

**STRESS, SMARTPHONE USE, LIFE SATISFACTION AND LEARNING PERFORMANCE: A STUDY AMONG YOUNG COLLEGE ADULTS**

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**Abstract.** *Smartphone now days are come to be a common fragment of students' life. Studies revealed that smartphone addiction caused psychological disorders and negatively affect mental health of learners. Current study aimed to examine the association between effects of smartphone use with life satisfaction intervened by stress and learning performance. It was also tried out to find the life satisfaction interceded by stress and learning performance encourages cell phone habit. To meet the set targets, a lump of 504 students enrolled at post graduate level from Bahawalpur were identified as sample of this study. The overview survey gathered demographic data and reactions to measures comprising the Smartphone Addiction Scale, the Perceived Stress Scale, and the Satisfaction with Life Scale. The outcomes demonstrated that smartphone use was positively identified with stress, but adversely identified with life satisfaction. Furthermore, a smartphone usage was adversely identified with learning performance, but positively related with life satisfaction of young adult Pakistani students.*

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**Keywords:** Stress, Smartphone, Life Satisfaction, learning Performance, Young College Adults

### **Introduction**

Bian and Leung (2014) reveals that cell phones are not quite the same as standard mobile phones in record of working system and being outfitted with the office of 3G or 4G components and having highlights of Facebook, email and sound/video accounts and YouTube, have pulled in an imperative number of customers. The Statista (2013) expressed a cell phone get to rate of 38%

around the globe; this figure continues creating. Smartphones have replaced standard phones, and to a particular degree they have furthermore superseded PCs and other devices. Their gigantic screen gauge and common movability think about a lot of abilities to be gotten to at whatever time and wherever. With a smartphone, a person can call other individuals, send instant messages, post photos and accounts, play PC music and diversions, screen courses of action and contacts, look Internet, check broadcast and weather, utilize applications for messaging and voice calls (e.g., Facebook, Whatsapp).

A phone can be hazardous and problematical, which might be competed with by a diminished sentiment of volitional control and provoke industrious mobile phone development (Thomee, Harenstam, & Hagberg, 2011), prompting emotional wellness manifestations, for example, unrest, sleep disturbance, and mental stress and anxiety (Thomee et al., 2011; Nilsson & Hagberg, 2007). Measure of studies have been done concentrating on smartphone addiction (Youthful, 2004), risky utilize (Martinotti et al., 2011; Chen & Kim, 2013), mental depression or over usage of smartphones (Buckner, Castille & Sheets, 2012; Bener, Al-Mahdi et.al., 2010) of the Web and different other applications.

Smartphone usage has been changing gradually with social practices, emancipative possibilities, family dealings and social interchanges. The steady read-through or conceivably usage of mobile phone applications twenty four hours in a day has been associated with rest disrupting impacts, push, uneasiness, withdrawal and disintegrating in flourishing, lessened scholarly execution, and reduced physical liveliness (Thomee et al., 2011). Inquiries about looking into mobile phone usage and how it is influencing people's lives are still at a beginning period. Regardless, thinks so far have shown that use of mobile phones may incite to mental issues and mental issue (Lee, Chang, Lin and Cheng, 2014; Hawi and Rupert, 2015).

A negative relationship has been found between use of cellphone and learning performance of students according to few studies (Karpinski et al., 2013; Judd, 2001). Specifically, in view of Rosen et al. (2013) this connection has been distinguished between cell phone multitasking and a decrease in learning performance of students. An exploration on college students uncovered an inverse connection between the academic GPA of students and cell phone use, on the other hand, this association remained harmonized by multitasking (Karpinski, 2013). Parallel outcomes were acquired from researches on college students exposed the habit of text messages and using

Facebook even though at the same time doing classwork or going to class (Junco and Cotten, 2012) were unfavorably associated with GPAs.

Mobile phone use is unequivocally connected with technostress, which is pressure accomplished by information and correspondence over-load (Ragu-Nathan, et.al., 2008). A couple of inventories have exhibited that clear uneasiness can be a pointer of fulfillment with life (Matheny, Roque-Tovar, and Curlette, 2008). In particular, understudies who report low levels of pressure and more lifted measures of life fulfillment and positive uneasiness as indicated by Abolghasemi and Varaniyab (2010) is firmly related to life contentment in the learners' performance.

