

# MOBILE PHONE ADDICTION AS A MEDIATING FACTOR BETWEEN LONELINESS AND ACADEMIC STRESS AMONG ADOLESCENTS

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## Abstract

The young people in the age group of 10-24 year in India comprises one of the precious wealth of India considered by growth and development and is a stage of susceptibility often predisposed by several intrinsic and extrinsic factors that affect their overall health and safety. Mental health problems have significant repercussions for every feature of young people's lives including their proficiency to engage with education, make and keep friends, have constructive family and peer relationships. Adolescents have unique characteristics and it is different from any other age groups. It is estimated that around 20% of the world's adolescents have a mental health or behavioural problem. Upto 50% of mental, behavioural and psychological problems have their onset during adolescence period. There is growing evidence of increased psychological problems in adolescents especially behaviour problems and suicides. Academic stress is one such problem, the adolescents face in life which may lead to various issues and addiction. This in turn, affects them in their personal life, social life and in their education. The present study investigated the Mobile Phone Addiction as a mediating factor between Loneliness and Academic Stress among Adolescents. The convenience sampling method was used and the sample size was 106 adolescents from the state of Tamil Nadu. The data was analyzed using mediation analysis in statistical package for social sciences (SPSS 17). The results revealed that Mobile Phone Addiction Mediates between Loneliness and Academic Stress among Adolescents. The implications of the results are discussed.

**Key Words:** Mobile Phone Addiction, Loneliness, Academic Stress, Adolescents

## Introduction

Each of us lives in a diverse social world. Yet all of us are inclusive of this social world. Being biased and less open to others may be detrimental to one's health and wellbeing. A non-inclusive and narrow attitude to others may extend to the narrowing down of options in life, a path that will ultimately negatively impact one's wellbeing (Fletcher, 2016). As we grow up, each period of human development is very diverse. Adolescence is a period of human development and a developmental transition from childhood to adulthood

which every individual faces as he/she grows up. World Health Organization (WHO) terms it as one of the most rapid phases of human development.

The adolescent development can be viewed biologically, cognitively and socially (Arnett, 2007). According to Arnett (2007), adolescence can be regarded biologically, as the physical evolution marked by the inception of puberty and the termination of physical growth; cognitively, as an alteration in the ability to think abstractly and in varied fashions; or socially, as a period of preparation for mature adult roles. Hall (1904), one of the principal founders of Developmental Psychology in the United States, describes adolescence as follows; a time of tempest and tension during which the individual is faced by opposites such as action versus inaction, excitement versus quiet, elation versus dejection, self-confidence versus doubts about self-esteem, and the need for authority versus the need to rebel against authority. This period is thought of as a period of remarkable emotional instability and turmoil.

Adolescence is a period of change. The change includes all spheres of one's life. Physical changes are manifested by bodily changes and developments; emotional changes surface with its related problems; behavioural changes occur with peer pressure, sometimes leading to substance use and abuse.

During this developmental stage of adolescence, individuals face many challenges which are part and parcel of this vulnerable age. These can be varied - educational challenges which come about due to poor academic performance; health problems because of lack of nutrition and being body conscious; psychological problems of depression and stress; social problems related to interpersonal and immature relationship and over-dependence on social media. They are exposed to various stressful conditions and risk factors relating to social issues and other challenges in life. Academic stress is one such kind of challenge that the adolescents can face (Kudlova, 2004).

Academic stress is a serious issue that is faced by all students which are attributed to poor study habits, poor time management, academic pressure, parental pressure and expectations. According to Verma and Gupta (1990), academic stress involves psychological and mental distress regarding predictable academic challenges or failure, or even an understanding of the prospect of academic failure. During the school years, academic stressors may be seen in any feature of the child's environment: home, school, neighbourhood, or friendship (Anderson, Jimerson & Whipple, 2005; Hess & Copeland, 2006).

At this period of development, the adolescents need proper guidance and support to face the challenges of life and cross this vulnerable stage of human development to emerge as a responsible adult in the society. If the adolescents lack appropriate support and guidance during this stage of growth, they may succumb to setbacks, failures and negative events in their life specially depression and loneliness.

Loneliness is one of the most common feelings that individuals could experience in their lives. Loneliness is a negative emotion that comes about through a discrepancy between desired and achieved levels of social contact (Perlman & Peplau, 1981). According to Lopata (1969), loneliness is an emotion experienced by an individual who wishes for a level of contact unlike from the one currently encountered.

