Role of Smart Phone Addiction, Fear of Missing Out on Perceived Competence among Secondary and Intermediate Students

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Abstract

The main goal of the study was to investigate the effects of SPA (smart-phone-addiction), FOMO (fear-of-missing-out) on PC (perceived competence) among secondary and intermediate students. The sample was comprised of 200 students from Multan's secondary and intermediate levels, their age range was 15 to 18 years old. The purposive sampling technique was used. The measure of smart phone addiction by Kwon et al. (2013) consisted of 10 items, Przybyiski et al. (2013) 10 items FOMO intervention, Ozer et al. (2016) PC (perceived-competence) scale consisting of 40 items were employed. Results indicated that smart phone addiction positively correlated with Fear-of-Missing-Out and had a negative relation with Fear-of-Missing-Out & PC (perceived competence). SPA (Smart-phone-addiction) has a significant impact on the fear of missing out. Smart-phone-addiction has an insignificant impact on perceived competence of cognitive, social and physical subscales through mediating effect of fear of missing out. Smartphone addiction has a significant impact on perceived competence of general self-worth and learning through mediation of fear-of-missing-out.

Keywords: Fear of Missing Out, Perceived Competence, Smart Phone Addiction

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Introduction

Twenty-first century has witnessed technological advancements that have affected many aspects of existence. The smart phone and its multiple components or applications, which allow rapid internet and social media connectivity via apps such as message applications, online websites, and voice chat, are among the numerous advancements. In addition to SMS and fax transmission, the mobile device supported Internet navigation. Sports, video recorder, camera, internet, multimedia, radio, Twitter, pictures, GPS, and other apps are among the features of the mobile phone in addition to those listed above (Abo-Jedi, 2008). Microsoft office or other additional programs can download through manufacturer's website or the Play Store is one of its most important features. It also has feature of a touch screen that allows users to swiftly compose emails. As with other global markets, new digital phones are introducing every day in the Gulf. Additionally, people of all ages are interested in purchasing such mobiles. Increasing numbers of users are purchasing smart devices for their variety and versatility. For some people, the cell phone has become a device replacement. It has become the most efficient form of amusement, enjoyment, and diversion for some. Due to its success, mobile phone usage has become a source of business status, and mobile ownership is associated with a range of social and psychological values, as well as the popularity implied by having a big number of friends or followers.

However, many argue that the disadvantages of cell phones outweigh their benefits. The disadvantages stem from teens' cell phone usage (Attamimi, 2011). There is scientific evidence that the majority of mobile users are young people whose shyness and lack of self-confidence leads them to rely on mobiles to contact with others without engaging in speech (Walsh et al., 2007).

In recent years, the number of mobile users who spend huge amounts on new patches, models, and software has increased substantially. Users are so reliant on their mobile device that they believe they would be unable to function without it, and their use and maintenance of the device results in the absence of certain tasks and responsibilities. This compulsive overuse of mobile devices is referred to as mobile addiction and is classified as an obsession by psychologists. This kind of addiction is more prevailing than other addictions. The users of mobile devices are forced to live in seclusion. This addiction can also have economic and psychological effects for individuals (Walsh et al., 2007). Smartphone addiction, also known as "pathological smartphone use" or "smartphone dependence," is characterized as an individual's uncontrolled use of their smartphone, which can lead to major negative behavior at work, when learning, and in daily life. Smartphone addiction involves saliency, impulsivity, and withdrawal symptoms (Panova & Carbonell, 2018). Smartphone addiction is widely considered to be harmful not just to mental health, but also to learning, life, and physical health. Furthermore, smartphone addiction has been linked to a variety of negative health effects, including weariness (Guo et al., 2019).

Fear-of-Missing-Out

Przybylski et al. (2013) the phenomenon of FOMO has been described as "a continuous anxiety that others are absent from having rewarding experiences, and fear of missing out is characterized by the need to remain constantly linked to what others are doing". The study examined the prevalence of failure anxiety and its interaction with social media (Maguire et al., 2012). Przybylski et al. (2013) is the first study to institutionalize the FOMO model by bringing together a wide group of international scholars. According to a recent academic study conducted by Alt (2015), social media involvement shows a favorable correlation with two motivational factors: Fear of losing out is more likely to reflect an extrinsic and a learning-based motivation. Fear of missing out plays a crucial influence in social media involvement. Yin et al. (2015) argue that the continued usage of social media is positively associated with FOMO and happiness. According to Przybylskiet et al. (2013), participants with a high level of FOMO likely to engage in more activity on social networking sites. The use of social networks has been associated to increased rates of emotional support from close friends (Alt, 2015). As a means of communicating with people to acquire social skills and strengthen friendships, social networking is typically utilized by those with poor specificity (Przybylskiet al., 2013).

