 0.385; and all p values < 0.001), 3 Education groups (D = 0.345, 0.406, 0.392 ; and all p values < 0.001), 3 categories of Birth order (D = 0.363, 0.398, 0.349; and all p values < 0.001), 2 Gender groups (D = 0.356, 0.410; and all p values < 0.001), 2 categories of Domicile (D = 0.387, 0.435; and all p values < 0.001),

2 Psychological problems groups faced due to mobile phone usage (D = 0.362, 0.402; and all p values < 0.001) and 2 categories of Study time (D = 0.385, 0.392; and all p values < 0.001). 1 category of Number of hours spent on mobile phone daily is omitted in above results of Shapiro–Wilk test and Kolmogorov-Smirnov test. There was a significant deviation from Normality and hence we used Non – Parametric Statistical Tests. Kruskal Wallis Test was used to examine significant difference in Independent Variables namely Age, Number of Siblings, Number of hours spent on mobile phone daily, Purpose of mobile phone usage, Physical problems experienced due to mobile phone usage, Education and Birth Order having 3 categories and Abstinence dimension of Mobile dependency (Dependent Variable). Mann-Whitney U Test was used to investigate significant variation in Independent Variables namely Gender, Domicile, Psychological problems groups faced due to mobile phone usage and Study time having 2 categories and Abstinence dimension of Mobile dependency (Dependent Variable). Shapiro–Wilk test showed a significant deviation from Normality for Loss of control dimension of Mobile dependency (Dependent Variable scores) with all 3 Age groups (W = 0.635, 0.627, 0.613; and all p values < 0.001); 3 categories of Number of Siblings (W = 0.635, 0.610, 0.641 ; and all p values < 0.001); 3 Monthly income groups (W = 0.637, 0.624, 0.684; and all p values < 0.001), 3 categories of Number of hours spent on mobile phone daily (W = 0.750, 0.636, 0.621; and all p values < 0.001), 3 Purpose of mobile phone usage group (W = 0.643, 0.623, 0.624; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (W = 0.629, 0.638, 0.643 ; and all p values < 0.001), 3 Education groups (W = 0.635, 0.632, 0.610; and all p values < 0.001), 2 Gender groups (W = 0.636, 0.619; and all p values < 0.001), 2 categories of Domicile (W = 0.633, 0.664; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (W = 0.631, 0.637; and all p values < 0.001) and 2 categories of Study time (W = 0.630, 0.628; and all p values < 0.001). Kolmogorov-Smirnov test also shows that data was Non - normally distributed for Loss of control dimension of Mobile dependency (Dependent Variable scores) with all 3 Age groups (D = 0.359, 0.382, 0.406; and all p values < 0.001); 3 categories of Number of Siblings (D = 0.359, 0.409, 0.391; and all p values < 0.001); 3 Monthly income groups (D = 0.345, 0.387,

0.367; and all p values < 0.001), 3 categories of Number of hours spent on mobile phone daily (D = 0.385, 0.353, 0.393; and all p values < 0.001), 3 Purpose of mobile phone usage groups (D = 0.350, 0.390, 0.392; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (D = 0.376, 0.346, 0.350; and all p values < 0.001), 3 Education groups (D = 0.359, 0.372, 0.408 ; and all p values < 0.001), 3 categories of Birth order (D = 0.388, 0.345, 0.349; and all p values < 0.001), 2 Gender groups (D = 0.348, 0.395; and all p values < 0.001), 2 categories of Domicile (D = 0.365, 0.360; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (D = 0.370, 0.354; and all p values < 0.001) and 2 categories of Study time (D = 0.385, 0.379; and all p values < 0.001). There was a significant deviation from Normality and hence we used Non – Parametric Statistical Tests. Kruskal Wallis Test was used to examine significant difference in Independent Variables namely Age, Number of Siblings, Number of hours spent on mobile phone daily, Purpose of mobile phone usage, Physical problems experienced due to mobile phone usage, Education and Birth Order having 3 categories and Loss of control dimension of Mobile dependency (Dependent Variable). Mann-Whitney U Test was used to investigate significant variation in Independent Variables namely Gender, Domicile, Psychological problems groups faced due to mobile phone usage and Study time having 2 categories and Loss of control dimension of Mobile dependency (Dependent Variable).

