

Self Esteem And Problematic Smartphone Use Among Adolescents A Post Covid Model

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ABSTRACT

Approximately three billion people throughout the world use smartphones nowadays. The smartphone has been ingrained in the lives of countless individuals, including 95% of Indian teenagers. A number of mental health problems, including depression, anxiety, low self-esteem, and scholastic struggles, have been associated to problematic smartphone use (PSU), which happens when individuals depend on their phones excessively. The participants in this PSU poll were high school students from an inclusive and diverse Indian school, ranging from ninth to twelfth grade. In order to find links between PSU and factors including stress, depression, poor self-esteem, tenacity, and grades, 319 high school students took part in the study. According to the results, students use their cellphones for schoolwork both in and out of the classroom. The correlations between PSU and anxiety, depression, poor self-esteem, tenacity, and achievement in school were also statistically significant. Stress, self-esteem, and perseverance were shown to be significant predictors of PSU in a multiple regression analysis. Among the many possible outcomes of this research is the recommendation that policymakers, school administrators, educators, and parents all work together to make the electronic device policy work better and to impose stricter regulations on students' usage of cellphones in the classroom. Teens' ability to bounce back from social and emotional setbacks depends on their relationships, so it's important to keep assessments going and spread the word about PSU. This is especially important in the wake of the COVID-19 pandemic.

Keywords: Self esteem, adolescents, smartphone use, depression.

Introduction

Three billion people across the globe use smartphones right now, and that number is expected to rise by hundreds of millions. Like many other people, 95% of Indian teens use smartphones every day. Prone to behaviours similar to those of drug addiction, problematic smartphone use (PSU) occurs when device use becomes excessive and the user becomes unduly reliant on the device. Social and emotional well-being, everyday functioning, individual productivity, and academic and occupational success are

all negatively impacted by these behavioural addictions.

When compared to users of other age groups, PSU is more likely to affect teenagers. The negative effects of PSU extend into the home and the school, particularly in secondary and post-secondary settings, where they hinder students' ability to focus, disturb their thought processes, and form meaningful connections with their instructors and classmates. The use of smartphones is associated with an uptick in depressive symptoms and stress levels, a decline in self-esteem, and a drop in academic achievement. Smartphones may be a source of negative emotions like isolation, boredom, tension, and sadness, but they may also be a source of positive emotions like safety, communication, social connection, personal organisation, and alleviation of these problems.

Studies on PSU and mobile phone addiction date back 20 years (Bianchi & Phillips, 2005). The number of studies documenting the detrimental effects of PSU on students' mental health, including higher rates of stress, sadness, low self-esteem, and poor academic performance, has been steadily rising over the last decade. Teenagers from Generation Z—those born in 2000 and later—are used to and comfortable with using smartphones as part of their social growth, sense of self, and standard means of communication. The impressionability of teenagers makes them the most susceptible user group to PSU at this developmental time. Furthermore, adolescent brains are very malleable and capable of quick learning. New media is passionately and gladly accepted by teenagers. adolescent computer gaming has the second-highest prevalence of PSU, according to research, while adolescent social media use has the highest rate.

The age and ability to self-regulate of the smartphone user may determine the delicate balance between functional smartphone usage and behavioural addiction. Even though smartphones aren't gender or age biased, teens and young adults are more likely to acquire problematic smartphone habits than adults are. This is because they are more likely to be interested in and adaptable to new technologies, work closely with their peers, and spend a lot of time unsupervised.

Depression, Stress, Low Self-Esteem, and Resilience

Any kind of contact between two or more individuals is considered an interpersonal relationship. All ages may benefit from this foundational verbal and nonverbal communication, but middle and high school students in particular place a premium on friendships as a means of social identity and support. Negative anti-social behaviours, such as phubbing—i.e., being on one's phone while ignoring the other person—, fear of missing out

(FoMO)—i.e., fixation on other people's lives as shown through digital communication or social media—even when one is physically present with them—and nomophobia—i.e., anxiety caused by being unable to use one's mobile phone—are all symptoms of post-social anxiety disorder (PSUD). As a result of disturbed sleep and physical discomfort, PSU raises both mental and physical stress. Due to the lack of movement induced by spending too much time on smartphones, users are more likely to suffer from hypertension, obesity, back and joint discomfort, and eye strain.

