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Abstract:

In our day-to-day lives, the Smartphone is indispensable. This is critical for all of life's requirements. In comparison to previous decades, every student nowadays uses a Smartphone. Smartphones have a number of drawbacks, including sleep deprivation and a lack of attention diversity. A total of 390 students attended, with 129 women and 251 males. We designed a questionnaire with 91 items for this survey. Stress, academic, social, and emotional self-efficacy, PUMP (problematic usage of mobile phones), and locus of control were all measured using psychological measures. The randomization method was used to acquire primary data. Our goal is to assess students' addiction and stress levels, as well as the relationship between psychological variables and gender differences. Gender has a statistically significant relationship with Time Spent on Smartphone (W=28,p=0.022), Internet Use (W=528,p=0.0070), Money on Smartphone (W=59,p=0.0028), Locus of Control (W=3916,p=0.0030), and Self-efficacy (W=528,p=0.0022). According to a comprehensive study, there is a strong linear link between Problematic Uses of Mobile Phones (PUMP) and Money on Smartphone(=0.0024,R2=0.624,t-value=1.63,p=0.105) and Stress and Emotional Self-Efficacy (=-0.108,R2=0.705,t-value=-3.174,p=0.002).The study's overall conclusion is that as self-efficacy levels improved, the scores of powerful others levels increased and there is no link between scores of self-efficacy and individual levels.

Keywords: Problematic Uses of Mobile Phones, Self-Efficacy, Stress, Locus of Control.

Introduction

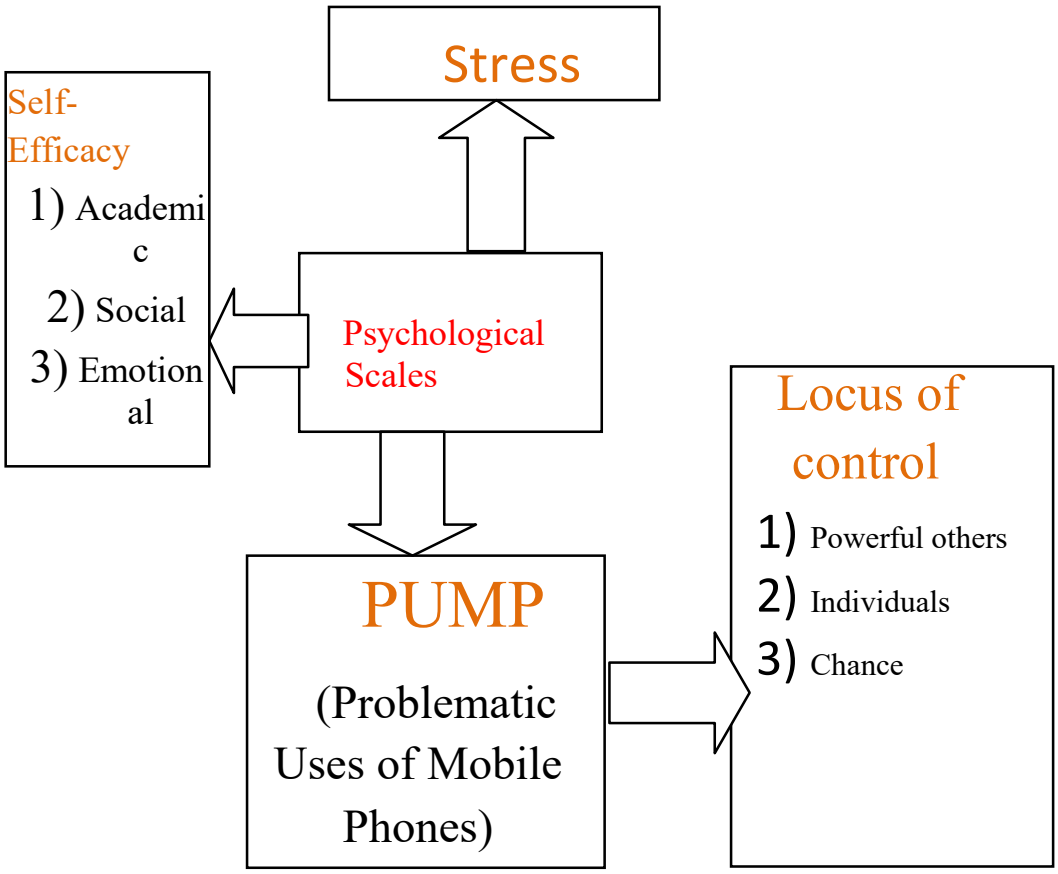
Smartphones play a predominant role in the present-day scenario. If wellutilized, there will be many advantages, but teenagerswhoarenotmentallymatureare spoiling their lives with the overuse of smartphones. Many become addicts, wastingtheir precious time. Despite external forces from parents, teachers, andwell-wishers,they can not be away from smartphones.They should be lightened regarding the proper utility of smartphones. There should be vast propaganda regarding the demeritsof the overuse of smartphones. If they are used for good purposes to enhance theirknowledge, it is okay. Otherwise, the lives of the students will be spoiled. Mobile phone use at bedtime was associated with, e.g., shorter sleep duration and lower sleep quality. "Problematic use" (dependency) was associated with several adverse outcomes [1]. The widespread of smartphones usage has increased the convenience of accessing information and knowledge sharing for higher learning students. The study examines smartphone habits and behaviors, internet literacy, and mobile learning concerning self-efficacy. Self-efficacy refers to the internal forces of a student's belief in the abilities to utilize smartphones as an educational aid in mobile learning [2]. In one Saudi Arabian study, 44.4% of participants related common health complaints such as headache, trouble concentrating, memory loss, hearing loss, and fatigue to their mobile phone use. Strong correlations were found between the PUMP Scale and an existing scale of cellular

