



SELF-CONTROL AND SMARTPHONE OVERUSE AMONG LATE ADOLESCENT STUDENTS

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ABSTRACT

To study self-control, smartphone overuse and their association among 120 late adolescent students of aged 18-21 years. For collecting and analyzing participants' data, used PMPU questionnaire (Billieux et al., 2008) for smartphone overuse and BSCS (Tangney et al., 2004) for self-control. The findings were unveiled that gender group differences were significantly found in dangerous use ($t=3.91$; $p<.05$), dependent use ($t=4.71$; $p<.05$), financial problems ($t=4.19$; $p<.05$), and self-control ($t=5.62$; $p<.05$) respectively. Stream group differences were significantly found in dangerous use ($t=4.88$; $p<.05$) and dependent use ($t=2.25$; $p<.05$) but no stream group differences were found in self-control. It was evidenced that self-control was found as a negative correlation with dangerous use ($r=-.270$; $p<.05$), prohibited use ($r=-.312$; $p<.05$), dependence use ($r=-.725$; $p<.01$), and financial problems ($r=-.405$; $p<.01$). Further it was evidenced that self-control was found to negatively and significantly predict dangerous use ($R^2=7.3\%$; $F=9.30$; $t=-3.05$; $p<.01$), prohibited use ($R^2=9.7\%$; $F=12.73$; $t=-3.57$; $p<.01$), dependent use ($R^2=52.5\%$; $F=130.54$; $t=-11.43$; $p<.01$), and financial problems ($R^2=16.4\%$; $F=23.20$; $t=-4.82$; $p<.01$) through regression analysis. This study has been concluded that students who use smartphones excessively having low self-control over their gadgets.

Keywords: Gender, Late Adolescent Students, Self-Control, Smartphone Overuse, Stream

INTRODUCTION

Smartphones, handy and portable gadgets, have many pre- and post-installed apps, utilities, and internet availability by allowing its users to accomplish multiple tasks at ease in their daily life. Today, the users mostly lean on their gadgets for making voice or video calls, creating reminders or notes, sending text messages, emails and any supported files (audios, videos, documents and images), searching locations through GPS, and so on to better their work done promptly. Sometimes the users relieve their weariness by spending their time online such as gaming, chatting, shopping, movies, etc. Smartphones always update its enlivening features of technology in order to meet the needs and requirements of its users. Eventually they will take the lead in the world of gadgets and cling to the lives of its users forever.

Today, many students are acquainted with and use more apps and features of smartphones than their parents because of early availability, freeness and possession of those gadgets to them. Typically they prefer using their devices for communication and entertainment rather than education. Parents and teachers need to cognize them how these gadgets are productive or counterproductive for their studies and life because they are at a crucial stage of paying attention to build a better career, improve skills, and strengthen vocational opportunities in the future. They will turn smart users when they efficiently handle and use their devices in better ways than their impulses and temptations go wrong in bad ways, which lead to problematic smartphone use. They may show irascible responses towards behaviors of their parents who restrict overuse of their devices. Smartphone overuse contributes to negative consequences on all walks of their lives by excessively using their gadgets without time sense.

Overuse of smartphones can impact students' cognitive skills, moods, and personality. Allowed to use phones in class deflected the attention of students and engendered them to retain less knowledge from classroom lectures [23]. Excess use of smartphones negatively affects students' academic performance [6] and their GPA [13, 29]. Smartphones addiction impacts the brain similar to drug addiction [14] and its symptoms are akin to that of drug addiction like craving, tolerance and withdrawal [24]. Smartphone overuse causes digital amnesia [18], loneliness [3], and also affects quality of sleep [20], including smartphone-induced illnesses like anxiety, depression, headache, and musculoskeletal problems such as wrist or neck pains. Past studies reported that students with higher smartphone addiction had lower

psychological well-being [21, 32]. Social networking sites could be an ostensible and agog world for students to acclimatize with that world and meet new people and develop their virtual relationships with those people on online platforms. Sometimes, these social media sites give relief to those students who feel stressed out or anxious when their closed people cannot reach them to understand and soothe their emotional problems. Consequently, they discourage interpersonal relationships with real-life people and avoid social participation, thus developing loneliness and depression. Smartphone overuse becomes severe addiction when the students weaken their self-control to deal with smartphone-induced gratifications.