As a response to the negative events of life or an adventurous exploration, these adolescents fall prey to addictions of various kinds. Addiction is a condition in a human being, where a person who intakes certain substance like drugs or engage in certain activities (gambling, gaming, sexual activity), feels an impulse or force to go back to it again and again to experience the same state of mind. The dangerous part of this addiction is that an addict may not even be aware that he or she is getting addicted.

Cellphone addiction is defined as a habitual drive to continue to use one's cellphone repeatedly despite any negative impact on one's well-being (Roberts, Yaya, & Manolis, 2014). The appropriateness of a behavior can be argued as good or bad. However, one problem with an addiction is a loss of self-control, as people feel compelled to perform a behavior even to their own detriment.

There are many kinds of addiction starting from physical addiction. When the body gets adapted to certain kinds of drugs or substance or a situation, it will crave for it over and again. This happens when the physical body gets used to the drugs which are called as tolerance. Addiction also happens when brain overreacts to certain cues. The addicts will experience greater urge when they are situated in vulnerable situations.

### **Relationship between loneliness, academic stress and mobile phone addiction**

The researchers assumed that there is a relationship between loneliness, academic stress and mobile phone addiction among adolescents. Mami and Ghanbaran (2014) found that there was a significant negative relationship between feelings of loneliness and mental health. They also found that secure attachment style results in enhancing general health and avoided anxious ambivalent styles and feeling of loneliness leads to reduced mental health. Among adolescents, Chipuer, Bramston, and Pretty (2003) found that loneliness is an important predictor of life satisfaction.

Academic stress has major implications for student retention and dropout intention (Elias, Ping, & Abdullah, 2011). Academic stress is a student's perception of the pressure they face, time constraints to complete assignments, academic workload, and their academic self-perception (Bedewy & Gabriel, 2015). Symptoms of academic stress include anxiety, depression, decrease exercise, changes in eating habits, and sleep disturbance (Backović, Živojinović, Maksimović, & Maksimović, 2012; Schraml, Perski, Grossi, & Simonsson-Sarnecki, 2011).

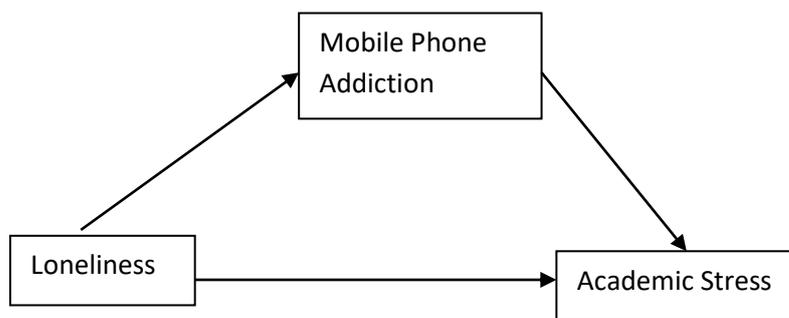
Roberts et al. (2014) found that addiction to one's cellphone can negatively influence academic performance as students' concentration in class declines because of cellphone use and disrupts their studies outside of class. Lepp, Barkley, and Karpinski (2014) found a negative relationship between cellphone use and GPA. However, it is important to note that academic performance and academic stress are different in constructs with stress normally influencing performance (Sanders, 2013).

In Sar's (2013) study, the problematic phone use increases as talking time increases, however increase of talking time decreases loneliness level in teenagers. Jin and Park (2012) found that more face-to-face interactions were associated with lower levels of loneliness; however, more cell phone calling was associated with greater loneliness. Reid and Reid (2007) revealed that lonely people preferred calls and rated text such as short message service (SMS, or text messaging) as a less intimate method of contact. According to Takao, et al. (2009) it is conceivable that lonely people are eager to maintain contact with their peers through frequent calls so as to fulfill their loneliness. We therefore would expect that higher or problematic phone use is predicted by loneliness.