Shapiro–Wilk test showed a significant deviation from Normality for Tolerance dimension of Mobile dependency (Dependent Variable scores) with all 3 Age groups (W = 0.616, 0.632, 0.613; and all p values < 0.001); 3 categories of Number of Siblings (W = 0.618, 0.625, 0.665; and all p values < 0.001); 3 Monthly income groups (W = 0.627, 0.619, 0.684; and all p values < 0.001), 3 categories of Number of hours spent on mobile phone daily (W = 0.750, 0.636, 0.586; and all p values < 0.001), 3 Purpose of mobile phone usage group (W = 0.643, 0.600, 0.638; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (W = 0. .589, 0.638, 0.643; and all p values < 0.001), 3 Education groups (W = 0.605, 0.624, 0.635; and all p values < 0.001), 3 categories of Birth order (W = 0.616, 0.635, 0.579; and all p values < 0.001), 2 Gender groups (W = 0.631, 0.596; and all p values < 0.001), 2 categories of Domicile (W = 0.618, 0.664; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (W = 0.611, 0.637; and all p values < 0.001) and 2 categories of Study time (W = 0.630, 0.622; and all p values < 0.001). Similarly, Kolmogorov-Smirnov test also shows that data was Non - normally distributed for Tolerance dimension of Mobile dependency (Dependent Variable scores) with all 3 Age groups (D = 0.401,0.370, 0.406; and all p values < 0.001); 3 categories of Number of Siblings (D = 0.397, 0.388, 0.325 ; and all p values < 0.001); 3 Monthly income groups (D = 0.382, 0.396, 0.367; and all p values < 0.001), 3 categories of Mobile phone usage hours (D = 0.385, 0.353, 0.433; and all p values < 0.001), 3 mobile phone usage purpose groups (D = 0.350, 0.420, 0.363; and all p values < 0.001), 3 categories of Physical problems experienced due to mobile phone usage (D = 0.431, 0.346, 0.350; and all p values < 0.001), 3 Education groups (D = 0.415, 0.389, 0.361 ; and all p values < 0.001), 3 categories of Birth order (D = 0.400, 0.358, 0.440; and all p values < 0.001), 2 Gender groups (D = 0.372, 0.424; and all p values < 0.001), 2 categories of Domicile (D = 0.398, 0.360; and all p values < 0.001), 2 Psychological problems groups faced due to mobile phone usage (D = 0.408, 0.354; and all p values < 0.001) and 2 categories of Study time (D = 0.385, 0.392; and all p values < 0.001). There was a significant deviation from Normality and hence we used Non – Parametric Statistical Tests. Kruskal Wallis Test was used to examine significant difference in Independent Variables namely Age, Number of Siblings, Number of hours spent on mobile phone daily, Purpose of mobile phone usage, Physical problems experienced due to mobile phone usage, Education and Birth Order having 3 categories and Tolerance dimension of Mobile dependency (Dependent Variable). Mann-Whitney U Test was used to investigate significant variation in Independent Variables namely Gender, Domicile, Psychological problems groups faced due to mobile phone usage and Study time having 2 categories and Tolerance dimension of Mobile dependency (Dependent Variable).

RESULTS

Table 1: Socio – Demographic Characteristics of the Respondents

Variables	Categories	Number of Respondents	Percent (%)
Age	Below 16 Years	37	37
	16 - 18 Years	41	41
	18 and above Years	22	22
	Total	100	100

Gender	Male	64	64
	Female	36	36
	Total	100	100
Education	Xth Standard	37	37
	XIth Standard	30	30
	XIIth Standard	33	33
	Total	100	100
Family income per month	Below ₹ 10000	41	41
	₹ 10000 to ₹ 20000	54	54
	₹ 20000 and above	05	05
	Total	**100**	**100**
Domicile	Rural	93	93
	Urban	07	07
	Total	100	100
Type of Family	Joint Family	30	30
	Nuclear Family	70	70
	Total	100	100
Birth Order	First Child	42	42
	Second Child	39	39
	Third Child	17	17
	Fourth Child	02	02
	Total	100	100
Number of Siblings	Below 2	67	67
	2 to 4	25	25
	4 and above	08	08
	Total	**100**	**100**

Table 1 presents the socio-demographic characteristics of the respondents. It indicates that More than Two Fifth (41%) of respondents are aged between 16 and 18 years; 37 Percent are Below 16 years and 22 Percent are Above 18 years. More than Three Fifth (64%) of the participants are Male.

Females constitute 36 Percent of the respondents. More than One – Third (37 Percent) of respondents are enrolled in the 10th Class, 30 Percent of them are in the 11th Grade, and 33 Percent are in the 12th Class. More than Half (54 Percent) of the participants belong to families with a monthly income between ₹10,000 and ₹20,000, 41 Percent earn below ₹10,000 and 5 Percent report earning ₹20,000 and above per month. Majority (93 Percent) respondents reside in Rural areas and 7 Percent of them live in Urban locations. In terms of family type, More than Two – Third (70 Percent) of participants belong to Nuclear families and 30 Percent of them belong to Joint families. Birth order statistics show that More than Two – Fifth (42 Percent) of respondents are First-born children; 39 Percent are Second-born, 17 Percent are Third-born and 2 Percent are Fourth-born. Slightly More than Two – Third (67 Percent) of participants have Less than 2 siblings; 25 Percent have 2 to 4 siblings and 8 Percent have 4 and above siblings.

Table 2: Purpose of Mobile Phone Usage

Variable	Categories	Number of Respondents	Percent (%)
Purpose of Mobile Phone Usage	Games	67	67
	Reels	18	18
	Study Purpose	15	15
	Total	100	100

Table 2 reveals about objective of Mobile Phone use. It indicates that a Slightly More than Two-Third (67 Percent) of participants primarily used their Mobile Phone for Games, 18 Percent utilized it for viewing Reels and the remaining 15 Percent reported using it for Study Purpose.