phone dependency validated in Asia and items assessing frequency and intensity of mobile phone use [3].As problematic internet usage increased in the students, their total scores of internal-external Locus of control and emotional intelligence levels decreased.

Self-efficacy is a person's belief related to a specific task, challenge, or endeavor, which means that self-efficacy may differ according to the situation. On the other hand, Locus of control is a person's attribution towards a factor on the outcome of an event. This study aimed to investigate the relationships between self-efficacy and Locus of control of special educators [4]. Higher levels of Stress are associated with higher levels of sickness, more significant external Locus of control, and lower levels of self-efficacy [5]. In three groups of university students, the impacts of self-concepts on Locus of control and academic self-efficacy were investigated (Psychology, Medicine, and Law). Actual and Future Self-concepts were measured using the Locus of Control of Behavior Scale (Craig et al., 1984), Academic Self-efficacy Scale, and Semantic Differentials (Osgood et al., 1957). The Locus of Control is a personality trait that refers to an individual's sense of the Locus of Events as being internally decided by their actions rather than by fate, luck, or external circumstances. Its origins can be traced back to the Social Learning Theory.It's a view that the outcomes of our actions are determined by what we do (internal control orientation) or by events beyond our control (external control orientation) (see Zimbardo, 1985).

Internality relates to the expectation that one is in charge or instrumental in gaining rewards from one's surroundings, according to Rotter (1966).

In contrast, externality refers to the assumption that tips are beyond one's control and determined by luck [7].Generalized Stress is a condition of psychological arousal that occurs when a person's adaptive abilities are taxed or exceeded by external demands (Lazarus, 1966; Lazarus and Folkman, 1984). Academic self-efficacy is a stronger and more reliable predictor of academic performance than stress [13]. This paper is only completed by college students aged 15 to 30, and the Survey is only conducted on smartphone users. Smartphone overuse's harmful effects on young adults, such as sleep deprivation and attention deficit, have recently become more recognized. This burgeoning problem prompted us to investigate the patterns of smartphone overuse. Among this paper, we used surveys to analyse Smartphone usage in 380 college students (118 females and 232 males), and we used a standard psychological questionnaire to investigate the relationships between Stress, Academic, Social, and Emotional Self-Efficacy, Locus of Control, and PUMP (Problematic Use of Mobile Phone) psychological scales.



