



ROLE OF EMOTIONAL REGULATION AND INTERACTION ANXIOUSNESS ON SMART PHONE ADDICTION AMONG COLLEGE STUDENTS

Jeyanthi Pryadarshni S	Postgraduate
Sumithradevi S	Associate Professor
Usaid S	Associate Professor
Uma Gayathri B P	Assistant Professor
Siva Ilango T	Professor & HOD
Arun Pattamathu	Clinical Psychologist
Dhrusya Manoj	Clinical Psychologist
Elizabeth Jolly*	Clinical Psychologist *Corresponding Author

ABSTRACT

In the era of digital connectivity, smartphone use has become deeply embedded in daily life, particularly among college students. While smartphones support academic, social, and emotional needs, excessive use can lead to behavioral addiction, negatively impacting mental health and social functioning. This study investigates the role of emotional regulation and interaction anxiousness in contributing to smartphone addiction among college students. A sample of 100 students aged 18–25 from a private university in Chennai participated in the study. Standardized tools—the Smartphone Addiction Scale, Difficulties in Emotion Regulation Scale (DERS), and Interaction Anxiousness Scale—were used to assess the constructs. Results indicated significant negative correlations between emotional regulation and both smartphone addiction and interaction anxiousness, suggesting that poor emotional regulation increases vulnerability to addiction and social anxiety. Gender-based analysis revealed that males exhibited higher levels of smartphone addiction, whereas females scored higher in emotional dysregulation, specifically in non-acceptance of emotions. No significant gender difference was observed in interaction anxiousness. These findings underscore the importance of enhancing emotional regulation skills and addressing social anxiety to mitigate smartphone overuse. The study offers practical implications for educational institutions, mental health practitioners, and technology developers aiming to foster healthier digital behaviors in youth.

KEYWORDS : Smartphone addiction, Emotional regulation, Interaction anxiousness

INTRODUCTION

In today's digital age, smartphones have become essential tools for communication, information access, and daily task management. Among college students, smartphones play a significant role in academic coordination, social interaction, and emotional support. However, this widespread reliance has led to growing concerns about smartphone addiction—a behavioral pattern marked by compulsive usage, emotional withdrawal when not using the phone, and interference with personal, academic, and social responsibilities. (Harris, B., Regan, T., Schueler, J., & Fields, S. A. (2020). Problematic Mobile Phone and Smartphone Use Scales: A Systematic Review. *Frontiers in Psychology*, 11, 672. <https://doi.org/10.3389/fpsyg.2020.00672>, n.d.; 40. Yu, S., & Sussman, S. (2020). Does Smartphone Addiction Fall on a Continuum of Addictive Behaviors. *International Journal of Environmental Research and Public Health*, 17(2), 422. <https://doi.org/10.3390/ijerph17020422>, n.d.)

As smartphone use increasingly shifts from necessity to compulsion, understanding the psychological factors behind this behavior becomes vital. Two key contributors are emotional regulation and social anxiety. (Rozgonjuk, D., & Elhai, J.D. (2019). Emotion Regulation in Relation to Smartphone Use: Process Smartphone Use Mediates the Association between Expressive Suppression and Problematic Smartphone Use. *Current Psychology*. <https://doi.org/10.1007/S12144-019-00271-4>, n.d.; 8. Shahidin, S. H., Midin, M., Sidi, H., Choy, C. L., Nik Jaafar, N. R., Mohd Salleh Sahimi, H., & Che Roos, N. A. (2022). The Relationship between Emotion Regulation (ER) and Problematic Smartphone Use (PSU): A Systematic Review and Meta - Analyses. *International Journal of Environmental Research*