Table 3: Number of Hours spent on Mobile Phone Daily

Variable	Categories	Number of Respondents	Percent
Number of Hours spent on Mobile Phone daily	Less than 2 hours	03	03
	2 to 4 hours	34	34

	More than 4 hours	63	63
	Total	100	100

Table 3 presents data on the Number of hours spent on Mobile Phone daily. It reveals that More than Three-Fifth (63 Percent) of participants use their Mobile Phone for More than 4 hours each day, 34 Percent engage with it for 2 to 4 hours daily, and 3 Percent report usage of Less than 2 hours per day.

Table 4: Respondents Perception towards impact of Mobile Phone Usage on Study Time

Variable	Categories	Number of Respondents	Percent
Study Time	Affected	85	85
	Not affected	15	15
	Total	100	100

Table 4 indicates participants perception of Mobile Phone usage impact on Study Time. It indicates that a Majority (85 Percent) of respondents perceived their Study Time to be adversely affected by Mobile Phone usage and 15 Percent reported that their Study Time remained unaffected.

Table 5: Participants Perception towards Physical Problems Experienced due to Mobile Phone Usage

Variable	Categories	Number of Respondents	Percent
Physical problems experienced due to Mobile Phone usage	Vision Problem	56	56
	Body Pain	29	29
	Other Physical Problems	15	15
	Total	100	100

Table 5 presents respondents perceptions regarding Physical Problems arising from Mobile Phone usage. It reveals that Less than Three-Fifth (56 Percent) of participants reported experiencing Vision Problems, 29 Percent encountered Body Pain, and the remaining 15 Percent reported Other Physical Problems associated withMobile Phone use.

Table 6: Respondents Perception towards Psychological Problems Faced due to Mobile Phone Usage

Variable	Categories	Number of Respondents	Percent
Psychological problems faced due to Mobile Phone usage	Anxiety	32	32
	Sleep disturbances	68	68
	Total	100	100

Table 6 presents participants perceptions of the Psychological Problems associated with Mobile Phone usage. It indicates that More than Two-Third (68 Percent) of the respondents reported experiencing Sleep disturbances attributable to Mobile Phone use and 32 Percent had mentioned to be suffering from Anxiety related to its usage.

Table 7: Level of Mobile Dependency among the Participants

Variable	Categories	Number of Respondents	Percent
Abstinence dimension of Mobile Dependency	Low	57	57
	High	43	43
	Total	100	100
Lack of Control dimension of Mobile Dependency	Low	55	55
	High	45	45
	Total	100	100

Tolerance dimension of Mobile Dependency	Low	60	60
	High	40	40
	Total	100	100
Overall Mobile Dependency	Low	41	41
	High	59	59
	Total	100	100

Table 7 shows Mobile Dependency Level among respondents across its key dimensions. A Low level of the Abstinence dimension is observed among Less than Three-Fifth (57 Percent) of participants and 43 Percent of them exhibit a high level. More than Half (55 Percent) of respondents demonstrate a Low level of Lack of Control, whereas 45 Percent of them reflect a high level. Three-Fifth (60 Percent) of participants show a Low level regarding the Tolerance dimension and 40 Percent of them displayed a high level. Slightly Less than Three-Fifth (59 Percent) of respondents showed a High level of Overall Mobile Dependency and 41 Percent of them fall under the Low-level category.

Table 8: Kruskal Wallis Test Results between Age and Mobile Dependency as well as its Dimensions among the respondents of this research

Mobile Dependency and its dimensions	Age	N	Mean Rank	Chi – Square (χ^2)	df	P value
Abstinence dimension of Mobile Dependency	Below 16 Years	37	57.38	7.594	2	0.022
	16 - 18 Years	41	42.41			
	18 and above Years	22	54.00			
Lack of Control dimension of Mobile Dependency	Below 16 Years	37	55.03	2.075	2	0.354
	16 - 18 Years	41	48.73			
	18 and above Years	22	46.18			
Tolerance dimension of Mobile Dependency	Below 16 Years	37	49.42	0.449	2	0.799
	16 - 18 Years	41	52.45			
	18 and above Years	22	48.68			
Overall Mobile Dependency	Below 16 Years	37	54.32	1.674	2	0.433
	16 - 18 Years	41	47.07			
	18 and above Years	22	50.45			

The results of the Kruskal – Wallis test presented in Table 8 reveal a significant difference across Age categories of respondents concerning the Abstinence dimension of Mobile Dependency ($\chi^2 = 7.594$; $P = 0.022 < 0.050$). No significant variation is observed between Age categories of participants and Lack of Control dimension of Mobile Dependency ($\chi^2 = 2.075$; $P = 0.354 > 0.050$). No significant variation is seen between Age categories of respondents and Tolerance dimension of Mobile Dependency ($\chi^2 = 0.449$; $P = 0.799 > 0.050$). Overall Mobile Dependency does not differ significantly across Age categories ($\chi^2 = 1.674$; $P = 0.433 > 0.050$) of participants.