Fear Circumstances of Missing Out

When addressing FOMO and its contributing aspects, we must consider the fact that social networking sites have become the most popular leisure activity, especially among young individuals. As with other internet services, electronic media could become a cause of addiction (Shopping, play, dates of virtual sex). Addiction to major media platforms, such as Facebook and Integral, is an illustration of internet addiction. Fear of missing out may also contribute to online communicators' addiction to social networking sites, mobile devices, and emerging communication technologies (Kuss & Griffiths, 2017). Fear of missing out on social growth includes elements such as common need, fear of exclusion, and fulfilling the urge to participate through engaging in interactive peer networks online (Beyens et al., 2016). Fear of missing out affects the mood and happiness

of young individuals, as well as those who are extremely involved online. This is especially prevalent among individuals with diminished attention, such as in classes (Przybylski et. al., 2013). Heavy social media use is connected with symptoms such as DSM-5 attention deficit, hyperactivity / impulsivity, social awkwardness, and social isolation. Consequently, fear of loss is typically accompanied by depressive mood (Barry et al. 2017; Elhai et al., 2016).

Internet addiction test predictions, and consequently, fear of missing out, frequently stimulate the use of new technology. This source of motivation determines whether the Internet is utilized destructively or constructively. The "motivation of flight" consists of the desire to flee from troubles, grief, depression, and an inward need. "Grace" is associated with the following: a desire to be "educated," an interest in the behaviors of others, a desire to maintain contact with friends, and a quest for the most recent experiences. The third part of the "cause of boredom" is the lack of other ways to spend spare time (Mróz & Solecki, 2017).

Perceived Competence

Typically, perceived talents have two domains: Ozer et al. (2016) technical and social. Certainly, Tafarodi and Swann, (2001) poor professed abilities depicted negative effect on personality. The lack of competency awareness is evident in social media and has a greater effect on knowledge on social networks (Masur et al., 2014). Lack of social skills makes the overuse of informal communication channels and the popularity of snap chat even worse. Given these findings, the goal of this study is to determine why people use social media by taking into account aspects including mobile reliance, fear of making mistakes, and perceived intellectual and sociological ability. A convincing body of research has demonstrated that students' perceptions of their own academic aptitude have an impact on their commitment to learning and success in college. It exemplifies why theories of inspiration and

learning must include self-perceptions of skill evaluations. Nonetheless, several academic studies conducted concurrently and examining the effects of diverse scholastic appraisal techniques on students' goals, motivation, learning preferences, and academic accomplishment. (Satici & Eraslan, 2014).

Entwistle & Peterson (2004) urges curriculum experts to adhere to a systematic learning plan, which is intended to lead to improved academic performance and comprehension. (Entwistle & Peterson, 2004; Vermunt & Vermetten, 2004) Mobile phones and modern IT infrastructure have enabled people, especially young people, to stay connected to their social and professional websites. This resulted in mandatory status change and notification monitoring for fear of loss. FOMO, a process of internet addiction, is the subject of an observational study exploring the impact of fear of missing out on students' academic progress. This is a survey of four hundred twenty-two college students regarding their internet use (social services) and academic performance. The findings revealed that the continued use of the internet has had a negative impact on the academic achievement of students. Third-party schools will improve student input and therapy to mitigate the negative impacts of internet use on pupils (Wireko, 2019).

Problem Statement

Numerous educational challenges are generated for examining smartphone-addiction, either has it an effect within and beyond the classroom? Numerous studies have been undertaken in recent years to shed light on the problem of smart phone addiction among adolescents. Because this addiction is rapidly growing among young people, the majority of studies focused on adolescents and college students. In addition, research has been conducted on the impact of smart phone addiction on the workplace in order to measure the employees' levels of competence. It was discovered that Smartphone addiction leads to health issues like mental stress, sleep

disruptions, and academic failures (Lee et al., 2015).

The main theme of research was to investigate smart-phone-addiction link with the Fear-of-Missing-Out, & perceived-competence among secondary & intermediate students. Previous researches were conducted on western nations, but the current investigation was conducted in Punjab, Pakistan. The majority of earlier research focused on the level of media addiction among high school students, and their investigations were confined to exploring and linking the findings. This study also takes into consideration other key risk factors for smart phone addiction, such as those at schools and colleges. The research also included college students. The findings of studies will aid in our comprehension of the negative effects of smart phone use. The present research results will add additional dimensions to the body of knowledge. It will be beneficial for students, parents, and instructors.