Rules for Smartphones

In 2014, the World Health Organisation held a conference to discuss the behavioural addiction of PSU and the increasing public concern about PSU throughout the world. This brought PSU to the forefront of global attention. The South East District New Delhi Police Department in India, the world's second-highest internet user country, launched a prevention programme to combat adolescent PSU. The New Delhi Police have announced a cyber awareness programme aimed at college-aged, middle-school, and high school students in an effort to combat PSU as a behavioural addiction. Internet safety, PSU, and addiction were the primary foci of the preventive programme.

Results showed an increase in interpersonal ties among students, instructors, and classmates, as well as accounts of a more pleasant campus atmosphere, after France outlawed smartphone usage in first through ninth grades during the autumn of 2018. After removing their smartphones, French students reported reduced stress, despair, and an uptick in good peer relationships. The United States is dragging its feet when it comes to removing cellphones from school grounds. Some states, including Arizona, Maine, Maryland, and Utah, tried to establish laws restricting students' use of smartphones in the classroom, but they couldn't muster the necessary votes.

METHOD

Approximately 3,200 students from a India comprehensive four-year high school participated in the research. For the purpose of data analysis, 319 participant questionnaires were used. The school board and site administration gave their approval for this research to go forward. The high school attendance office provided a hand with distributing information and school-to-home messages to parents and students. Parent Square, an online application, was used for school communication. The school messaging app served as a portal for participant recruitment and consent documentation. The offer, which included links to forms for both parental and student permission, was published in the

school's weekly email in order to attract students. The permission and assent forms were digitally returned to a designated research email address by all interested persons.

The SA-Short Version of the Smartphone Addiction Scale

Developed by Kwon, Kim, et al. (2013), the Smartphone Addiction Scale Short Version (SAS-SV) assessed behaviours related to smartphone addiction and, based on the overall score, determined if users were addicted to smartphones (PSU). A total of ten questions covering topics including daily-life disruption, positive anticipation, withdrawal, relationships centred around cyberspace, overuse, and tolerance made up the SAS-SV. A maximum score of 60 points might be achieved by answering questions using a six-point Likert scale. According to a study by Kwan, Kim, et al. (2013), worse PSU was indicated by higher total scores. Based on comparable research done by Lee et al. (2018), the suggested cut-off score for males displaying smartphone addiction was 31, while for females it was 33.

Depression Scale developed by the Centre for Epidemiologic Studies (CES-D)

The individual's depressed symptoms during the preceding week were evaluated using the Centre for Epidemiologic Studies-Depression Scale (CES-D). Twenty statements on the CES-D were scored using a Likert-type scale, with possible values ranging from 0 to 60. A higher score indicates that the kids are more depressed than average. Anyone with a score of 16 or above was thought to be at increased risk for depression.

Assessment of Perceived Stress (PSS)

An individual's level of perceived stress in response to various life events was examined using Cohen's Perceived Stress Scale (1983). On the PSS, participants were asked to assess their emotions and thoughts during the last 30 days using a five-point Likert-scale. The possible total scores ranged from 0 to 40. An increase in perceived stress was reflected by higher scores. Low stress was indicated by a score between 0 and 13, moderate stress by a score between 14 and 26, and severe stress by a score between 27 and 40 (Cohen et al., 1983).

The Rosenberg Scale for Self-Esteem

In order to gauge self-esteem, the Rosenberg Self-Esteem Scale (RSES) asked participants to rate their own sense of value and how well they accepted themselves. The RSES used a Likert scale with a range of 0–30 points to rate ten propositions. values below 15 indicated poor self-esteem, whereas values between 15 and 25 were considered normal.

