

## The Interplay between Smartphone Addiction, Emotional Regulation, and Cognitive Distortions among Young Adults in Kerala

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### ABSTRACT

Smartphone dependency is increasing among young adults and may be influenced by underlying emotional and cognitive factors. A quantitative, correlational research design was used, involving 230 participants aged 18 to 25 years, chosen using purposive sampling. Data were gathered with standardised tools: Smartphone Addiction Scale – Short Version (SAS-SV), Emotion Regulation Questionnaire – Short Form (ERQ-S), and Cognitive Distortions Questionnaire (CD-Quest); and analysed using Mann-Whitney U tests and Spearman correlations. The findings showed that while there was no difference in cognitive reappraisal, expressive suppression was much higher in those with high smartphone addiction. Participants with smartphone addictions also showed much more screen time and cognitive distortions. Among non-addicted users, cognitive reappraisal and cognitive distortions showed a strong negative correlation; however, no significant correlations were discovered within the addicted population. Only expressive suppression showed gender differences, with men using this strategy more frequently. The results imply that problematic smartphone use may be influenced by cognitive biases and inappropriate emotional control. The implications for preventive mental health programs, emotional skills training, and digital well-being interventions have been discussed.

**Keywords:** *smartphone addiction, emotional regulation, cognitive distortions, digital health*

Smartphones have evolved into essential tools for young adults, transforming the way they communicate, access information, and engage socially around the world. The growing reliance on smartphones, while improving communication and efficiency, raises concerns about excessive use, particularly when it becomes compulsive or driven by emotions. In places like Kerala, where digital skills, technology infrastructure, and access to devices are high, young adults may be especially prone to excessive use patterns that can significantly impact their emotional well-being and cognitive functioning. Therefore, understanding the connection between smartphone addiction, emotional regulation, and cognitive distortions in this group has become an important issue for mental health.

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The global increase in smartphone access represents a major shift in technology this century, changing how people socialize, study, work, and enjoy entertainment. Young adults frequently engage in smartphone use for school support, navigation, entertainment, socializing, and emotional release, making them a vital part of their lives. However, the advantages of smartphone access come with new behavioral risks. Researchers are paying more attention to excessive or unhealthy use patterns, often termed smartphone addiction. This pattern includes compulsive behavior and difficulty controlling usage even when users know it has negative effects. This reflects findings in addiction studies, where signs of focus on the device, withdrawal, increased tolerance, and functional interference resemble those in other addictions. In countries like India, research reveals a troubling rise in smartphone dependency among teenagers and young adults (Ting & Chen, 2020). In Kerala, with its high technology use and education rates, similar trends are seen, especially among students managing academic, social, and personal pressures.

Smartphone addiction is not yet officially recognized in diagnostic manuals like the DSM-5; however, it describes a pattern of excessive and uncontrollable use that disrupts daily life, emotional stability, social interactions, and performance in work or school (Kwon, Kim, Cho, & Yang, 2013). Users who show signs of addiction often feel an urge to check their devices constantly and become anxious or irritable when they are not connected. This behavioral pattern often includes increased usage (tolerance), lack of control, and constant use in spite of being aware of the risks. Fear of missing out, relief from anxiety, or a need for societal approval can fuel repeated engagement with their devices, while physical issues like strain or sleep problems result as secondary effects. This compulsive behavior reflects broader addiction patterns recognized in both behavioral and substance use fields.

Several theories explain smartphone addiction. Biological models highlight the brain's reward system and reinforcement loops from digital alerts (Koob & Volkow, 2010). Psychological theories emphasize quick rewards for social connections and entertainment, as well as escape from discomfort (Skinner, 1953). Khantzian's Self-Medication Hypothesis proposes people use smartphones for psychological relief (Khantzian, 1985). Uses and Gratifications Theory indicates that smartphones fulfill various needs, leading to habitual use (Katz, Blumler, & Gurevitch, 1974). The Problematic Use Framework combines personal vulnerabilities with environmental triggers and persuasive design (Billieux et al., 2015).

Global estimates of prevalence vary due to differences in measurement, but research indicates that 10–67% of youth display problematic use. In India, rates vary from 24.6% to 44% among teens and young adults (Das, Saraswathy, & Chaudhary, 2024). In Kerala, increased reliance on smartphones, especially for social media, messaging, and gaming, reflects both global and national trends (Ratan, Zaman, Islam, & Hosseinzadeh, 2021).