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Emotional regulation refers to how individuals manage and respond to emotional experiences. (American Psychological Association. (2023). Emotional Regulation. <https://dictionary.apa.org/emotion-regulation>, n.d.) College students often face various stressors, and those with poor emotional regulation may turn to smartphones for distraction or emotional escape. (Cherry, K. (2022). What Is Self-Determination Theory: How Self-Determination Influences Motivation. *Very Well Mind*. <https://www.verywellmind.com/what-is-self-determination-theory-2795387>, n.d.) Over time, this coping mechanism can become habitual, leading to problematic use. (Extremiera, N., Quintana-Orts, C., Sánchez-Álvarez, N., & Rey, L. (2019). The Role of Cognitive Emotion Regulation Strategies on Problematic Smartphone Use: Comparison between Problematic and Non-Problematic Adolescent Users. *International Journal of Environmental Research and Public Health*, 16(17), 3142. <https://doi.org/10.3390/ijerph16173142>, n.d.; 16. Hilt, L.M., Hanson, J.L., & Pollak, S.D. (2011). Emotion Dysregulation, *Encyclopaedia of Adolescence*, 3, 160-169., n.d.)

Social anxiety, or interaction anxiety, involves discomfort or fear in social situations. Students with high social anxiety may prefer digital communication over face-to-face interaction, using smartphones as a buffer to avoid perceived judgment or rejection. While this may offer short-term relief, it can reinforce avoidance behaviors and increase dependency on technology. (Wang, Y., Chen, J., Zhang, X., Lin, X., Sun, Y., Wang, N., Wang, J., & Luo, F. (2022). The Relationship between Perfectionism and Social Anxiety: A Moderated Mediation

Model. *International Journal of Environmental Research and Public Health*, 19(19), 12934. <https://doi.org/10.3390/ijerph191912934>, n.d.; 37. Xiao, W., Zhou, H., Li, X., & Lin, X. (2021). Why Are Individuals with Alexithymia Symptoms More Likely to Have Mobile Phone Addiction? The Multiple Mediating Roles of Social Interaction Anxiousness and Boredom Proneness. *Psychology Research and Behavior Management*, 14, 1631–1641. <https://doi.org/10.2147/PRBM.S328768>, n.d.)

The interaction between emotional dysregulation, social anxiety, and smartphone addiction creates a feedback loop—where smartphones provide temporary comfort but also deepen emotional and social difficulties. This cycle can exacerbate mental health challenges while encouraging continued excessive use. (Shahidin, S. H., Midin, M., Sidi, H., Choy, C. L., Nik Jaafar, N. R., Mohd Salleh Sahimi, H., & Che Roos, N. A. (2022). The Relationship between Emotion Regulation (ER) and Problematic Smartphone Use (PSU): A Systematic Review and Meta-Analyses. *International Journal of Environmental Research and Public Health*, 19(23), 15848. <https://doi.org/10.3390/ijerph192315848>, n.d.; Mehmood, A., Bu, T., Zhao, E., Zelenina, V., Alexander, N., Wang, W., Siddiqi, S. M., Qiu, X., Yang, X., Qiao, Z., Zhou, J., & Yang, Y. (2021). Exploration of Psychological Mechanism of Smartphone Addiction Among International Students of China by Selecting the Framework of the I-PACE Model. *Frontiers in Psychology*, 12, 758610. <https://doi.org/10.3389/fpsyg.2021.758610>, n.d.)

Exploring these psychological dynamics is essential for informing prevention and intervention strategies. By identifying how emotional regulation and social anxiety contribute to smartphone addiction, researchers and practitioners can develop targeted programs to promote healthier digital habits. These may include emotional coping skills training, social skills enhancement, and education on responsible smartphone use. (Chowdhury, M. R. (2023). Emotional Regulation : 6 Key Skills to Regulate Emotions. *Positive Psychology.Com*. <https://positivepsychology.com/emotion-regulation/>, n.d.; Kanuri, N., Arora, P., Talluru, S., Colaco, B., Dutta, R., Rawat, A., Taylor, B. C., Manjula, M., & Newman, M. G. (2020). Examining the Initial Usability, Acceptability and Feasibility of a Digital Mental Health Intervention for College Students in India. *International Journal of Psychology : Journal International de Psychologie*, 55(4), 657–673. <https://doi.org/10.1002/ijop.12640>, n.d.)