Aims And Objectives

The primary goal of this study is to determine the relationship between Stress, self-efficacy, and Locus of control as well as the relationship between PUMP (Problematic Use of Mobile Phones) and use of the Internet and money on smartphones.

The study's goals are as follows:

- Look into pupils' smartphone addiction, as well as their stress levels.
- To see if there is a substantial difference between Locus of Control,Stress,Self-Efficacy,Use of Internet and Money on Smartphone concerning Gender.
- To determine the relationship between Stress and academic self-efficacy, social self-efficacy, emotional self-efficacy, Locus of control, and problematic phone use.

- Establish a link between problematic uses of mobile phones(PUMP) and academic self-efficacy, social components of self-efficacy, emotional self-efficacy, Locus of control, and Stress.
- Examine the link between self-efficacy and the Locus of control (powerful others).
- Create regression models and forecasts for PUMP (Problematic Uses of Mobile Phones), internet use, money on a smartphone, Stress and different sorts of self-efficacy (Academic, Emotional and Social).

Materials And Methodology

Through research, we looked into the use of smartphones among 350 pupils (118 women and 232 men). The study included all Degree College students (Science, Commerce, and Arts) who were present (on the survey day). We created a questionnaire with the help of numerous psychological scales.

The Cronbach alpha was used to verify reliability (questionnaire) and the Shapiro-Wilk test was used to examine the Normality of the data. We used the Non-parametric Mann-Whitney U test to see if there was a significant difference between the two variables.Multiple linear regression methods determine the best functional relationship between a dependent variable and one or more co-occurring (independent) variables and Stepwise regression method were used and it is the combination of forward selection and backward elimination. In the forward section, once the regressor is added to the model. The SPSS version 20 was utilised, as well as R software, MS-Excel 2007, Minitab, and JASP version 0.16.

Hypothesis:

Null Hypothesis: Time spent on Smartphones, Use of the Internet, Money spent

on smartphones, Total Scores of Locus of Control Level,Stress and Self-efficacy levels of female students is higher than or equal to the male students.

Alternative Hypothesis: Time spent on Smartphones, Use of the Internet, Money spent on smartphones, Total Scores of Locus of Control Level,Stress and Self-efficacy levels of female students is lesser than the male students.

Results

Among the 380 students, 129 are female and 251 are male. For categorical data, we approximated percentages, and for quantitative data, we calculated the significant difference with Gender. First, we looked at the Shapiro-Wilk test for Normality and Levene's test for equality of variance. In this investigation, the normality assumptions will not be met. We used the Mann-Whitney U test, which is an alternative to the t-test, to see if there was a significant difference in Gender.

We discovered that severely addicted students make up 28.42 percent, extensively addicted students make up 54.47 percent, regularly addicted students make up 11.05 percent, and unaddicted students make up 6.05 percent (Table1). Deeply Stressed 2.11 percent, Extensively Stressed 14.29 percent, Normally Stressed 69.44 percent, and Un-Stressed 14.16 percent of pupils were found to have high-stress levels (Table2).

Out of 380 students, it was found that the Use of the Internet among males was 236(66%) and female is 121(34%). (p=0.0001) **(**Table3).According to Gender, 65.9% of female students were in the age group 20-22 and 24-26 male students (37%) **(**Table4). Use of the Internet is high in the age group of 18-20,i.e., 179(50.14%) **(**Table5).

There was no statistically significant relationship between Problematic Uses of Mobile Phones (PUMP) and other psychological scales (Stress, Self-Efficacy, and Locus of Control). Still, there

was a statistically significant relationship between Stress and total self-efficacy (r=-0.182,p=0.00), academic self-efficacy (r=-0.109,p=0.035), social self-efficacy (r=-0.159,p=0.002), emotional self-efficacy (Table6).