Objectives

The primary goals of this research were to check the relationships between smart phone addiction, FOMO, & perceived competence among secondary and intermediate students, moreover, to examine smart phone addiction influences on perceived competence among secondary and intermediate students through FOMO.

Figure 1
Conceptual Framework
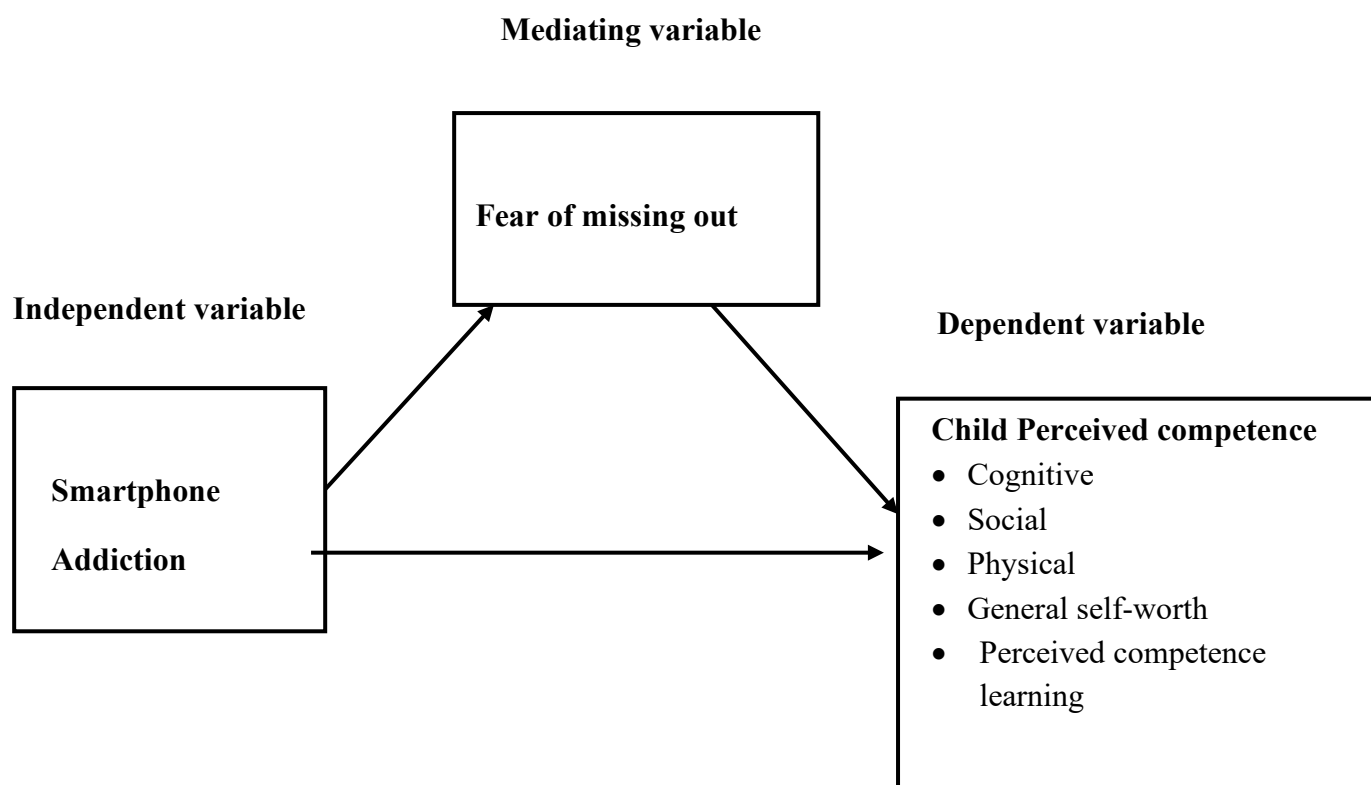
Hypotheses

H$_1$ There would be significant relationship among smart-phone-addiction, perceived competence and fear-of-missing-out among secondary & intermediate students.

H$_2$ Smartphone addiction will have a significant impact on cognitive perceived competence through mediating effect of FOMO among secondary and intermediate students.

H$_3$ There would be significant impact of smartphone addiction on social perceived competence through mediating effect of FOMO among secondary and intermediate students.