Self-control plays a decisive role in the lives of students who can get unhinged and controlled by instant urges. Self-control is defined as "individuals' ability to regulate their emotions, behaviors, and cognitions" [11]. Past studies show that self-control is positively correlated with sustained attention [34], academic achievement [16], happiness [27], two subjective wellbeing factors viz. cognitive and affective [25], whereas it is negatively correlated with internet addiction [1, 30]. Highly self-controlled students showed better academic performance [9, 35], better grades, adjustment, and interpersonal relationships [33]. For achieving chosen goals, they have to exercise strong self-control by regulating their attention, emotions, and behavior [8]. Those with high self-control have happier and healthier life. It makes them civilized and decent social beings as well. Students with low self-control show academic procrastination [26]. They cannot organize and manage a set of schedules and cannot accomplish them on time when encountered with academic deadlines resulting in poor academic performance [10], which leads to academic cheating [5, 17]. Individuals, who had poor self-control, frequently texted messages in class [34], checked messages on their devices once notifications received [2] and showed behavioral problems [31]. People in low self-control engage in developing various addictive behaviors such as drugs, alcohol, etc. when unable to manage difficult situations in their lives. Those with low self-control are not only prone to physical and emotional imbalance, as well as many psychological illnesses (e.g. anxiety, stress, depression) but also lead to disrupt their personal and social life.

REVIEW OF LITERATURE

^[22]Lee & Moon (2013) reported that male and female of middle school students and also their grades showed no significant differences in smartphone addiction. Smartphones addiction had a negative correlation with self-control.

^[19]Kim & Sohn (2014) revealed that the findings of their study, in which lower self-control leading to mobile phone addiction and self-control explained 28% of the addictive mobile phone use.

^[15]Jiang & Zhao (2016) studied the mediating role of mobile phone use patterns on the self-control and problematic mobile phone use of Chinese college students. In their study, results were revealed that female students had higher dependency on mobile phones compared to their opposite gender peers. Students who had low self-control score had high score on interpersonal, transaction and entertainment of phone use patterns. Self-control could be explained in predicting interpersonal and transaction phone use patterns.

^[7]Chen et al. (2017), their findings were unveiled that the preponderance of smartphone addiction among medical students was 29.8%. Factors like playing game apps, anxiety, and poor sleep in male students were linked to excessive smartphone use. Whereas factors like multimedia and social media apps, anxiety, depression, and poor sleep in female students were linked to smartphone overuse.

^[28]Servatyari et al. (2019) reported that high score on mobile phone addiction leading to high score on depression and hopelessness. Male and female of high school students was significantly related to mobile phone addiction but no relationship between age and mobile phone addiction was found.

Objectives of the study

1. To examine the gender differences in smartphone overuse among late adolescent students.
2. To examine the gender group differences in self-control among late adolescent students.
3. To assess the stream group differences in smartphone overuse among late adolescent students.
4. To assess the stream group differences in self-control among late adolescent students.
5. To determine the correlation between self-control and smartphone overuse among late adolescent students.
6. To determining in predicting smartphone overuse by self-control among late adolescent students.

Hypotheses of the study

1. There are no significant gender group differences in smartphone overuse among late adolescent students.
2. There are no significant gender group differences in self-control among late adolescent students.
3. There are no significant stream differences in smartphone overuse among late adolescent students.
4. There are no significant stream differences in self-control among late adolescent students.
5. There is negatively correlated to smartphone overuse by self-control among late adolescent students.
6. There is negatively predicted to smartphone overuse by self-control among late adolescent students.

METHODOLOGY

Sample

A sample of 120 late adolescent students (60 males and 60 females) was selected through simple random sampling method.

Tools Used

- **Brief Self-control Scale:** was developed by [33] to measure of individual differences in self-control with 13 items rated on a 5-point Likert scale ranging from not at all (1) to very much (5). Items 2, 3, 4, 5, 7, 9, 10, 12, 13 are reverse scored. The total score is 13-65.
- **Problematic Mobile Phone Use Questionnaire:** was developed by [4] to measure problematic mobile use. A self-reported questionnaire consists of 30 items with 4 subscales viz. dangerous use (5 items), prohibited use (5 items), dependence use (7 items), and financial problems (13 items). It is a 4-point Likert scale from 1 (strongly agree) to 4 (strongly disagree).

Statistical techniques

Mean, Standard Deviation, t test, correlation and regression were used for data analysis.