### **The Current Research**

The previously mentioned studies were about contributions set off our interest in exploring two connections. To start with, we tried to examine the association between stress and cell phone usage hazard which influences life satisfaction. At that point, researchers considered to discover the association between learning performance affected by cell phone dependence, and satisfaction with life.

### **Methodology**

A sample of 504 university students (272 men, 232 women) was randomly selected through random sampling technique from Bahawalpur among the enrolled students who were attending last year at master's program as well as last semester at BS Honors programs. Use of smartphone Scale - Short Version (SAS-SV) was used to measure students' use of smartphone prepared by Kwon et.al. (2013). The SAS-SV includes ten questions valued on Likert scale, stretching from "Strongly Disagree" to "Strongly Agree". The Perceived Stress Scale (PSS), prescribed and used by Cohen, Kamarck and Mermelstein (1983), analyzes the indications of stress, i.e., how much conditions are surveyed as annoying, by requesting that subjects rate the recurrence from their insights and feelings related to conditions occurred. This instrument used as a piece of a few investigations and acknowledged in various vernaculars, the PSS offers accommodating psychometric properties (Andreou et al., 2011). It contains ten inquiries assessed on a Likert type scale, extending from "Never" to "Very often". The Satisfaction with Life Scale prepared by Diener, Emmons, Larsen and Griffin (1985) about social wellbeing, measured through determining psychological self-evaluation regarding pleasure of individual life. It includes five questions valued on a

Likert scale starting from "Strongly Agree" to "Strongly Disagree". A few studies have affirmed its appropriateness and consistency (Neto, 1993; Alfonso, Allison, Rader & Gorman, 1996).

**Data analysis**

To extract the results from the data, different formulas were applied while using SPSS 22 version software. Pearson correlation matrix and linear regression model were computed. Regression analyses were employed to find out whether large amounts of smartphone use anticipated raised levels of life satisfaction of students. The examinations were utilized to inspect the relationship between processed variables.

**Findings**

Out of 504 respondents, 53.3% were male students among the respondents. The average age group of respondents was 21.87 years (SD = 1.89) with a general extent somewhere around 18 and 27 years of age.

**Table 1: Pearson Correlation Matrix (N=504)**

Variables	GPA	Sex	SAS-SV	PSS	SWLS
Sex	.284**	---	---	---	---
SAS-SV	-1.67*	.177	---	---	---
PSS	-.055	-.009	.198**	---	---
SWLS	.196**	.169*	.097	-.398***	---

Note: SAS-SV: Use of smartphone Scale, PSS: Perceived Stress scale, and SwLS: Satisfaction with Life scale. \*P < .05. \*\*P < .01. \*\*\*P < .005.

The proportion of students who were at extraordinary possibility of cell phone use (49.6%) was marginally lower than that of students at generally safe (50.4%). The rate of students distinguished as having elevated amounts of anxiety (52.7%) was marginally more prominent than the rate of university students revealed low levels of anxiety (47.3%).

The association between possibility of use of smartphone and life satisfaction (as assessed by SWLS) was researched utilizing a Pearson correlation among possibility of smartphone use and perceived stress (as assessed by the PSS).

Gender wise college students in Pakistan is significantly related with their learning performance (r = 0.28). However, its correlation with smartphone

addiction of the students shows pointedly opposite relationship ( $r = -1.67$ ). Perceived stress of college students is also meaningfully associated with the use of smartphone symptoms ( $r = .198$ ). Data revealed a strong, negative association concerning the two variables ( $r = -.398$ ),  $n = 504$ ,  $p < .0005$ , with high measure of stress related with lower dimension of life satisfaction. Specifically, whenever seen extend augments by a unit of standard deviation as of its mean and life satisfaction would be required to reduce by one unit mean, whereas all other appropriate regional affiliations remained consistent.

**Table 2: Multiple regression model (N=504)**

Variables	$\beta$	t	Sig.	R <sup>2</sup>
GPA	-.01	-1.2	.000	.177
Sex	.03	.82	.349	
PSS	.37	2.2	.000	
SWLS	.19	3.2	.000	

As shown in Table 2, GPA, perceived stress and satisfaction with life were significantly related to use of smartphone among the students, with  $b = .19$ ,  $p < .001$ ; with perceived stress  $b = .37$ ,  $p < .000$  respectively. As to correspondence of the slants with the two-level arbitrator (i.e. Perceived Stress), the aftereffects of impact investigation uncovered that the positive relationship between two factors was huge when seen stretch levels were high ( $b = .37$ ,  $p < .000$ ). So also, the relationship between utilization of cell phone among the students and satisfaction with life remains significantly high with ( $b = .19$ ,  $p < .000$ ), while the relationship amongst gender and utilization of cell phone was not noteworthy when gender orientation differences were low ( $b = .03$ ,  $p > .05$ ).