Beyond usage patterns, researchers have started exploring the psychological aspects that may drive or result from smartphone addiction. One significant factor linked to excessive use is emotional regulation. This term refers to the strategies people use to identify, interpret, change, or express their emotions, helping them adapt to different situations and mental states (Gross, 1998). It is crucial for mental health, affecting resilience, social ties, and overall well-being. Studies suggest that individuals struggling to regulate their emotions may turn to smartphones for easy distractions, escape, or stress relief (Shahidin et al., 2022). Thus, the link between emotional regulation problems and smartphone addiction can be seen as two-

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way: unhelpful digital habits may weaken effective emotional processing, while poor emotional regulation increases dependence on devices.

Cognitive distortions are closely related to emotional health and smartphone use. Cognitive distortions refer to irrational or exaggerated thinking patterns that negatively affect how individuals view themselves, situations, and their relationships (Beck, 1967). These distortions usually happen automatically and can increase emotional distress or unhelpful behaviors. Common forms include expecting the worst, seeing things as black-and-white, paying attention only to negative aspects, taking undue personal responsibility, and assuming others think negatively of them without evidence. Furthermore, recent studies reveal that high smartphone use is linked to maladaptive cognitive distortions (Roubi, Rathee, & Kumar, 2023). These thought patterns can make it harder to regulate emotions, creating a vicious cycle where negative thinking fuels compulsive use while excessive use increases susceptibility to negative thoughts (Deperrois & Combalbert, 2022).

Although smartphone addiction, emotional regulation, and cognitive distortions have all been studied independently, comparatively few studies have looked at how these dimensions interact, especially in distinct sociocultural areas like Kerala. A possible cyclical model is suggested by the intersection of these constructs: poor emotional regulation may lead to digital avoidance coping, smartphone addiction may impair emotional competence by reducing real-world emotional processing, and cognitive distortions may reinforce maladaptive beliefs and behaviors that perpetuate the cycle. Psychological research on these interactions among young adults in Kerala is very scarce, despite an increasing body of literature worldwide. Additionally, there is a lack of empirical research that links cognitive processes, emotional regulation issues, and excessive technology use into a cohesive explanatory framework.

The current study aims to investigate the interrelated association between smartphone addiction, emotional regulation strategies, and cognitive distortions among young adults in Kerala considering this conceptual gap. The study intends to propose a theoretical model pertinent to psychological risk patterns arising in youth groups that are heavily dependent on technology by empirically analyzing the interactions between these characteristics. Targeted therapies that address psychological underpinnings rather than just behavioral symptoms, such as digital wellness education and mental health counseling techniques, may benefit from these insights.

### *Objectives of the Study*

1. To assess the connection between smartphone addiction, emotion regulation, and cognitive distortions among young adults.
2. To analyse the influence of cognitive distortions on excessive smartphone use.
3. To analyse the emotional regulation strategy used by smartphone addicted and non-addicted individuals.
4. To explore gender differences in smartphone addiction, emotion regulation strategies, and cognitive distortions.

### *Hypotheses*

- **H01:** There is no significant difference in the use of emotional regulation strategy cognitive reappraisal across the categories of smartphone addiction.
- **H02:** There is no significant difference in the use of emotional regulation strategy expressive suppression across the categories of smartphone addiction.

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- **H03:** There is no significant difference in the presence of cognitive distortions across the categories of smartphone addiction.
- **H04:** There is no significant difference in the distribution of screen time across the categories of smartphone addiction.
- **H05:** There is no significant difference in the use of cognitive reappraisal between males and females.
- **H06:** There is no significant difference in the use of expressive suppression between males and females.
- **H07:** There is no significant difference in the presence of cognitive distortions between males and females.
- **H08:** There is no significant relationship between the two emotional regulation strategies and cognitive distortions among smartphone-addicted individuals.
- **H09:** There is no significant relationship between the emotional regulation strategy cognitive reappraisal and cognitive distortions among smartphone non-addicted individuals.
- **H10:** There is no significant relationship between the emotional regulation strategy expressive suppression and cognitive distortions among smartphone non-addicted individuals.