Table 9: Kruskal Wallis Test Results between Number of Siblings and Mobile Dependency as well as its Dimensions among participants of this research

Mobile Dependency and its dimensions	Number of Siblings	N	Mean Rank	Chi – Square (χ^2)	df	P value
Abstinence dimension of Mobile Dependency	Below 2	67	48.40	3.795	2	0.150
	2 to 4	25	51.00			
	4 and above	08	66.50			
Lack of Control dimension of Mobile Dependency	Below 2	67	51.13	1.833	2	0.400
	2 to 4	25	46.00			

	4 and above	08	59.25			
Tolerance dimension of Mobile Dependency	Below 2	67	49.90	0.369	2	0.831
	2 to 4	25	50.50			
	4 and above	08	55.50			
Overall Mobile Dependency	Below 2	67	49.40	1.656	2	0.437
	2 to 4	25	50.00			
	4 and above	08	61.25			

Kruskal - Wallis test results presented in Table 9 reveal that there is no significant difference between Number of Siblings and Abstinence (χ^2 = 3.795; P = 0.150 > 0.050); Lack of Control (χ^2 = 1.833; P = 0.400 > 0.050) as well as Tolerance (χ^2 = 0.369; P = 0.831 > 0.050) dimensions of Mobile Dependency among the respondents. No significant variation is observed between Number of Siblings categories and overall Mobile Dependency (χ^2 = 1.656; P = 0.437 > 0.050) among the participants.

Table 10: Kruskal Wallis Test Results between Family Income per Month and Mobile Dependency as well as its Dimensions among respondents of this research

Mobile Dependency and its dimensions	**Family Income per Month**	**N**	**Mean Rank**	**Chi – Square (χ^2)**	**df**	**P value**
Abstinence dimension of Mobile Dependency	Below ₹ 10000	41	52.17	1.257	2	0.533
	₹ 10000 to ₹ 20000	54	50.30			
	₹ 20000 and above	05	39.00			
Lack of Control dimension of Mobile Dependency	Below ₹ 10000	41	53.61	1.076	2	0.584
	₹ 10000 to ₹ 20000	54	48.37			
	₹ 20000 and above	05	48.00			
Mobile Dependency and its dimensions	**Family Income per Month**	**N**	**Mean Rank**	**Chi – Square (χ^2)**	**df**	**P value**
Tolerance dimension of Mobile Dependency	Below ₹ 10000	41	51.23	0.064	2	0.969
	₹ 10000 to ₹ 20000	54	49.94			
	₹ 20000 and above	05	50.50			
Overall Mobile Dependency	Below ₹ 10000	41	53.17	1.480	2	0.477
	₹ 10000 to ₹ 20000	54	49.44			
	₹ 20000 and above	05	40.00			

The results of the Kruskal – Wallis test presented in Table 10 reveals no significant difference across Family Income per Month categories of respondents concerning the Abstinence dimension of Mobile Dependency (χ^2 = 1.257; P = 0.533 > 0.050). No significant variation is observed between Family Income per Month categories of participants and Lack of Control dimension of Mobile Dependency (χ^2 = 1.076; P = 0.584 > 0.050). No significant variation is seen between Family Income per Month categories of participants and Tolerance dimension of Mobile Dependency (χ^2 = 0.064; P = 0.969 > 0.050). Overall Mobile Dependency does not differ significantly across Family Income per Month categories (χ^2 = 1.480; P = 0.477 > 0.050) of participants.

Table 11: Kruskal Wallis Test Results between Number of Hours spent on Mobile Phone Daily and Mobile Dependency as well as its Dimensions among participants of this research

Mobile Dependency and its dimensions	**Number of Hours spent on Mobile Phone Daily**	**N**	**Mean Rank**	**Chi – Square (χ^2)**	**df**	**P value**
Abstinence dimension of Mobile Dependency	Less than 2 hours	03	79.00	4.806	2	0.090
	2 to 4 hours	34	46.65			
	More than 4 hours	63	51.22			
Lack of Control dimension of Mobile Dependency	Less than 2 hours	03	61.33	2.134	2	0.344
	2 to 4 hours	34	54.47			
	More than 4 hours	63	47.84			
Tolerance dimension of Mobile Dependency	Less than 2 hours	03	63.83	4.999	2	0.082
	2 to 4 hours	34	56.97			
	More than 4 hours	63	46.37			
Overall Mobile Dependency	Less than 2 hours	03	80.00	6.916	2	0.031
	2 to 4 hours	34	55.00			

	More than 4 hours	63	46.67			

Kruskal - Wallis test results presented in Table 11 reveal that there is no significant difference between Number of Hours spent on Mobile Phone daily and Abstinence ($\chi^2 = 4.806$; P = 0.090 > 0.050); Lack of Control ($\chi^2 = 2.134$; P = 0.344 > 0.050) as well as Tolerance ($\chi^2 = 4.999$; P = 0.082 > 0.050) dimensions of Mobile Dependency among the respondents. No significant variation is observed between Number of Hours spent on Mobile Phone daily categories and overall Mobile Dependency ($\chi^2 = 6.916$; P = 0.031 > 0.050) among the participants.