## Discussion

The focus of this research was to compare the association between mobile phone use and satisfaction with life. Our results showed that a relationship does not exist, which upheld Lepp et. al. (2014) look into disclosures. In other words, the level of use of cell phone possibility does not anticipate the level of satisfaction with life. Information showed that possibility of cell phone usage can be associated with satisfaction with life through stress and learning performance. For instance, students with high possibility of cell phone usage experienced more hoisted measures of perceived stress. Second, a strong negative relationship was found between utilization of cell phone and

satisfaction with life. Third, there was only a delicate positive association between learning performance and satisfaction with life.

The focal point of this investigation was to look at the relationship between cell phone use and with life satisfaction. Our outcomes demonstrated no any relationship between the two, which also upheld the findings of Lepp et al. (2014) who investigate divulgences. At the end of the day, the dimension of utilization of phone probability does not envision the dimension of life satisfaction. Data demonstrated that plausibility of PDA use can be related with life satisfaction through pressure and learning execution. For example, students with high plausibility of phone use experienced more lifted proportions of apparent pressure. Second, a solid inverse association was found between use of phone and life satisfaction. Third, there was just a fragile positive relationship between life satisfaction and learning performance of the students.

On the grounds that cell phones constitute another innovation, the accessibility of earlier research investigating the effect of utilization of cell phone on perceived stress and the other way around is constrained. In light of the fact uncovered an association between them, presently an open chance to lead facilitate inquiries on tests both inside an indistinguishable philosophy from same as well as crosswise culture over societies. To begin with, the curiosity of the outcomes welcomes a more grounded general arrangement of confirmation. Additionally, the cross-sectional outline of the current research distinguished existing affiliations between utilization of mobile phone, stress, learning performance, and life satisfaction. Be that as it may, no cause and effect results have been reported in the current study. Third, students self-revealed information on cell phone tendencies and perceived stress couldn't be independently confirmed.

Beranuy et al. (2009) proposed that using Internet and mental signs can pass on and stimulate one another. For example, the higher the peril of utilization of cell phone is, the higher the dimension of apparent stress would be, and the higher the dimension of apparent stress is, the higher the likelihood of usage of mobile phone would be. Summing it up, whatsoever that increases the dimension of apparent stress may create the probability of using of mobile phone. Meanwhile, anything that raises the danger of usage of mobile phone may affect an extended dimension of stress, which moves a person into a hazardous zone depicted by the high plausibility of use of wireless, an irregular condition of stress, and a little aspect of life satisfaction.

For instance, students experiencing low dimensions of life satisfaction were increasingly disinclined to achieve worthy total GPA and will likely move to bigger measures of stress, consequently, these students will presumably be slanted to use of mobile phone.

Summing it up, we in current study speculated that the utilization of cell phone would have a positive relationship with students' learning performance because of the interesting components of cell phones. In current study, despite the fact that it was not factually noteworthy, with a significant level of 0.05, the utilization of cell phone was imperceptibly connected with students' learning performance in the wake of controlling the factors identified with individual foundation.

## Results

Outcomes of this research demonstrated the presence of a positive relationship between use of phone and stress, a negative connection between use of phone and learning performance and least adverse association concerning use of phone and life satisfaction. A zero type association found between utilization of phone and life satisfaction besides between stress and learning performance. Some of these discoveries are harmonious with different research work particularly the association with learning performance (Kibona & Mgaya, 2015; Wentworth & Middleton, 2014). More researches are required to conduct if use of phones can be associated to depression, anxiety, stress, family relations, and so on with young people.