H[4]   There would be significant impact of smartphone addiction on physical perceived competence through mediating effect of FOMO among secondary and intermediate students.

H[5]   There would be significant impact of smartphone addiction on general self-worth perceived competence through mediating effect of FOMO among secondary and intermediate students.

H[6]   There would be significant impact of smartphone addiction on learning perceived competence through mediating effect of FOMO among secondary and intermediate students.

Method

Research Design
Quantitative correlation research design was used with survey research method through questionnaires to obtain data through purposive sampling.

Participants
Using a purposive sampling strategy, 200 students from various secondary and intermediate institutions of Multan were included in the sample. The ages of those eligible participants were 15–18. Data was taken from both male and female participants. A prior G*Power analysis conducted a power analysis 3.1.9 (Faul et al., 2007) to detect the efficacy of a study with power 0.95 and alpha (0.04), with acceptable power to test or sufficient sample size. The current study recruited 200 people (N=200); initially, 8 additional participants were added to account for attrition and bias.

Measures

Smart-Phone Addiction
10-point questionnaire established by Kwon et al. (2013) with response choices ranging, "1-Strongly disagree", "6 – Strongly agree." Rewriting some questions to enhance access & accuracy, for instance "Missing planned work due to smart phone use" to "I missed planned work due to smart phone use," alpha was necessary (Kwon et al., 2013). The alpha of Cronbach in our study was 0.91. Higher scores reflect self-awareness of the severity of addiction to smart phones.

Fear-of-Missing-Out
FOMO questionnaire build up (Przybyiski et al., 2013). The points have been measured on a Likert five-point scale, as I am extremely true, I do, I do not apply very much, I do not apply at all, the ranking 5, 4, 3, 2 and 1 respectively. The average effects of every 10 objects and the accurate compound value (a = 87 to 90) can be determined by individual scores.

Perceived Competence Scale
The perceived competence scale is a Japanese questionnaire from the PCSC. The scale has been developed by Ozer et al. (2016). This scale was developed to measure the adolescent self-competence of ability in the cognitive (10 items) social (10 items) physical (10 items) general self-worth (10) items. The sub-scale CPCS scores represent the self-competence experienced by an adolescent in each environment. As much higher values suggest a high perceived competence.

Procedure
Researcher made booklet with three scales and demographic characteristics like age, gender, birth order, education, and education sector. Participants were selected through purposive sampling technique. When visited schools and colleges first of all taken permission from administration. After approval, students' data was taken from administration due to age factor. In current research were needed 15 to 18 years old students. After taking bio data of students, then contacted participants and explained aim of the present research. Participants were ensured that their personal information would be kept totally secret and will be used solely for academic reasons. They had choice to leave the research any time. They were instructed to place all responds on the scales in accordance with the instructions provided. Who had less age or more age from 15 to 18 those students were not taken. Because after confirmation of administration ensured date of birth from students for accurate data for research. The gathered

data was then incorporated into the quantitative study.

Ethical Considerations

The following ethical guidelines guided the study's design: authorization was requested from the relevant institutions for data gathering. All participants were told about the research and provided written permission. The participants ensured the information's anonymity and confidentiality. Participants had the option to withdraw from the research at any time.

Results

Table 1

Correlation among Study Variables (N=200)

	M	SD	1	2	3	4	5	6	7
SPA	36.00	7.91	-	.40**	.004	.08	-.01	-.108	.006
FOMO	29.19	6.12		-	-.09	.056	-.03	-.21**	-.15*
PCS cognitive	27.52	4.44			-	.45**	.19**	.41**	.54**
PCS Social	27.57	4.17				-	.20**	.04	.309**
PCS Physical	26.17	4.30					-	.16*	.33**
PCS General Self Worth	26.69	3.78						-	.47**
PCL	20.45	3.96							-

**$p<0.01$, *$p<0.05$

SPA= Smartphone addiction, FOMO= Fear of missing out, PCS= Perceived Competence Scale, PCL= Perceived competence learning

No significant correlation was found between SPA and other variables ($p> .05$). FOMO was significantly negatively correlated with PCS General Self Worth, $r(198) = -.21$, $p < .01$, and PCL, $r(198) = -.16$, $p<.05$, suggesting that as FOMO scores increase, PCS General Self Worth and PCL scores tend to decrease. In terms of PCS Cognitive subscale, there were significant positive correlations with PCS Social, $r(198) = .45$, $p< .01$; PCS Physical, $r(198) = .19$, $p<.01$; PCS General Self Worth, $r(198) = .42$, $p < .01$; and PCL, $r(198) = .54$, $p< .01$. PCS Social had significant positive correlations with PCS Physical, $r(198) = .20$, $p< .01$, and PCL, $r(198) = .31$, $p < .01$. PCS Physical was significantly positively correlated with PCS General Self Worth, $r(198) = .17$, $p < .05$, and PCL, $r(198) = .33$, $p<.01$. Lastly, a significant positive correlation was found between PCS General Self Worth and PCL, $r(198) = .47$, $p< .01$.