Table 12: Kruskal Wallis Test Results between Purpose of Mobile Phone Usage and Mobile Dependency as well as its Dimensions among respondents of this research

Mobile Dependency	Purpose of Mobile Phone Usage	N	Mean Rank	Chi – Square (χ^2)	df	P value
Abstinence dimension of Mobile Dependency	Games	67	50.64	0.072	2	0.965
	Reels	18	51.22			
	Study Purpose	15	49.00			
Lack of Control dimension of Mobile Dependency	Games	67	48.15	2.478	2	0.290
	Reels	18	58.56			
	Study Purpose	15	51.33			
Tolerance dimension of Mobile Dependency	Games	67	47.66	2.961	2	0.228
	Reels	18	58.28			
	Study Purpose	15	53.83			
Overall Mobile Dependency	Games	67	46.42	5.741	2	0.057
	Reels	18	60.56			
	Study Purpose	15	56.67			

The results of the Kruskal – Wallis test presented in Table 12 reveals no significant difference across objective of Mobile Phone usage categories of respondents concerning the Abstinence dimension of Mobile Dependency ($\chi^2 = 0.072$; P = 0.965 > 0.050). No significant variation is observed between purpose of Mobile Phone use categories of participants and Lack of Control dimension of Mobile Dependency ($\chi^2 = 2.478$; P = 0.290 > 0.050). No significant variation is seen between objective of Mobile Phone usage categories of participants and Tolerance dimension of Mobile Dependency ($\chi^2 = 2.961$; P = 0.228 > 0.050). Overall Mobile Dependency does not differ significantly across purpose of Mobile Phone use categories ($\chi^2 = 5.741$; P = 0.057 > 0.050) of participants.

Table 13: Kruskal Wallis Test Results between Physical Problems Experienced due to Mobile Phone Usage and Mobile Dependency as well as its Dimensions among participants of this research

Mobile Dependency and its dimensions	Physical Problems Experienced due to Mobile Phone Usage	N	Mean Rank	Chi – Square (χ^2)	df	P value
Abstinence dimension of Mobile Dependency	Vision Problem	56	51.32	0.146	2	0.929
	Body Pain	29	49.69			
	Other Physical Problems	15	49.00			
Lack of Control dimension of Mobile Dependency	Vision Problem	56	49.43	0.244	2	0.885
	Body Pain	29	52.14			
	Other Physical Problems	15	51.33			
Tolerance dimension of Mobile Dependency	Vision Problem	56	46.57	3.345	2	0.188
	Body Pain	29	56.36			
	Other Physical Problems	15	53.83			
Mobile Dependency and its dimensions	**Physical Problems Experienced due to Mobile Phone Usage**	**N**	**Mean Rank**	**Chi – Square (χ^2)**	**df**	**P value**
Overall Mobile Dependency	Vision Problem	56	46.96	2.708	2	0.258
	Body Pain	29	54.14			
	Other Physical Problems	15	56.67			

Kruskal - Wallis test results presented in Table 13 reveal that there is no significant difference between Physical Problems faced due to Mobile Phone use and Abstinence ($\chi^2 = 0.146$; P = 0.929 > 0.050); Lack of Control ($\chi^2 = 0.244$; P = 0.885 > 0.050) as well as Tolerance ($\chi^2 = 3.345$; P = 0.188 > 0.050)dimensions of Mobile Dependency among the respondents. No significant variation is observed between Physical Problems experienced due to Mobile Phone usage and overall Mobile Dependency ($\chi^2 = 2.708$; P = 0.258 > 0.050) among the participants.

Table 14: Kruskal Wallis Test Results between Education and Mobile Dependency as well as its Dimensions among respondents of this research

Mobile Dependency and its dimensions	Education	N	Mean Rank	Chi – Square (χ^2)	df	P value
Abstinence dimension of Mobile Dependency	Xth Standard	37	54.68	1.702	2	0.427
	XIth Standard	30	47.33			
	XIIth Standard	33	48.70			
Mobile Dependency and its dimensions	**Education**	**N**	**Mean Rank**	**Chi – Square (χ^2)**	**df**	**P value**
Lack of Control dimension of Mobile Dependency	Xth Standard	37	55.03	2.231	2	0.328
	XIth Standard	30	49.67			
	XIIth Standard	33	46.18			
Tolerance dimension of Mobile Dependency	Xth Standard	37	48.07	0.766	2	0.682
	XIth Standard	30	50.50			
	XIIthStandard	33	53.23			
Mobile Dependency and its dimensions	**Education**	**N**	**Mean Rank**	**Chi – Square (χ^2)**	**df**	**P value**
Overall Mobile Dependency	Xth Standard	37	52.97	0.636	2	0.728
	XIth Standard	30	48.33			
	XIIth Standard	33	49.70			

The results of the Kruskal – Wallis test presented in Table 14 reveals no significant difference across Education categories of respondents concerning the Abstinence dimension of Mobile Dependency ($\chi^2 = 1.702$; P = 0.427 > 0.050). No significant variation is observed between Education categories of participants and Lack of Control dimension of Mobile Dependency (χ^2 = 2.231; P = 0.328 > 0.050). No significant variation is seen between Education categories of participants and Tolerance dimension of Mobile Dependency ($\chi^2 = 0.766$; P = 0.682 > 0.050). Overall Mobile Dependency does not differ significantly across Education categories ($\chi^2 = 0.636$; P = 0.728 > 0.050) of participants.