The GritShort Scale

The gritS, a short scale developed by Duckworth and Quinn (2009), assessed this non-genetic quality. The eight questions on the GritS test centred on topics like interest consistency and effort perseverance. On a five-point Likert-scale, we ranked the questions. After some things were graded in reverse and split by eight, a total score was computed for the GritS. Scores ranged from 1 (not at all gritty) to 5 (very gritty) on the scale.

Each instrument's reliability is backed by a Cronbach's alpha coefficient ranging from .70 to .97. The validity of each instrument is supported by previous research that has used them to measure depression, anxiety, self-esteem, grit, smartphone addiction, stress, and depression in middle school and high school students (Duckworth and Quinn, 2009; Lee et al., 2018; Liu et al., 2020; Roberts, 1980; Wang et al., 2017).

Objective of the study

- Investigate the correlation between self-esteem levels and problematic smartphone use among adolescents in the post-COVID era.
- Examine how changes in lifestyle and social interactions during and after the pandemic impact both self-esteem and smartphone use.

Hypothesis of the study

There is a significant negative correlation between self-esteem levels and problematic smartphone use among adolescents in the post-COVID era, indicating that lower self-esteem is associated with higher levels of problematic smartphone use.

DATA ANALYSIS

Three to nine hours a day was the average amount of time students spent using their smartphones. While working on assignments outside of class, 19% of students admitted to being constantly distracted and 64% admitted to being somewhat so. In addition, 61 percent of students admitted to sleeping with their phones either on or near the bed. In addition, over half of the students (44%) said they likely spend too much time on their phones, while nearly a quarter (22%) said they do so definitely. Half of the students said they used their phones more frequently during the COVID-19 school closures, while a third said they used them slightly more frequently, 11% said they used them about the same, and 4% said they used them slightly less frequently. All of the students who took part in the survey had a smartphone, according to the data. The majority of students (78%) reported using their smartphones as a learning tool in the classroom. The following smartphone features were used in the classroom to enhance

learning: Google Classroom, calculators, video lessons, music players, messaging partners, alarms, timers, and web browsers. Furthermore, a whopping 79% of the students who took part in the study kept using their smartphones even after class ended to finish their homework. Refer to Table 1.

Table 1 Summary of Smartphone Use Inside and Outside the Classroom to Support Learning

	Google classroom	Internet research	Calculator	Tutorial Videos	Contact a friend	Timer/Alarm
Inside Class	81%	62%	63%	31%	18%	25%
Outside Class	83%	64%	64%	48%	61%	26%

Problematic Smartphone Use (PSU) among Students

The results revealed that among high school students, 23% of males and 21% of females had PSU. Data showed that a large percentage of students were nearing these thresholds, with 67% of male participants and 68% of female participants falling close to the suggested scale cutoff values of 31 and 33, respectively. To compare the PSU scores across the different high school grade levels, a one-way analysis of variance was performed. There is a statistically significant correlation between PSU and grade level, with 9th grade having the lowest PSU compared to 10th and 12th.

Hypothesis testing – table 2

Multiple Regression Analysis Summary for GritS, RSE, and PSS predicting SAS

Measure	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Grit	-2.84	.86	-.21	-3.31**	.001
Self Esteem	.29	.11	.23	2.63**	.009
Perceived Stress	.34	.10	.31	3.42***	<.001
Depression	.05	.07	.06	.67	.503

Depression, Stress, Self-Esteem, and Grit

Grit, self-esteem, sadness, and stress ratings were compared across grade levels using one-way ANOVAs. With 38% in 9th grade, 50% in 10th, 43% in 11th, and 56% in 12th, the results showed that 45% of the participants were at risk for depression. Students' risk of depression grew significantly with each grade level, according to the ANOVA. Stress, self-esteem, and perseverance did not vary significantly among grade levels, according to the ANOVA findings. The results showed that whereas 48% of the individuals reported mild stress, 32% reported moderate stress, and 20% reported

severe stress. Out of all the participants, 22% had poor self-esteem, 60% had normal self-esteem, and 18% had excellent self-esteem, according to the results. There is an average amount of grit among participants from all academic levels.