Shambare et al., consider cell-phone addiction to be one of the greatest addictions of the current century. They highlight six types of behavior, habitual (habits performed with little mental awareness), mandatory (officially required or parentally mandated), voluntary (reasoned and conducted for specific motivations), dependent (motivated by the attached importance of social norms), compulsive (strong urge to continuously perform the behavior), and addictive, or behavior defined by the user's progressive exclusion of other activities, causing physical, mental, and social harm, while attempting to control the user's dysphoric feelings. Therefore, excessive attention and uncontrolled dedication to one's cell phone is an addiction.

Cellphone addiction can have a detrimental impact on an individual's life through constant distractions and negative consequence pertaining to health (Archer, 2013; McAllister, 2011). There is also evidence that many students are afflicted with cellphone addiction (Archer, 2013; McAllister, 2011; Roberts et al., 2014). However, the use of cellphones can provide benefits if used in a careful manner. However, how cellphone addiction affects the stress university students experience from academics is a critical relationship to study.

There is a gap in academic literature with regards to studies examining mobile phone addiction as a mediating factor between loneliness, and academic stress among adolescents. Loneliness, mobile phone addiction and depression can affect the mental health of an individual in the society. Mental health problems have been increasing among young people in and around the world. The present study assumed that there is a correlation between loneliness and academic stress and that mobile phone addiction acts as a mediating factor for loneliness and academic stress among adolescents.



### Research question:

Does mobile phone addiction acts as a mediating factor between loneliness and academic stress among adolescents?

### Objectives:

1. To assess Academic Stress, Loneliness and Mobile Phone Addiction among adolescents.
2. To examine whether Mobile Phone Addiction acts as a mediating factor between Loneliness and Academic Stress among Adolescents.

### Hypothesis:

1. Mobile Phone Addiction mediates the relationship between Loneliness and Academic Stress among adolescents.

**Research Design:** Correlational research design was utilized to find out whether mobile phone addiction acts as mediating variable between loneliness and academic stress.

### Methods

**Participants:** A sample of 106 comprised of 52 boys and 54 girls, were selected purposively from the school of Chennai, Tamil Nadu. They consisted of school-going adolescents studying in standards 11<sup>th</sup> and 12<sup>th</sup> from English medium classes.

**Procedure:** With the consent of the Principals of the schools, the researcher approached the participants and briefed them about the study. Adolescents, who were willing to participate, were included for the study. The investigator then administered the questionnaires to them. The administration of the questionnaire took 30 minutes. The participants were from 11<sup>th</sup> to 12<sup>th</sup> grades from English medium schools.

**Measures: UCLA Loneliness Scale (Russell, 1996):** UCLA Loneliness Scale was developed at the University of California at Los Angeles (version 3; Russell, 1996). It is a 20-item scale intended to measure one's subjective feelings of loneliness as well as feelings of social isolation. UCLA Loneliness scale was

rated on a 4-point scale from “I often feel this way” to “I never feel this way”. Higher scores indicate higher level of loneliness.

**Scale for Assessing Academic Stress (Sinha, Sharma & Mahendra, 2000):** It measures the major indicators of academic stress regarding the presence and absence of stress. The scale is a 30-item self-report measure developed to assess all possible major indicators of academic stress in terms of their presence or absence. The subject has to select one out of two alternative responses (yes / no) for each item of the scale. All ‘yes’ responses are given 1 point each and summed up to get the total stress score. The higher the score, the greater is the level of academic stress and vice versa. The test-retest reliability of the Scale for Assessing Academic Stress (SAAS) over the time frame of one month is 0.88 and split-half reliability is 0.75 representing satisfactory reliability of the scale. Internal consistency of the scale is also adequate being in a range of 0.30 and 0.81.

**Mobile Phone Addiction Scale (Velayudhan & Srividya, (2012):** The scale examines the problematic usage of mobile phones leads to poor mental health and behavioural disturbances, problematic interpersonal relationship, social withdrawal and clinically diagnosed psychological disturbances. The scale was beneficial in finding out the growing dependence mobile phone usage and its functionalities among adolescents and re- examine whether excessive mobile phone usage leads to addiction and its consequences. The scale has five points. The alpha reliability of the scale was found to be 0.79 and it is quite satisfactory.

### Data Analysis

The data were analyzed using correlation and mediational analysis with the help of Statistical Package for Social Sciences (SPSS Version 17).

**Results:** As mentioned earlier correlation and mediational analysis was done to test the hypothesis and the results are reported in table 1 and 2 respectively.