Table 15: Mann – Whitney (U) Test Results between Gender and Mobile Dependency as well as its Dimensions among participants of this research

Mobile Dependency and its dimensions	Gender	N	Mean Rank	Sum of Ranks	Mann – Whitney U	Wilcoxon W	Z	P value
Abstinence dimension of Mobile Dependency	Male	64	52.44	3356.00	1028.000	1694.000	-1.038	0.299
	Female	36	47.06	1694.00				
Lack of Control dimension of Mobile Dependency	Male	64	52.22	3342.00	1042.000	1708.000	-0.917	0.359
	Female	36	47.44	1708.00				
Tolerance dimension of Mobile Dependency	Male	64	52.38	3352.00	1032.000	1698.000	-1.016	0.310
	Female	36	47.17	1698.00				
Overall Mobile Dependency	Male	64	51.88	3320.00	1064.000	1730.000	-0.742	0.458
	Female	36	48.06	1730.00				

The results of the Mann – Whitney (U) test presented in Table 16 reveals no significant difference across Gender categories of respondents concerning the Abstinence dimension of Mobile Dependency (U = 1.028.000; Z = -1.038, P = 0.299 > 0.050). No significant variation is observed between Gender categories of participants and Lack of Control dimension of Mobile Dependency (U = 1.042.000; Z = -0.917, P = 0.359 > 0.050). No significant variation is seen between Gender categories of participants and Tolerance dimension of Mobile Dependency (U = 1.032.000; Z = -1.016, P = 0.310 > 0.050). Overall Mobile Dependency does not differ significantly across Gender categories

(U = 1.064.000; Z = -0.742, P = 0.458 > 0.050) of participants.

Table 16: Mann – Whitney (U) Test Results between Domicile and Mobile Dependency as well as its Dimensions among respondents of this research

Mobile Dependency and its dimensions	Domicile	N	Mean Rank	Sum of Ranks	Mann – Whitney U	Wilcoxon W	Z	P value
Abstinence dimension of Mobile Dependency	Rural	93	49.43	4597.00	226.000	4597.000	-1.568	0.117
	Urban	07	64.71	453.00				
Lack of Control dimension of Mobile Dependency	Rural	93	50.58	4704.00	318.000	346.000	- 0.118	0.906
	Urban	07	49.43	346.00				
Tolerance dimension of Mobile Dependency	Rural	93	49.85	4636.50	265.500	4636.000	-0.955	0.339
	Urban	07	59.07	413.50				
Overall Mobile Dependency	Rural	93	51.88	3320.00	219.000	4590.000	-1.689	0.091
	Urban	07	48.06	1730.00				

Mann – Whitney (U) test results presented in Table 17 reveal that there is no significant difference between Domicile and Abstinence (U = 226.000; Z = -1.568, P = 0.117 > 0.050); Lack of Control (U = 318.000; Z = - 0.118, P = 0.906 > 0.050) as well as Tolerance (U = 265.500; Z = -0.955, P = 0.339 > 0.050) dimensions of Mobile Dependency among the respondents. No significant variation is observed between Birth Order and overall Mobile Dependency (U = 219.000; Z = -1.689, P = 0.091 > 0.050) among the participants.

Table 17: Mann – Whitney (U) Test Results between Psychological Problems Faced due to Mobile Phone Usage and Mobile Dependency as well as its Dimensions among participants of this research

Mobile Dependency and its dimensions	Psychological Problems Faced due to Mobile Phone Usage	N	Mean Rank	Sum of Ranks	Mann – Whitney U	Wilcoxon W	Z	P value
Abstinence dimension of Mobile Dependency	Anxiety	32	47.75	1528.00	1000.000	1528.000	-0.758	0.448
	Sleep disturbances	68	51.79	3522.00				
Lack of Control dimension of Mobile Dependency	Anxiety	32	51.44	1646.00	1058.000	3404.000	-0.257	0.797
	Sleep disturbances	68	50.06	3404.00				
Tolerance dimension of Mobile Dependency	Anxiety	32	53.94	1726.00	978.000	3324.000	-0.958	0.338
	Sleep disturbances	68	48.88	3324.00				
Overall Mobile Dependency	Anxiety	32	51.88	1660.00	1044.000	3390.000	-0.382	0.703
	Sleep disturbances	68	49.85	3390.00				

The results of the Mann – Whitney (U) test presented in Table 18 reveals no significant difference across Psychological Problems experienced due to Mobile use categories of respondents con-

cerning the Abstinence dimension of Mobile Dependency (U = 1000.000; Z = -0.758, P = 0.448 > 0.050). No significant variation is observed between Psychological Problems faced due to Mobile utilization categories of participants and

Lack of Control dimension of Mobile Dependency (U = 1058.000; Z = -0.257, P = 0.797 > 0.050). No significant variation is seen between Psychological Problems Experienced due to Mobile use categories of participants and Tolerance dimension of Mobile Dependency (U = 978.000; Z = -0.958, P = 0.338 > 0.050). Overall Mobile Dependency does not differ significantly across Psychological Problems faced due to Mobile utilization categories (U = 1044.000; Z = -0.382, P = 0.703 > 0.050) of participants.