There is strong linear relationship between Problematic uses of mobile phones(PUMP) and Money on smartphone(β=0.105,R^2=0.624,t-value=1.63,p=0.0024) and Use of internet (β=-16.0,R^2=0.624,t-value=-2.89,p=0.004) (Table7).There is strong linear relationship between Stress and Emotional Self -Efficacy (β=-0.108,R^2=0.705,t-value=-3.174,p=0.002)(Table8).

Validation of Normality assumption for the Variable Stress(Female p=0.04,Male p=<0.001), Self-Efficacy(Female p=0.138,Male p=0.004), PUMP(Female p=0.042,Male p=<0.001), Locus of control(Female p=<0.001,Male p=0.072), Money Spent on smartphone(Female p=<0.001,Male p= <0.001), Time Spent on Smartphone(Female p=<0.001,Male p= <0.001) and Use of Internet(Female p=<0.001,Male p= <0.001)(Table9) and Validation of Equality of Variance for Stress(p=0.99), Self-Efficacy(p=0.455), PUMP(p=0.664), Locus of control(p=0.334), Money Spent on smartphone(p=0.235), Time Spent on Smartphone(p=0.697),Use of Internet(p=0.295)(Table10).

There is no statistical significant difference between gender and Time Spend on Smartphone(W=13826,p=0.239),Use of internet(W=14202.5,p=0.227),Money on Smartphone (W=13800.5,p=0.15),Problamamtic uses of mobile phones(PUMP)(W=14220.5,p=0.098),Locus of Control (W=16518,p=0.522), Self-efficacy (W=15993.5,p=0.907) and Stress(W=15735,p=0.888),using Independent sample Mann-Whitney U test(Table11).

The reliability of questionnaire for Stress (Cronbach's Alpha=0.623), self-efficacy (Cronbach's Alpha= 0.847), PUMP (Problematic Uses of Mobile Phone) (Cronbach’s Alpha

=0.747), Locus of control (Cronbach's Alpha =0.83) (Table 12).

Discussions:

A significant—and growing—amount of study has been conducted on the psychological or behavioral links between mobile phone use and mental health. In both children and adults, excessive mobile phone use has been related to various mental health consequences, including depressed symptoms and sleep problems. A slew of studies looked into the link between mobile phone use and sleep habits; using a phone before bed or at night, for example, was linked to shorter sleep and poorer sleep quality. PUMP (Problematic Uses of Mobile Phones), Stress, Self-efficacy, and Locus of Control were among the psychological scales used in this study. We investigated the use of smartphones among 350 college students using questionnaires (118 female and 232 male).All Degree College students (Science, Commerce, and Arts) who were present were included in the study (on the survey day).

Correlation between self-efficacy ratings and Locus of Control subscales, namely, Powerful Others (r = 0.46**, n = 35, p.01), Chance Control (r = -0.40*, n = 35, p.05), and Individual Control (r = 0.23, n = 35, p>.05).Ms.Malarkodi. Doctor Sujaritha Magdal [4]. It was shown that self-efficacy and powerful others had a strong and positive link,was significant and The link between self-efficacy and individual scores, on the other hand, was insignificant. In this study, however, the association between self-efficacy and chance control was found to have a substantial and favorable positive correlation.

Conclusions:

The study's overall conclusion is that as self-efficacy levels improved,the scores of powerful others levels increased and there is no link between scores of self-efficacy and individual levels.

It was discovered that as students' scores of Problematic Use of Mobile Phone increased, their use of the Internet decreased and their spending on a Smartphone increased. Their scores of Stress increased, their scores of Self-efficacy, Emotional Self-efficacy, and Powerful Others levels decreased. The fitted models are Problematic Uses of Mobile Phones (PUMP) =70.61-16.0*(Use of Internet) +0.105*(Money on Smartphone) and Stress=31.517-0.136 *(Emotional Self efficacy), with the prediction that as one unit Problematic Uses of Mobile Phones levels score increases, 16 times the use of internet decreases, 0.105 times the money on smartphone increases, and 0.136 times the Emotional self-efficacy decreases.