This study aims to examine the relationships among emotional regulation, social anxiety, and smartphone addiction in college students. By shedding light on these interconnections, the research hopes to inform evidence-based practices that support students' mental well-being and foster healthier technology use in an increasingly connected world.

Promoting emotional awareness and reducing social anxiety can also improve real-life interactions and overall student well-being. Ultimately, this research supports healthier digital habits, with long-term benefits for both individuals and society. (Alhassan, A. A., Alqadhib, E. M., Taha, N. W., Alahmari, R. A., Salam, M., & Almutairi, A. F. (2018). The Relationship between Addiction to Smartphone Usage and Depression among Adults: A Cross Sectional Study. *BMC Psychiatry*, 18(1), 148. <https://doi.org/10.1186/S12888-018-1745-4>, n.d.; 24. Liu, B., Yang, T., & Xie, W. (2022). Emotional Regulation Self-Efficacy Influences Moral Decision Making: A Non-Cooperative Game Study of the New Generation of Employees. *International Journal of Environmental Research and Public Health*, 19(23), 16360. <https://doi.org/10.3390/ijerph192316360>, n.d.)

Methodology

This study investigated the relationship between emotional

regulation, interaction anxiety, and smartphone addiction among college students. The primary objective was to evaluate the association of emotional regulation and interaction anxiousness to smartphone addiction. The secondary objectives were to determine any gender differences among the outcome variables and to correlate gender differences with emotional regulation, interaction anxiety and smartphone addiction.

A descriptive research design was adopted, with a sample of 100 college students aged 18–25 from a private university, Chennai. Participants were selected from second-year undergraduate and postgraduate programs. Students with any physical or psychiatric conditions and those outside the specified age range were excluded from the study.

Data were collected using self-report questionnaires. A sociodemographic proforma was used to gather basic personal information. The Smartphone Addiction Scale (33 items) was used to assess behavioral patterns related to smartphone overuse across six domains. (Park, J., Jeong, J. E., Park, S. Y., & Rho, M. J. (2020). Development of the Smartphone Addiction Risk Rating Score for a Smartphone Addiction Management Application. *Frontiers in Public Health*, 8, 485. <https://doi.org/10.3389/fpubh.2020.00485>, n.d.) Emotional regulation was measured using the Difficulties in Emotion Regulation Scale (DERS), a 36-item tool that evaluated six dimensions of emotional challenges. (Hilt, L.M., Hanson, J.L., & Pollak, S.D. (2011). *Emotion Dysregulation*, *Encyclopaedia of Adolescence*, 3, 160-169., n.d.) Interaction anxiousness was assessed through a 15-item Interaction Anxiousness Scale. (Gao, Y., Lei, M., & Zhu, T. (2015). What Is Interaction Anxiousness. *Encyclopedia of Mobile Phone Behaviour*. DOI: 10.4018/978-1-4666-8239-9.Ch036., n.d.)

Data analysis was conducted using SPSS version 26. Pearson correlation analysis was used to determine relationships among the variables, and t-tests were performed to examine gender differences in emotional regulation, interaction anxiety, and smartphone addiction.

RESULTS

A total of 120 college students were initially approached for participation in the study. Out of these, 20 responses were excluded due to incomplete data. Statistical analysis was conducted on the remaining 100 participants, comprising 50 males and 50 females. The participants represented diverse academic backgrounds and were predominantly within the age group of 18 to 22 years.

To explore the relationship between smartphone addiction and interaction anxiousness, Pearson correlation analysis was performed. The analysis focused on various dimensions of smartphone addiction, including daily life disturbance, positive anticipation, withdrawal, cyberspace-oriented relationships, overuse, and tolerance.