Table 18: Mann – Whitney (U) Test Results between Impact of Mobile Phone Usage on Study Time and Mobile Dependency as well as its Dimensions among participants of this research

Mobile Dependency and its dimensions	Impact of Mobile Phone Usage on Study Time	N	Mean Rank	Sum of Ranks	Mann – Whitney U	Wilcoxon W	Z	P value
Abstinence dimension of Mobile Dependency	Affected	85	49.00	4165.00	510.000	4165.000	-1.435	0.151
	Not affected	15	59.00	885.00				
Mobile Dependency and its dimensions	**Impact of Mobile Phone Usage on Study Time**	**N**	**Mean Rank**	**Sum of Ranks**	**Mann – Whitney U**	**Wilcoxon W**	**Z**	**P value**
Tolerance dimension of Mobile Dependency	Affected	85	50.50	4292.50	637.500	4292.000	0.000	1.000
	Not affected	15	50.50	757.50				
Overall Mobile Dependency	Affected	85	50.00	4250.00	595.000	4250.000	-0.482	0.630
	Not affected	15	53.33	800.00				

Mann – Whitney (U) test results presented in Table 19 reveal that there is no significant difference between influence of Mobile Phone use on Study Time and Abstinence (U = 510.000; Z = -1.435, P = 0.151 > 0.050); Lack of Control (U = 525.000; Z = -1.260, P = 0.208 > 0.050) as well as Tolerance (U = 637.500; Z = 0.000, P = 1.000 > 0.050) dimensions of Mobile Dependency among the respondents. No significant variation is observed between impact of Mobile Phone utilization on Study Time and overall Mobile Dependency (U = 595.000; Z = -0.482, P = 0.630 > 0.050) among the participants.

DISCUSSION

Life skills interventions are of vital significance in addressing mobile dependency among adolescents, given the associations observed with gender, domicile, and psychological problems. Social work professionals can effectively reduce such dependency and enhance mental health by designing holistic, multidimensional programs. Developing self-awareness and emotional regulation through mindfulness, journaling, and reflection helps adolescents recognize emotional triggers of mobile use. Techniques such as Deep breathing and Cognitive restructuring reduce Compulsive behaviours. Complementary time management and goal-setting workshops teach adolescents to organize academic schedules and introduce digital detox routines for balanced use. Strengthening social skills and establishing peer support groups provide alternatives to online interaction, addressing domicile-related stress and fostering meaningful face-to-face relationships. Enhancing problem-solving and coping skills through cognitive-behavioural and stress management techniques promotes resilience against Anxiety and Psychological stressors underlying Tolerance aspects of mobile dependency. Family plays a vital role in life of adolescents. Thus, parenting skills education and family involvement workshops cultivate supportive home environments and healthy mobile routines. Education on mobile dependency and mental health risks using Case Studies and Interactive Sessions increase awareness of Tolerance and Abstinence dimension of Mobile dependency. Encouraging alternative recreation and leisure activities, including sports and community service, gives adolescents fulfilling offline engagement opportunities supporting self-expression and well-being. Strength-based approaches further build resilience, emphasizing adolescents'

intrinsic capacities and positive aspirations beyond mobile engagement. Robust monitoring and evaluation mechanisms through self-reports, diaries, and feedback are essential for tracking behavioural change and refining interventions. Incorporating emotional, cognitive, social, and familial dimensions ensures holistic and sustainable outcomes in managing mobile dependency and promoting adolescent mental health.

LIMITATIONS OF THE RESEARCH

Various restrictions of this study are clearly mentioned below.

Sample size of 100 adolescent learners from one government-aided school in Tiruchirappalli District, Tamil Nadu limits the generalizability of results to other regions or Types of School (Government or Private) or based on School affiliation (State Board or CBSE or ICSE). Geographical constraint further restricts applicability due to possible cultural and environmental variations elsewhere. Reliance on self-reported data through Interviews and Questionnaires may introduce social desirability bias and inaccuracies in self-assessment. Selected socio-demographic variables and dimensions of Mobile Dependency were examined, excluding psychological, familial, and environmental factors. This research was conducted in August 2025, its findings may not capture subsequent mobile dependency changes among adolescents.

CONCLUSION AND RECOMMENDATIONS

This research revealed that 59 percent of adolescents exhibited high mobile dependency. Kruskal Wallis Test showed significant variation among Age groups in the Abstinence dimension (χ^2 = 7.594; P = 0.022 < 0.050). No significant differences were found between various Independent Variables (i.e. Monthly Family Income, Mobile Phone Usage Hours, Purpose of Mobile Use, Physical as well as Psychological Problems experienced due to Mobile Phone usage, Education, Gender, Domicile and impact of mobile phone usage on study time) and Mobile Dependency as well as its dimensions (Dependent Variables) among the participants of this study. It is recommended that schools introduce structured Life Skills Education, digital literacy programs, and counselling sessions to promote healthy mobile use. Parents and teachers should collaborate to monitor screen habits and encourage balanced offline activities for improving adolescents' mental health.

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REFERENCES

Alter, A. (2018). *Irresistible: The rise of addictive technology and the business of keeping us hooked*. **New York: Penguin Books, 2017. 368 pp. ISBN: 9780735222847,** Penguin.