Table 2

Regression Analysis showing Impact of Smart Phone Addiction on Fear of Missing Out (N=200)

Predictors	B	SE	B	t	p
(Constant)	18.04	1.85		9.72	.000***
SPA	.31	.05	.40	6.14	.000***

$R^2 =.16$, Adjusted $R^2=.15$, $F(1,198) =37.77$

***$p<0.001$

Table 3

Regression Analysis showing Impact of Smart Phone Addiction and Fear of Missing Out on Cognitive Perceived Competence (N=200)

Predictors	B	SE	B	t	p
SPA	.02	.04	.04	.64	.52
FOMO	-.08	.05	-.11	-1.48	.14

R^2=.000, Adjusted R^2 = -.005, $F(1,198) = 1.09$

Table 4

Regression Analysis showing Impact of Smart Phone Addiction and Fear of Missing Out on Social Perceived Competence (N=200)

Predictors	B	SE	B	t	p
SPA	.03	.04	.07	.95	.34
FOMO	.01	.05	.02	.33	.73

R^2 =.007, Adjusted R^2 =.002, $F(1,198) = 1.40$

Table 5

Regression Analysis showing Impact of Smart Phone Addiction and Fear of Missing Out on Physical Perceived Competence (N=200)

Predictors	B	SE	B	t	p
SPA	-.00	.04	-.00	-.08	.93
FOMO	-.02	.05	-.03	-.41	.68

R^2 =.011, Adjusted R^2 =.001, $F(1,198)= .12$

Table 6

Regression Analysis showing Impact of Smart Phone Addiction and Fear of Missing Out on General Self-worth Perceived Competence (N=200)

Predictors	B	SE	B	t	p
SPA	-.01	.03	-.02	-.38	.72
FOMO	-.12	.04	-.19	-2.60	.010**

R^2 =.012, Adjusted R^2 =.035, $F(1,198) = 2.35$, **$p<0.01$

Table 7

Regression Analysis showing Impact of Smart Phone Addiction and Fear of Missing Out on Learning Perceived Competence (N=200)

Predictors	B	SE	B	t	p
SPA	.04	.03	.08	1.08	.28
FOMO	-.12	.05	-.19	-2.50	.013**

R^2 =.031, Adjusted R^2 =.021, $F(1,198)= 3.13$,**$p<0.01$

Result depicted that smart phone addiction leads to fear of missing out. It indicated to significant research hypothesis (Table 2). Result indicated that smart phone addiction had not direct and indirect impact on cognitive perceived competence because fear of missing out did not play mediator role (Table 3). Like Table 3, smart phone addiction did not played direct and indirect impact on social perceived competence

through fear of missing out (Table 4). This analysis also exhibited insignificant impact of smart phone addiction and fear of missing out on physical perceived competence (Table 5). The Table 6 exhibited indirect effect of smart phone addiction on general self-worth through mediating role of fear of missing out. It is showing fear of missing out played full mediator role between smart phone

addiction and general self-worth (Table 6). Like previous result, this analysis also exhibited indirect impact of smart phone addiction on learning via mediating role of fear of missing out. It also depicted fear of missing out played full mediator role between smart phone addiction and learning (Table 7).

Discussion

Research hypothesis was there would be significant relation among smart phone addiction, FOMO and perceived competence among secondary and intermediate students. Results indicated that the relation between smart phone addiction & fear-of- missing-out is found significant positive and FOMO on perceived competence negatively correlated among secondary and intermediate students. Earlier research revealed that the relationships between cell phone usage and expectations of disappointment have been strongly positive, and major negative associations have been identified between the utilization of social- media & enhanced social skills more over in academic production. Due to these findings, mobile addiction and anxiety is rising. Sufficiency rises as their suspected social and academia ability decreasing (Tunc-Aksan & Akbay, 2019).