## References

- Abolghasemi, A., & Varaniyab, S. T. (2010). Resilience and perceived stress: predictors of life satisfaction in the students of success and failure. *Procedia-Social and Behavioral Sciences*, 5, 748-752.
- Alfonso, V. C., Allison, D. B., Rader, D. E., & Gorman, B. S. (1996). The extended satisfaction with life scale: Development and psychometric properties. *Social Indicators Research*, 38(3), 275-301.
- Andreou, E., Alexopoulos, E. C., Lionis, C., Varvogli, L., Gnardellis, C., Chrousos, G. P., & Darviri, C. (2011). Perceived stress scale: reliability and validity study in Greece. *International journal of environmental research and public health*, 8(8), 3287-3298.
- Bener, A., Al-Mahdi, H. S., Vachhani, P. J., Al-Nufal, M., & Ali, A. I. (2010). Do excessive internet use, television viewing and poor lifestyle habits

- affect low vision in school Children? *Journal of child health care*, 14(4), 375-385.
- Bian, M., & Leung, L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. *Social Science Computer Review*, 33(1), 61-79.
- Castille, C. M., & Sheets, T. L. (2012). The Five Factor Model of personality and employees' excessive use of technology. *Computers in Human Behavior*, 28(5), 1947-1953.
- Chen, H. T., & Kim, Y. (2013). Problematic use of social network sites: The interactive relationship between gratifications sought and privacy concerns. *Cyberpsychology, Behavior, and Social Networking*, 16(11), 806-812.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of health and social behavior*, 385-396.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49(1), 71-75.
- Judd, T. (2014). Making sense of multitasking: The role of Facebook. *Computers & Education*, 70, 194-202.
- Junco, R., & Cotten, S. R. (2012). No A 4 U: The relationship between multitasking and academic performance. *Computers & Education*, 59(2), 505-514.
- Karpinski, A. C., Kirschner, P. A., Ozer, I., Mellott, J. A., & Ochwo, P. (2013). An exploration of social networking site use, multitasking, and academic performance among United States and European university students. *Computers in Human Behavior*, 29(3), 1182-1192.
- Kibona, L., & Mgaya, G. (2015). Smartphones' effects on academic performance of higher learning students. *Journal of Multidisciplinary Engineering Science and Technology*, 2(4), 777-784.
- Lee, Y. K., Chang, C. T., Lin, Y., & Cheng, Z. H. (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress. *Computers in human behavior*, 31, 373-383.
- Lepp, A., Barkley, J. E., & Karpinski, A. C. (2014). The relationship between cell phone use, academic performance, anxiety, and satisfaction with life in college students. *Computers in Human Behavior*, 31, 343-350.
- Martinotti, G., Vilella, C., Di Thiene, D., Di Nicola, M., Bria, P., Conte, G., ... & La Torre, G. (2011). Problematic mobile phone use in adolescence: a cross-sectional study. *Journal of Public Health*, 19(6), 545-551.

- Matheny, K. B., Roque-Tovar, B. E., & Curlette, W. L. (2008). Perceived stress, coping resources, and life satisfaction among US and Mexican college students: A cross-cultural study. *Anales de Psicología/Annals of Psychology*, 24(1), 49-57.
- Neto, F. (1993). The satisfaction with life scale: Psychometrics properties in an adolescent sample. *Journal of youth and adolescence*, 22(2), 125-134.
- Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information systems research*, 19(4), 417-433.
- Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and texting made me do it: Media-induced task-switching while studying. *Computers in Human Behavior*, 29(3), 948-958.
- Statista (2013a). Global smartphone penetration from 2008 to 2014 (in percent of new handset sales). Retrieved January 15, 2015, from <<http://www.statista.com/statistics/218532/global-smartphone-penetration-since-2008/>>.
- Statista (2013b). Smartphone penetration rate in the United Kingdom (UK) from 2010 to 2017. Retrieved January 15, 2015, from <<http://www.statista.com/statistics/270888/smartphone-penetration-in-the-united-kingdom-uk/>>.
- Statista (2013c). Smartphone penetration rate in the United States from 2010 to 2017. Retrieved January 15, 2015, from <<http://www.statista.com/statistics/201183/forecast-of-smartphone-penetration-in-the-us/>>.
- Statista (2013d). Share of mobile phone users that use a smartphone in China from 2010 to 2017. Retrieved January 15, 2015, from <<http://www.statista.com/statistics/257045/smartphone-user-penetration-in-china/>>.
- Thomé, S., Eklöf, M., Gustafsson, E., Nilsson, R., & Hagberg, M. (2007). Prevalence of perceived stress, symptoms of depression and sleep disturbances in relation to information and communication technology (ICT) use among young adults—an explorative prospective study. *Computers in Human Behavior*, 23(3), 1300-1321.
- Wentworth, D. K., & Middleton, J. H. (2014). Technology use and academic performance. *Computers & Education*, 78, 306-311.