Table 1 Relationship Between Emotional Regulation And Smart Phone Addiction Among College Students

Sl. Variable no s	1	2	3	4	5	6	7	8	9	10	11	12
1 Daily life disturba nce	()	0.115	0.166	-0.082	0.081	0.089	-0.183	-0.071	0.067	0.119	0.074	-0.103
2 Positive anticipa tion		()	0.110	-0.015	-0.10	-0.063	-0.106	0.00	-0.065	0.150	-0.020	0.100
3 Withdra wal			()	-0.072	-0.058	0.277*	-0.178	0.023	-0.058	-0.055	-0.139	-0.12*
4 Cybersp				()	0.0	-0.1	-0.0	-0.0	-0.2	0.0	-0.0	-0.0

	ace oriented relation ship					16	17	020	56	19*	38	014	55
5	Overuse				()	-0.098	0.048	-0.137	0.164	-0.064	-0.210*	-0.079	
6	Tolerance				()	0.081	0.021	-0.029	-0.0231*	-0.099	-0.027		
7	Non accept				()	0.01**	-0.059	-0.0124	-0.0104	-0.038			
8	Goals				()			-0.185	-0.026	-0.402***	-0.110		
9	Impulse				()			0.056	0.385**	0.039			
10	Awareness				()			0.195	0.093	-0.013			
11	Strategies				()					0.002			
12	Clarity				()								

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

Table 1 shows, A moderate positive correlation was observed between withdrawal and tolerance ($r = 0.277$, $p < 0.01$), indicating that students experiencing withdrawal symptoms were more likely to show increased tolerance, i.e., a greater need to use smartphones over time.

In terms of emotion regulation, non-acceptance of emotional responses was significantly positively correlated with impulse control difficulties ($r=0.301$, $p<0.001$), suggesting that individuals who have difficulty accepting emotional responses may also struggle to control impulsive behaviors. Similarly, a strong positive correlation was found between impulse control difficulties and limited access to emotion regulation strategies ($r = 0.385$, $p < 0.001$), implying that those with poor impulse control are less likely to use effective emotion regulation strategies.

On the other hand, significant negative correlations were found between certain components of smartphone addiction and emotion regulation dimensions. Cyberspace-oriented relationships were negatively correlated with goal-directed behavior ($r = -0.219$, $p < 0.05$), indicating that excessive online relational orientation may interfere with one's ability to stay goal-directed when emotionally distressed. Overuse of smartphones was also negatively associated with emotion regulation strategies ($r = -0.210$, $p < 0.05$), and tolerance was negatively correlated with emotional awareness ($r = -0.231$, $p < 0.05$).

Notably, difficulties in goal-directed behavior were strongly negatively correlated with emotional clarity ($r = -0.402$, $p < 0.001$), highlighting that individuals with poor goal-directed behavior during emotional distress also struggle to clearly understand their emotional states.

These findings indicate that increased smartphone addiction tendencies are associated with greater difficulties in various aspects of emotional regulation.

Table 2 Relationship between interaction anxiousness and emotional regulation on among college students

Sl. no	Variables	1	2	3	4	5	6	7
1	Non accept	()	-0.059	-0.124	-0.104	0.038	0.706	-0.235*

2	Goals		()	-0.185	-0.026	-0.402**	-0.110	0.016
3	Impulse		()	0.056	0.385**	0.039	0.103	
4	Awareness			()	0.195	0.099	-0.154	
5	Strategies				()	-0.013	0.103	
6	Clarity					()	0.002	
7	Interaction anxiousness						()	

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

Table 2 shows, Among the emotion regulation components, non-acceptance of emotional responses showed a statistically significant negative correlation with interaction anxiousness ($r = -0.235$, $p < 0.05$), indicating that students who experience higher levels of social or interactional anxiety are more likely to have difficulty accepting their emotional responses.

A particularly strong and significant negative correlation was observed between difficulties in goal-directed behavior and emotion regulation strategies ($r = -0.402$, $p < 0.001$), suggesting that students who struggle to remain focused on goals during emotional distress also tend to lack effective strategies to manage their emotions.