Results and discussion

Table (1) Overview of PMPU Subscales scores on both genders

Gender	Subscales of Problematic Mobile Phone Use											
	Dangerous use			Prohibited use			Dependence use			Financial problems		
	M	SD	t	M	SD	t	M	SD	t	M	SD	t
Male (N=60)	10.20	2.35	3.91*	11.67	2.63	1.38 ^{NS}	19.07	3.52	4.71*	30.60	4.98	4.19*
Female (N=60)	8.60	2.13		10.90	3.41		15.53	4.63		27.07	4.22	

* $p < .05$; NS: Non-significant

Table (1) depicted that the values of t-test for all subscales of PMPU in both genders are dangerous use ($t=3.91$), prohibited use ($t=1.38$), dependence use ($t=4.71$) and financial problems ($t=4.19$) at $p < .05$ respectively. All other subscales of PMPU except prohibited use have significant differences in both genders. Males have excessive smartphone use than females due to their mean differences. Hence the null hypothesis is partially rejected.

Table (2) Overview of self-control scores on both genders

Variable	Gender				t-value
	Male (N=60)		Female (N=60)		
	Mean	SD	Mean	SD	
Self-control	38.00	6.37	44.37	6.05	5.62*

* $p < .05$

Table (2) revealed that the t-value for self-control in both genders is 5.62, which is significant at $p < .05$. Self-control shows significant difference in both genders. Females have higher self-control than males due to their mean differences. Hence the null hypothesis is unaccepted.

Table (3) Overview of PMPU Subscales scores on both streams

Stream	Subscales of Problematic Mobile Phone Use											
	Dangerous use			Prohibited use			Dependence use			Financial problems		
	M	SD	t	M	SD	t	M	SD	T	M	SD	t
Arts (N=60)	8.43	2.06	4.88*	11.63	2.32	1.26 ^{NS}	18.20	4.87	2.25*	28.30	5.01	1.19 ^{NS}
Science (N=60)	10.37	2.28		10.93	3.64		16.40	3.85		29.37	4.83	

* $p < .05$; NS: Non-significant

Table (3) depicted that the values of t-test for all subscales of PMPU in both streams are dangerous use ($t=4.88$), prohibited use ($t=1.26$), dependence use ($t=2.25$) and financial problems ($t=1.19$) at $p < .05$ respectively. Dangerous use and dependence use of PMPU except prohibited use and financial problems subscales have significant differences in both streams. Science students incline to use smartphones than arts students, while driving, whereas, arts students incline to excessive smartphones dependency than their counterparts due to their mean differences. Hence the null hypothesis is partially rejected.

Table (4) Overview of self-control scores on both streams

Variable	Stream				t-value
	Arts (N=60)		Science (N=60)		
	Mean	SD	Mean	SD	
Self-control	40.07	5.87	42.30	7.79	1.77 ^{NS}

NS: Not Significant

Table (4) revealed that the t-value for self-control in both streams is 1.77, which is not significant at $p < .05$. Self-control shows non-significant difference in both streams. Hence the null hypothesis is accepted.

Table (5) Overview of correlational values (r) between self-control and subscales of PMPU among late adolescent students (N=120)

	Subscales of Problematic Mobile Phone Use			
	Dangerous use	Prohibited use	Dependence use	Financial problems
Self-control	-.270*	-.312*	-.725**	-.405**

** $p < 0.01$; * $p < 0.05$.

Table (5) depicted that self-control is negatively correlated with dangerous use ($r = -.270$; $p < .05$), prohibited use ($r = -.312$; $p < .05$), dependence use ($r = -.725$; $p < .01$), and financial problems ($r = -.405$; $p < .01$) subscales of PMPU. Hence the alternative hypothesis is accepted.

Table (6) Overview of regression analysis scores between self-control and PMPU Subscales

Self-Control (Predictor variable)	PMPU Subscales (Outcome variables)			
	Dangerous Use	Prohibited Use	Dependence Use	Financial Problems
R	.270	.312	.725	.405
R²	.073	.097	.525	.164
F	9.30	12.73	130.54	23.20
B	-.092	-.137	-.465	-.287
S.E	.030	.038	.041	.060
β	-.270	-.312	-.725	-.405
t	-3.05	-3.57	-11.43	-4.82
Sign.	.003**	.001**	.000**	.000**

** $p < .01$

Table (6) depicted that self-control explains 7.3% variance in dangerous use; 9.7% in prohibited use; 52.5% in dependent use and 16.4% in financial problems of PMPU. Self-control is a negatively significant predictor of all PMPU subscales. Hence the alternative hypothesis is accepted.

CONCLUSION

This study unveiled that male student group significantly experienced overuse of their smartphones whereas their opposite gender peers exercised better self-control to curb usage of their gadgets. Students from science stream felt using their devices in driving whereas those who were from arts stream underwent overdependence on their phones. Arts and science group students had similar experiences in controlling themselves against their impulsive behavior for their smartphone overuse. Students engaged in using their smartphones excessively could lower their self-control. Self-control could be explained in negatively predicting smartphone overuse.

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