It was found that Time spent on Smartphones, Use of the Internet, Money spent on smartphones, Total Scores of Locus of Control Level,Stress and Self-efficacy levels of female students is higher than or equal to the male students.

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Table 1

Percentage of Smartphone Addiction of college students.

Addiction Level	Score Range	Students Addicted Inpercentn (%)
Deeply Addict	77-100	108(28.42%)
Extensively Addict	66-76	207(54.47%)
Normally Addict	50-65	42(11.05%)
Un -addict	0-49	23(6.05%)

Table 2

Percentage of Stress of college students.

Stress Levels	Score Range	Stress (per) N (%)
Deeply stress	77-100	8(2.11%)
Extensively stress	66-76	54(14.29%)
Normally stress	50-65	264(69.44%)
Unstressed	0-49	54(14.16%)

Table 3

Distribution of Use of Internet according to Gender

Age Groups	Do you use the Internet?			
	Yes	%	No	%
16-18	12	3.36	7	30.43
18-20	179	50.14	4	17.39
20-22	134	37.53	9	39.13
22-24	25	7	2	8.69
24-26	5	1.4	1	4.34
26-28	1	0.28	0	0
28-30	1	0.28	0	0
Total	357	100	23	100

Table 4

Distribution of Age according to Gender

Age Groups	Female	%	Male	%
16-18	3	2.32	10	3.98
18-20	32	24.8	2	0.79
20-22	85	65.89	18	7.17
22-24	9	6.97	55	21.91
24-26	0	0	93	37.05

26-28	0	0	41	16.33
28-30	0	0	20	7.96
Total	129	100	251	100

Table 5

Distribution of Use of Internet according to Age

Gender	**Do you use the Internet?**			
	Yes	**%**	**No**	**%**
Female	121	33.89	14	60.86
Male	236	66.1	12	52.17
Total	357	100	23	100

Table 6

Correlation Matrix concerning PUMP, Stress, self-efficacy, and Locus of control

Variables	**Pearson Correlation and p-value**	**Pump**	**Stress**	**total self-efficacy**	**Academic Self-efficacy**	**Social Self efficacy**	**Emotional Self-efficacy**	**powerful others**	**chance**	**individual**
Pump	Pearson Correlation	1	-0.04	0.031	0.025	0.043	0.002	0.042	-0.02	-0.013

	p-value		0.443	0.553	0.629	0.405	0.97	0.412	0.761	0.807
Stress	Pearson Correlation	-0.04	1	-.182**	-.109*	-.159**	-.162**	-.105*	-0.08	-0.06
	p-value	0.443		0	0.035	0.002	0.002	0.041	0.143	0.246
total Self Efficacy	Pearson Correlation	0.031	-.182**	1	.789**	.815**	.718**	.141**	.205**	0.092
	p-value	0.553	0		0	0	0	0.006	0	0.074
Academic Self efficacy	Pearson Correlation	0.025	-.109*	.789**	1	.463**	.292**	0.071	.184**	.143**
	p-value	0.629	0.035	0		0	0	0.172	0	0.006
Social Self efficacy	Pearson Correlation	0.043	-.159**	.815**	.463**	1	.451**	.211**	.189**	-0.011
	p-value	0.405	0.002	0	0		0	0	0	0.829
Emotional Self efficacy	Pearson Correlation	0.002	-.162**	.718**	.292**	.451**	1	0.049	0.097	0.072

	p-value	0.97	0.002	0	0	0		0.347	0.059	0.162
Powerful others	Pearson Correlation	0.042	-.105*	.141**	0.071	.211**	0.049	1	.648**	.365**
	p-value	0.412	0.041	0.006	0.172	0	0.347		0	0
Chance	Pearson Correlation	-0.02	-0.076	.205**	.184**	.189**	0.097	.648**	1	.331**
	p-value	0.761	0.143	0	0	0	0.059	0		0
Individual	Pearson Correlation	-0.01	-0.06	0.092	.143**	-0.011	0.072	.365**	.331**	1
	p-value	0.807	0.246	0.074	0.006	0.829	0.162	0	0	

Note: * Correlation is significant at the 0.05 level ** Correlation is significant at the 0.01 level

Table 7

Regression analysis concerning pump and use of the Internet and Money ona Smart phone.