Additionally, a significant positive correlation was found between impulse control difficulties and emotion regulation strategies ($r = 0.385$, $p < 0.001$). This suggests that students who act impulsively when distressed are also more likely to experience difficulty in applying effective emotional coping strategies.

No other components of emotional regulation, including emotional awareness or clarity, showed significant correlations with interaction anxiousness in this sample.

These findings suggest that college students with higher social anxiety may particularly struggle with accepting emotions and applying effective emotion regulation strategies, especially when faced with impulsive tendencies or goal disruption under distress.

Table 3 Relationship between smart phone addiction and interaction anxiousness among college students

Sl.no	Variables	1	2	3	4	5	6	7
1	Daily life disturbance	()	0.115	0.166	-0.082	0.081	-0.089	0.018
2	Positive anticipation	()	0.110	-0.015	-0.10	-0.063	-0.151	
3	Withdrawal		()	-0.072	-0.058	0.277*	-0.076	
4	Cyberspace oriented relationship			()	0.016	-0.117	0.016	
5	Overuse				()	-0.098	0.089	
6	Tolerance					()	-0.039	
7	Interaction anxiousness							()

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

Table 3 shows, Among the smartphone addiction dimensions, withdrawal showed a statistically significant positive correlation with tolerance ($r = 0.277$, $p < 0.01$). This suggests that students who experience emotional discomfort or anxiety when unable to use their smartphones are more likely to show

tolerance symptoms—such as needing to use their phones for longer periods to achieve the same level of satisfaction.

However, no significant correlations were found between interaction anxiousness and any of the smartphone addiction components, including daily life disturbance ($r=0.018$), positive anticipation ($r=-0.151$), withdrawal ($r=-0.076$), cyberspace-oriented relationships ($r=0.016$), overuse ($r=0.089$), and tolerance ($r=-0.039$). Although the direction of correlations varied, none reached statistical significance.

These results indicate that, in this sample, smartphone addiction behaviors were not significantly associated with students' levels of interaction anxiousness

Table 4 Mean differences of emotional regulation,smart phone addiction and interaction anxiousness among college students based on gender

Variable	Subscal e	Gende r	N	Mean	P value / t-value	Signific ance
Emotional Regulation	Non accept	Male	50	18.2	< .001	–
		Female	50	25.3	–	–
	Goals	Male	50	22.3	0.130	–
		Female	50	24.1	–	–
	Impulse	Male	50	22.9	0.252	–
		Female	50	24.3	–	–
	Awareness	Male	50	25.6	0.101	–
		Female	50	23.7	–	–
	Strategies	Male	50	25.1	0.853	–
		Female	50	24.9	–	–
	Clarity	Male	50	23.9	0.987	–
		Female	50	23.9	–	–
Smartphone Addiction	Daily life disturbances	Male	50	23.2	0.924	–
		Female	50	23.4	–	–
	Positive anticipation	Male	50	22.6	0.775	–
		Female	50	23.0	–	–
	Withdrawal	Male	50	23.11	< .001	–
		Female	50	17.5	–	–
	Cyberspace-oriented relationships	Male	50	18.8	0.454	–
		Female	50	19.8	–	–
	Overuse	Male	50	19.8	< .001	–
		Female	50	24.6	–	–
	Tolerance	Male	50	27.1	< .001	–
		Female	50	22.6	–	–
Interaction Anxiousness	–	Male	50	63.5	0.3136	0.754
		Female	50	62.7	–	–

Table 4 presents the gender-based mean differences in emotional regulation, smartphone addiction, and interaction anxiousness among college students. Within the domain of emotional regulation, only the non-accept subscale exhibited a statistically significant gender difference, with females reporting higher mean scores (25.3) compared to males (18.2), indicating that female students may struggle more with accepting emotional responses. Other subscales such as goals, impulse, awareness, strategies, and clarity did not show significant differences between genders.