A number of positive and negative associations were found between the variables of PSU (SAS-SV), depression, stress, self-esteem, grit, and academic success (GPA) using Pearson correlations. Anxiety and depression were positively correlated with smartphone addiction; that is, the more addicted one was to smartphones, the more depressed and anxious they felt. There was a negative correlation between smartphone addiction and both self-esteem and grit; that is, the more addicted one was, the worse off one's self-esteem and grit were. The correlation between smartphone addiction and poor academic achievement was weak, but not statistically significant. There is a strong positive association between self-esteem and GPA, a strong negative correlation between sadness and GPA, and a strong positive correlation between grit and GPA.

DISCUSSION

The primary objective of this research was to look for connections between PSU and factors including stress, sadness, low self-esteem, perseverance, and grades. Many of the study's conclusions corroborate those of earlier studies on this subject. All of the people who took part in this survey had access to some kind of mobile phone. The results corroborate those of Vogels (2019) and Anderson and Jiang (2018), which found that 95% of Indian youths use the gadget on a regular basis. These days, there are a plethora of inventive apps for smartphones that allow users to do anything from keeping in touch with friends and family to keeping tabs on their health, organising their lives, and even securing their homes and cars. Previous studies by Demerici et al. (2015), Elhai et al. (2019), and Fischer-Grote et al. (2019) also observed a rise in the smartphone's integration into everyday functions.

Participants in this research who used smartphones experienced the tension between being able to interact and learn more effectively using apps, and either being dependent on or addicted to their devices. With 79% of students using their phones outside of class to get work done, 83% of participants admitting to being distracted while working on assignments outside of class, and 44% admitting to spending too much time on the phone, this study challenges students to exercise self-awareness and self-discipline to put down their phones.

In general, this study's results corroborate those of other studies on smartphones. According to Kwon, Kim, et al. (2013), smartphone

use is not gender biased; 22% of female students and 67% of male students reached PSU levels, while 68% of female students reached PSU approaching levels. A noteworthy finding is that whereas grades 10–12 did show a significant correlation with PSU, grades 9–12 did not. The study's theoretical framework, Compensatory Internet Use Theory, may provide evidence for the absence of a substantial association between PSU and ninth grade. According to this idea, there are some good and constructive things that may come out of using a smartphone at first. These include better communication, more individualised entertainment, and relief from boredom, tension, and sadness. Then, PSU is developed as a result of the device's regular usage. By the time a kid reaches the tenth and eleventh grades, they may have developed strong social media relationships with their classmates and followers, and they may have become more reliant on the application's features.

A further area of concern with the results is that 45% of the participants were at risk of depression; this number increased to 38% in 9th grade, 50% in 10th grade, 43% in 11th grade, and 56% in 12th grade. Another important finding was the strong positive correlation between depression and PSU; this should serve as a warning to the 45 percent of students who are already at risk of developing depression to also develop PSU. Horvath et al. (2020), Alhassan et al. (2018), and Fisher-Grote et al. (2019) all showed depression connected to PSU.

Conclusion

Students should be informed about the connections between PSU and factors like stress, depression, self-esteem, and grit as early as ninth grade and continuing throughout high school. These factors may influence students' academic success. Teachers should promote discussions about students removing their devices from the classroom in accordance with California Assembly Bill 272, an electronic device policy that went into effect in 2019, because they know their students will use the devices for productive, enjoyable, and personal leisure activities outside of class. High school students' academic performance, health, happiness, and smartphone balance can be improved through the implementation of strong and well-considered classroom smartphone policies that are the result of an effort to educate students, teachers, district administrators, and community members on the effects of PSU. The fact that the participants were only present at one high school is one of the study's limitations. In order to promote a healthy balance in the usage of smartphones among students, it is advised that future studies continue PSU study at several middle and high schools after the epidemic. This will help us understand the increasing impact and role of smartphones on students both inside and outside of class.

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