Dependent	**Independent**	**Coefficient**	**Adjusted R^2**	**t-value**	**P-value**

Variable	Variables	Value	Value		
PUMP	Constant	70.61	0.624	1.5	**0.002**
	Use of internet	-16		-2.89	**0.004**
	Money on smartphone	0.105		1.63	**0.0024**

PUMP=70.61-16.0*(Use of internet)+0.105*(money on Smartphone)

Table 8

Regression analysis concerning Stress and self-efficacy

Dependent Variable	Independent Variables	Coefficient Value	Adjusted R^2 Value	t-value	P-value
Stress	Constant	70.61	0.705	41.319	**0**
	Academic Self Efficacy	-0.067		-0.065	**0.42**
	Social Self Efficacy	-0.108		-1.904	**0.105**
	Emotional Self Efficacy	-0.136		-3.174	**0.002**

Stress=31.517-0.136 *(Emotional Self efficacy)

Table 9

Validation of Normality Assumptions using Shapiro-Wilk test

Variables	Gender	W-value	p-value
Stress	Female	0.978	**0.04**
	Male	0.967	**< .001**
Self-Efficacy	Female	0.984	**0.138**
	Male	0.983	**0.004**
Problamatic Uses of Mobile Phones(PUMP)	Female	0.978	**0.042**
	Male	0.972	**< .001**
Locus of Cntrol	Female	0.95	**< .001**
	Male	0.99	**0.072**
Money spent on Smartphone	Female	0.96	**< .001**
	Male	0.237	**< .001**
Time spent on Smartphone	Female	0.929	**< .001**
	Male	0.936	**< .001**
Use of Internet	Female	0.81	**< .001**
	Male	0.209	**< .001**
Note. Significant results suggest a deviation from Normality.			

Table10

Validation of Test of Equality of Variances using Levene's test

Variables	F-value	p-vale
Stress	0.00015	**0.99**

Self-Efficacy	0.56	**0.455**
Problematic Uses of Mobile Phones(PUMP)	0.189	**0.664**
Locus of Control	0.937	**0.334**
Money spent on smartphone	1.418	**0.235**
Time spent on Smartphone	0.152	**0.697**
Use of Internet	1.099	**0.295**

Table11

Comparisons Gender vs. Time spent on Smartphone, Use of Internet,Money Spend on Smartphone ,Stress, Self-Efficacy, Problematic Uses Of Mobile Phones (PUMP) and Locus of Control using Mann-Whitney U test

Variables	Group	Mean	SD	W-Value	p-value
Stress	Female	29.159	4.136	15735	**0.888**
	Male	29.242	4.447		
Self-Efficacy	Female	58.667	12.504	15993.5	**0.907**
	Male	58.69	13.53		
Problematic Uses Of Mobile Phones (PUMP)	Female	53.008	11.874	14220.5	**0.098**
	Male	55.115	12.876		
Locus of Control	Female	63.849	11.832	16518	**0.522**

	Male	63.647	10.212		
Money spent on smartphone	Female	228.198	141.302	13800.5	**0.15**
	Male	291.114	527.042		
Time spent on Smartphone	Female	5.092	2.801	13826	**0.239**
	Male	5.461	2.721		
Use of Internet	Female	4.83	3.717	14202.5	**0.227**
	Male	6.426	14.471		

Table 12

Reliability of Questionnaire using Cronbach's Alpha

Variables	**Cronbach's Alpha**	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
Stress	0.623	0.116	10
Self-efficacy	0.847	0.847	20
Problematic Uses of Mobile Phone(PUMP)	0.747	0.747	20
Locus of control	0.83	0.87	8