In terms of smartphone addiction, significant gender differences were observed in the withdrawal, overuse, and tolerance subscales. Male students had a higher mean score in withdrawal (23.11 vs. 17.5), suggesting greater difficulty in refraining from phone use. Conversely, female students showed higher levels of overuse (24.6 vs. 19.8), indicating more frequent or excessive use. Tolerance, which reflects the need for prolonged phone use to achieve satisfaction, was

higher in males (27.1) than females (22.6).

For interaction anxiousness, the analysis revealed no significant gender difference. The mean scores were comparable (63.5 for males and 62.7 for females), suggesting that both male and female students experience similar levels of anxiety in social interactions.

DISCUSSION

The results revealed several key negative correlations between subscales of emotional regulation and smartphone addiction. Impulse control was negatively correlated with cyber-oriented relationships, suggesting that better impulse regulation is linked to lower smartphone addiction. This aligns with Rozgonjuk and Elhai (2019), who found poor emotion regulation increases smartphone use. (Rozgonjuk, D., & Elhai, J.D. (2019). Emotion Regulation in Relation to Smartphone Use: Process Smartphone Use Mediates the Association between Expressive Suppression and Problematic Smartphone Use. *Current Psychology*. <https://doi.org/10.1007/S12144-019-00271-4>, n.d.)

Withdrawal symptoms were negatively correlated with emotional clarity, indicating that as withdrawal increases, emotional regulation decreases. Shahidin et al. (2022) similarly found a positive association between emotional dysregulation and problematic smartphone use, particularly in younger individuals. (Shahidin, S. H., Midin, M., Sidi, H., Choy, C. L., Nik Jaafar, N. R., Mohd Salleh Sahimi, H., & Che Roos, N. A. (2022). The Relationship between Emotion Regulation (ER) and Problematic Smartphone Use (PSU): A Systematic Review and Meta-Analyses. *International Journal of Environmental Research and Public Health*, 19(23), 15848. <https://doi.org/10.3390/ijerph192315848>, n.d.)

Non-acceptance of emotional responses showed a negative correlation with interaction anxiousness, suggesting that better emotional acceptance lowers social anxiety. This is supported by Dua (2019), who found a strong link between emotional dysregulation and social anxiety. (Dua, J. (2019). Role of Emotion Regulation in the Relationship between Fears of Evaluation and Social Anxiety. *Masters Theses*, 4462. <https://thekeep.eiu.edu/theses/4462>, n.d.)

Smartphone overuse was negatively correlated with emotional regulation strategies, supporting Extremera et al. (2019), who reported higher maladaptive strategies in problematic users. (Extremera, N., Quintana-Orts, C., Sánchez-Álvarez, N., & Rey, L. (2019). The Role of Cognitive Emotion Regulation Strategies on Problematic Smartphone Use: Comparison between Problematic and Non-Problematic Adolescent Users. *International Journal of Environmental Research and Public Health*, 16(17), 3142. <https://doi.org/10.3390/ijerph16173142>, n.d.)

Tolerance was negatively correlated with emotional awareness, indicating that higher smartphone tolerance relates to poorer emotional regulation. Similar findings were reported by Derakshani and Shirazi (2015) and Hoffner and Lee (2015). (Derakshani, K., & Shirazi, M. (2015). The Role of Smartphone Addiction in Emotional Regulation of Boys' High School Students in Chabahar City. *Indian Journal of Fundamental and Applied Life Sciences*, 5, 1105-1108. <https://www.cibtech.org/Sp.Ed/Iss/2015/03/128-JLS-S3-132-SHIRAZI-SMARTPHONE.Pdf>, n.d.; Hoffner, C. A., & Lee, S. (2015). Mobile Phone Use, Emotion Regulation, and Well-Being. *Cyberpsychology, Behavior, and Social Networking*, 18(7), 411-416, n.d.)