Table 1 shows correlation coefficient among variables

Variables	Loneliness	Mobile Phone addiction
Mobile Phone addiction	.278**	
Academic stress	.404**	.442**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 1 shows Pearson’s product-moment correlation between academic stress, loneliness and mobile phone addiction. The correlation table indicates that there was significant positive correlation between loneliness, academic stress and mobile phone addiction among adolescents. Hence the strength of the relationship between the study variables were confirmed and moved further for the analysis of mediation.

Table 2 shows the results of mediating analysis.

	Effect	SE	T	P	Interpretation
<b>Total</b>	.1406	.0321	4.38	.001	<b>Fully mediating effect</b>
<b>Direct</b>	.1059	.0299	3.54	.001	
<b>Indirect</b>	.0347	.0188	z 1.9054	.0567	

Table 2 shows that the total effect of the model for 0.1406 is significant at 0.001 level (i.e.,  $t(1, 104) = 4.3799$ ,  $p < 0.001$ ). The direct effect of loneliness on academic stress 0.1059 is significant at 0.001 level i.e.  $t(2, 103) = 3.54$ ,  $p < 0.001$ . The indirect effect of loneliness on academic stress 0.0347 is not significant at 0.05 level (i.e.  $z = 1.9054$ ,  $p > 0.05$ ). As expected the direct effect of loneliness on academic stress was significant and the indirect effect of loneliness on academic stress was reduced and the estimate was not statistically significant. Hence based on Baron and Kenny approach (1986), the mediating variable (mobile phone addiction) is fully mediating with the relationship between loneliness and academic stress among adolescents.

### Discussion:

The present study investigated the Mobile Phone Addiction as a mediating factor between Loneliness and Academic Stress among Adolescents. There is a positive correlation between loneliness, academic stress and mobile phone addiction among adolescents (Table 1). This shows that academic stress and loneliness; academic stress and mobile phone addiction is correlated among the adolescents of the study. Academic stress influences an individual life and may lead to loneliness, depression and hopelessness.

Mami and Ghanbaran (2014) found that there was a significant negative relationship between feelings of loneliness and mental health. Among adolescents, Chipuer, Bramston, and Pretty (2003) found that loneliness is an important predictor of life satisfaction. In the present study, there is a positive correlation between academic stress and loneliness. Academic stress can lead to feelings of loneliness among adolescents.

To confirm the results, further mediation analysis was carried out. The results revealed that mobile phone addiction strongly acts as a mediating factor between loneliness and academic stress. The present study is supported by similar studies where it was found that addiction to one's cellphone negatively influence academic performance as students' concentration in class declines because of cellphone use and

disrupts their studies outside of class (Roberts et al. 2014; Lepp, Barkley & Karpinski, 2014). Jin and Park (2012) found that more cell phone calling or addiction was associated with greater loneliness. Mobile phone addiction acts as a mediating factor between loneliness and academic stress among adolescents of the study.

When an adolescent is faced by academic stress and feel lonely and exclude oneself from social or peer group due to lack of academic performance, they may find a way out through the usage of mobile phone. Through continuous use of mobile phone, gradually the individual may get addicted. This, in turn, will affect the academic performance and loneliness. Hence, mobile phone addiction mediates between loneliness and academic stress among adolescents.

### **Implications**

The present study revealed that there exist the impact of loneliness and mobile phone addiction on academic stress among adolescents. Based on this insight, an awareness program that could illuminate on how loneliness and mobile phone addiction can lead to academic stress among adolescents, so students, teachers and administrators get more benefits on how to deal with loneliness and mobile phones in the learning environment in order to reduce academic stress. Therapies like CBT and REBT can be used to deal with extreme conditions of loneliness (such as depressive disorders) and mobile phone addictions (as an impulsive control disorders).

### **Limitations**

This study was limited to a sample of adolescents only from Chennai city Schools. Therefore, the generalization of the findings to other population is restricted. The study identified mobile phone addiction as a mediating factor for loneliness and academic stress among adolescents. There might be other factors influencing the mental health of adolescents. The present study utilized corelational research design. Other creative experimental research design could be used to know the causal relationships between the variables.

### **Conclusions**

There is a gap in academic literature with regards to studies examining academic stress, loneliness and mobile phone addiction among adolescents and its effect on mental health and illnesses among adolescents. The present study found that mobile phone addiction is a mediating factor between academic stress and loneliness among adolescents.

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