Anderson, M., Faverio, M., & Gottfried, J. (2023, December 11). *Teens, social media and technology 2023*. Pew Research Center. https://www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/

Bélanger, R. E., Akre, C., Berchtold, A., & Michaud, P. A. (2011). A U-shaped association between intensity of Internet use and adolescent health. *Pediatrics, 127*(2), e330–e335.

Chóliz, M. (2012). Mobile-phone addiction in adolescence: The Test of Mobile Phone Dependence (TMD). *Progress in Health Sciences, 2*(1), 33–44.

Das, P., Saraswathy, K. N., & Chaudhary, V. (2024). Prevalence of smartphone addiction and its relationship with obesity among young adults: A cross-sectional study from Delhi, India. *Indian Journal of Community Medicine, 49*(3), 544–548.

Dogra, N., & Sharma, S. (2024). Smartphone use and its addiction among Jammu adolescents. *Indian Journal of Community Health, 36*(4), 578–582.

Gangadharan, N., Borle, A. L., & Basu, S. (2022). Mobile phone addiction as an emerging behavioral form of addiction among adolescents in India. *Cureus, 14*(4), e24084. https://doi.org/10.7759/cureus.24084

Griffiths, M. D., & Kuss, D. J. (2017). Adolescent social media addiction (revisited). *Education and Health, 35*(3), 49–52.

Jayalakshmi, G., Chidambaram, R., Srikumar, R., Vijayakumar, R., & Naveen Kumar, C. (2017). Online game addiction among adolescents in Pondicherry, India. *Journal of Addiction and Behavioral Therapy & Rehabilitation, 6*(2), 2.

Mahalakshmi, B., & Sivasubramanian, N. (2023). Impact of smartphone use on adolescent health in India. *Bioinformation, 19*(1), 1090.

Mathiyalagan Martin, R., & Maheswari, K. (2025). Psychosocial influences on adolescent self-esteem: A study of demographics, family dynamics, and academic performance. *International Research Journal of Multidisciplinary Scope, 6*(2), 1009–1021. https://doi.org/10.47857/irjms.2025.v06i02.03683

Mittal, D., & Shukla, A. (2025). A study of smartphone addiction and mental health among adolescents preparing for NEET at Allen Career Institute, Kota, Rajasthan. *International Journal of Indian Psychology, 13*(1), 1300–1305.

Murthy, J. V., & Tauro, V. G. (2024). Smartphone addiction and the associated factors of adolescents and purposes and pattern of smartphone use. *International Journal of Science and Healthcare Research, 9*(1), 158–168.

Nagaraj, D., Yeshaswi, M. C., Aishwarya, B., Akashanand, Roy, A., Banandur, P., & Banavaram, A. A. (2023). A population-based study on risk of cell phone addiction among youth (16–30 years) in rural Karnataka. *Indian Journal of Youth and Adolescent Health, 10*(1), 8–15.

Parekh, K., & Desai, M. (2025). Prevalence of smartphone addiction among adolescents in Ahmedabad city. *International Journal of Health Sciences and Research, 17*(7), 16–21. https://doi.org/10.52403/ijhsr.20250702

Rajeswari, S., & Eljo, J. G. (2013a). A comparative study on the problems of adolescent boys and girls students. *International Journal of Humanities and Social Sciences, 2*, 31–40.

Rajeswari, S., & Eljo, J. G. (2013b). Life skills among late adolescent school students in Tiruchirappalli. *Progressive Outlook: A Refereed National Research Journal of Social Sciences*.Volume 2, Issue 2, pages 49–56.

Rajeswari, S., & Eljo, J. G. (2023). Adolescent school students and life skills: A descriptive study. *Journal of Namibian Studies, 35*(S1), 2999–3022.

Ramaiah, N. M. M., Fatma, A. B., George, P. S., & Smitha, M. C. (2020). Mobile dependency: Factors influencing it and its association with depression among adolescents. *Journal of Mental Health and Human Behaviour, 25*(1), 39–44.

Rahmath Nisha, . J.O. Jeryda Gnanajane Eljo, K. Maheswari, . S. Rajeswari, Susmitha. M, Chinnadurai Periyasamy. (2025). Examining How Online Gaming Environments Contribute To Adolescent Emotional Management Skills. *South Eastern European Journal of Public Health*, 1589–1598. https://doi.org/10.70135/seejph.vi.4237

Soni, R., Upadhyay, R., & Jain, M. (2017). Prevalence of smartphone addiction, sleep quality and associated behaviour problems in adolescents. *International Journal of Research in Medical Sciences, 5*(2), 515–519.

Sulaiman, R., Shaji, S., Sheela, V. V., & Raheela, A. S. (2021). Mobile phone addiction among children aged 5–12 years: A hospital-based study in South Kerala. *International Journal of Community Medicine and Public Health, 8*(12), 5943–5946. https://doi.org/10.18203/2394-6040.ijcmph20214450

Tripathi, V.& Farooqi ,S.(2023). Social media usage: Implications for empathy, passive-aggressive behaviour and impulsiveness. *The Scientific Temper*, Vol 14(4).1482-1497.

Yadav, M. S., Kodi, S. M., & Deol, R. (2021). Impact of mobile phone dependence on behavior and academic performance of adolescents in selected schools of Uttarakhand, India. *Journal of Education and Health Promotion, 10*, 327.