The second hypothesis was smart-phone-addiction would have significant effect on FOMO among students of secondary and intermediate. Current study results indicated that there is found significant impact of smart-phone-addiction on fear-of-missing-out among secondary & intermediate students. The outcomes of the mobile addiction study estimate social-media-addiction for students of higher school in terms of fear of losing out and academic performance (Tunc-Aksan & Akbay, 2019). Research hypothesis was that there would be significant impact of smart phone addiction on perceived competence cognitive through mediating effect of FOMO among secondary and

intermediate students. The present study rejected the hypothesis and concluded that smart phone addiction insignificant impact on perceived competence cognitive though mediating effect of FOMO among secondary and intermediate students. Previous literature, mobile phone use is the most significant predictor of teenagers' social media use, with 23 percent of overall variation. 28 percent of the overall variance was interpreted by the addiction of mobile and fear-of-missing-out. Addiction of mobile was 30% of adolescents ' social networks, fear of losing and the perceived academic variables (Tunc-Aksan & Akbay, 2019).

Third research hypothesis was that there would be significant impact of smart phone addiction on perceived competence social through mediation of fear-of-missing-out among secondary &intermediate students. The study rejected the hypothesis and concluded that smart phone addiction has insignificant impact on perceived competence social through mediation effect of fear of missing out among secondary and intermediate students. Previous studies accepted this low social ability interpretation influences the high utilization of social networking website (Satici et al., 2014).

Fourth research prediction was that there would be significant impact of smart phone addiction on perceived competence physical through mediation of fear-of-missing-out among secondary & intermediate students. The study rejected the hypothesis and concluded that smart phone addiction insignificant impact on perceived competence physical through

mediation of fear-of-missing-out among secondary & intermediate students. This hypothesis confirmed by previous research Individuals are negatively impacted by low levels of perceived competence (Tafarodi & Swann, 2001).

Fifth research prediction was that there would be significant impact of smart phone addiction on perceived competence general self-worth through mediation of fear-of-missing-out among secondary & intermediate students. The study accepted the hypothesis and concluded that smart phone addiction insignificant impact on perceived competence general self-worth through mediation of fear-of –missing-out among secondary & intermediate students. According to previous study, students' self-perceived academic ability effects their motivation, learning, and academic achievement. (Ozer et al., 2016).

The sixth hypothesis was that there would be significant impact of smart phone addiction on perceived competence learning through mediation of fear-of-missing-out among secondary & intermediate students. This study accepted the hypothesis and concluded that smart phone addiction insignificant impact on perceived competence learning through mediation of fear-of-missing-out among secondary &intermediate students. Previous research indicates that the only assessment that can forecast student outcomes of analysis is academic self-efficacy. In addition, regression investigation has shown that variables of study together account for 13,9 percent of the difference in the success of the students. The individual contribution of intellectual self-efficacy amounts to about 7.4 per cent (Johan et al., 2009).

Conclusion

The present research found a link between smart-phone addiction and FOMO and this is positive, and another link which is negative correlation within smart phone addiction & perceived competence among students of secondary and intermediate. The link within smart-phone-addiction & FOMO has been discovered. Moreover,

found link within smart-phone-addiction & perceived cognitive competence among secondary and intermediate pupils, mediated by FOMO. The effect of FOMO as a mediator revealed a substantial link within smart-phone-addiction & perceived competence in secondary and intermediate students. Through the mediating influence of FOMO, a substantial relationship was established within smart-phone-addiction & perceived capability of physical in secondary and intermediate students. The significant effect of smart-phone-addiction on perceived competence & general self-worth among secondary and intermediate students is mediated by the dread of missing out. Secondary and intermediate students exhibit a substantial relationship between smart phone addiction and perceived learning capability, intervened by the fear-of-missing-out. In present research, the factors that prevented the development of a better and more comprehensive investigation are discovered. Since every study has flaws, the scope of this study is constrained. The limitations of the present investigation are as follows: The scope of the current study was limited to Multan Division, Pakistan, and the quantitative character of the study precludes causal explanation and measurement at a single point in time.

Implications

In the future, the scope of the study could be increased to encompass the entire nation of Pakistan. Other elements, such as academic fatigue, stress, mental health, and personality qualities, could be assessed in order to acquire a deeper insight. To get in-depth knowledge, research could be explained using a combination of methods.

Contribution of Authors

Maria Anwar Khan: Conceptualization, Methodology, Writing - Reviewing & Editing, Supervision

Aftab Hussain: Methodology, Writing - Reviewing & Editing

Misbah Batool: Investigation, Data Curation, Formal Analysis, Writing – Original Draft

Conflict of Interest

There is no conflict of interest declared by authors.

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [M.A.K.] upon the reasonable request.

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