Gender analysis showed a significant difference only in the non-acceptance subscale, with females scoring higher. While Kaur et al. (2022) found no significant gender differences overall, they noted men struggled more with emotional

acceptance and impulse control.(Kaur, A., Kailash, S.Z., Kailash Sureshkumar, K., Sivabackiya, C., & Rumaisa, N. (2022). Gender Differences in Emotional Regulation Capacity among the General Population. *IAIM*, 9(1), 22-28. https://www.iaimjournal.com/storage/2022/02/iaim_2022_0901_03.pdf, n.d.) Tolerance in smartphone addiction was higher among males, while other studies like Chen et al. (2017) found higher addiction rates in females.(Chen, B., Liu, F., Ding, S., Ying, X., Wang, L., & Wen, Y. (2017). Gender Differences in Factors Associated with Smartphone Addiction: A Cross-Sectional Study among Medical College Students. *BMC Psychiatry*, 17, 341. <https://doi.org/10.1186/S12888-017-1503-z>, n.d.) No significant gender difference was found in interaction anxiousness, although Baloglu et al. (2018) reported higher social anxiety in females.(Baloglu, M., Özteke Kozan, H. İ., & Kesici, Ş. (2018). Gender Differences in and the Relationships Between Social Anxiety and Problematic Internet Use: Canonical Analysis. *Journal of Medical Internet Research*, 20(1), E33. <https://doi.org/10.2196/jmir.8947>, n.d.)

Overall, the findings are supported by existing literature, though more recent research is needed to reinforce them.

The results of correlation analysis revealed a negative relationship between emotional regulation and interaction anxiousness, negative relationship between emotional regulation and smart phone addiction. The result of t-test revealed significant difference among male and female on smart phone addiction and emotional regulation among college students.

Limitations Of The Study

Data on emotional regulation, interaction anxiety, and smartphone addiction are typically collected through self-report measures, which can introduce biases such as social desirability and inaccurate self-assessment. Cross-sectional designs limit the ability to establish causation, revealing only associations. Recall bias may affect the accuracy of reported behaviors and emotions, while unmeasured confounding variables may influence the results, reducing the validity and generalizability of the findings.

SUMMARY AND CONCLUSION

Interaction anxiousness and emotional regulation has a significant negative relationship. Emotional regulation and smart phone addiction has a significant negatively relationship. Smart phone addiction is high in male than female. Emotional regulation is high among females than males. Smart phone addiction is high among males than females. No difference in gender for interaction anxiousness.

As college students navigate a culture where being constantly connected to the internet is the norm, it might be helpful to understand the intricate relationships between emotional regulation, social anxiety, and smartphone addiction. This study sheds light on the factors of smartphone addiction while also providing insights into creating customised therapies to promote safe smartphone usage behaviour. By advancing a better understanding of the psychological mechanisms at play, this research hopes to pave the way for more informed approaches to address the issues brought on by smartphone addiction among college students.

Implications Of The Study

This study has broad implications across psychology, education, and public health by highlighting emotional regulation and interaction anxiety as key factors in smartphone addiction. It supports the need for psychological interventions that teach emotion management skills, which can improve both mental health and reduce smartphone dependency. Colleges can enhance mental health services and raise awareness about anxiety to help students avoid using smartphones as a coping mechanism. Educators can

include addiction awareness in curricula, equipping students with healthier coping strategies. Tech developers may design features that encourage balanced smartphone use, while parents can better recognize and address signs of addiction in their children. Public health organizations can use these findings to inform campaigns and policies promoting responsible screen use and mental well-being.

Suggestions For Future Research

This study encourages further research into how emotional regulation, interaction anxiety, and smartphone addiction are connected among college students. Future studies could use experimental and longitudinal designs to explore causal relationships and track changes over time. Developing screening tools that consider emotional and social factors may help identify at-risk students early. Digital interventions, such as mobile apps, could be tested to promote emotional regulation and reduce addictive behaviors. Comparative studies across demographic or cultural groups, along with real-time data collection methods like Ecological Momentary Assessment (EMA), can provide more accurate insights into daily usage patterns.

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