### **METHOD**

#### *Research Design*

This study uses a quantitative, correlational, cross-sectional research methodology to investigate the links among smartphone addiction, emotion control, and cognitive distortions in young adults in Kerala.

#### *Aim of the Study*

- To study the interplay and relationship among Smartphone Addiction, Emotional Regulation, and Cognitive Distortions among young adults in Kerala.

#### *Research Participants*

This study included 230 young adults of ages 18 to 25 years from diverse regions of Kerala. They were selected from both private and public institutions, academies, and public venues to ensure educational and social variety. Purposive sampling was used to select participants, allowing for rapid data collection while guaranteeing that the study covers a wide range of experiences relating to smartphone addiction, emotion regulation, and cognitive distortions. Inclusion criteria required participants to: (a) fall within the age range, (b) own and actively use a smartphone, and (c) provide informed consent. Individuals with diagnosed psychiatric conditions or those currently undergoing psychological treatment were excluded to avoid confounding factors related to cognitive or emotional functioning.

#### *Instruments Used*

- **Personal Data Sheet:** A Personal Data Sheet created by the researcher was used to gather demographic and background data from participants. This page contains important personal information including age, gender, education level, socioeconomic background, and years of smartphone use. Prior to the Personal Data Sheet, participants were given an Informed Consent Form to ensure that they were fully informed of the study's objectives, methods, and rights.

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- **The Smartphone Addiction Scale – Short Version (SAS-SV):** The Smartphone Addiction Scale - Short Version (SAS-SV) is a frequently used self-report questionnaire for assessing smartphone addiction, developed by Kwon, Kim, Cho, & Yang (2013). The SAS-SV contains ten items that are scored on a six-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). The SAS-SV has demonstrated strong psychometric reliability and validity across varied populations, including Indian samples.
- **Emotional Regulation Questionnaire – Short Form (ERQ-S):** The Emotional Regulation Questionnaire-Short Form (ERQ-S), developed by Preece, Petrova, Mehta & Gross (2023), is a 6-item self-report questionnaire designed to examine two commonly used emotion management strategies – cognitive reappraisal and expressive suppression. Participants rated statements on a Likert scale indicating how frequently they use each strategy in emotional situations. The ERQ-S demonstrates satisfactory internal consistency.
- **The Cognitive Distortions Questionnaire (CD-Quest):** Irismar Reis de Oliveira developed the Cognitive Distortions Questionnaire (CD-Quest) in 2014. Amanda S. Morrison, Berk Ustun, and colleagues used machine learning to build the 9-item short-form model of CD-Quest, which was published in the Journal of Anxiety Disorders in 2022. The Cognitive Distortions Questionnaire (CD-Quest) is a self-report tool used to measure cognitive distortions, which are unreasonable or maladaptive thought patterns that cause psychological suffering. It consists of 15 items, each of which addresses a unique sort of cognitive distortion, such as catastrophising, overgeneralisation, or personalisation. For this study, the 9-item short form of CD-Quest has been used, which has excellent to good accuracy, reliability, and validity.

### *Procedure*

The study involved young adults aged 18 to 25 from various districts in Kerala, utilizing a purposive sampling method to gather approximately 230 participants from both public and private institutions. Participants received hard copies of the surveys and signed informed consent forms detailing the study's objectives, risks, benefits, and the confidentiality of their responses. They completed three standardized questionnaires assessing smartphone addiction, emotional regulation, and cognitive distortions, taking around 20 to 30 minutes. Data collection spanned three to four weeks, with participants submitting the completed surveys in person. Throughout the study, participants had the option to leave at any time, and discretion was strictly upheld by eliminating personal identifiers from the data.

### *Statistical Analysis*

Non-parametric statistical tests were used to analyse the data due to the non-normal distribution. Group variations in emotional regulation and cognitive distortions depending on gender and smartphone addiction risk levels were studied using the Mann-Whitney U test. The relationships between emotional regulation strategies and cognitive distortions were evaluated using Spearman's rank correlation. Score distributions and demographic information were compiled using descriptive statistics.

### *Ethical Considerations*

- All respondents were guaranteed that the data collected will be kept confidential and anonymous, and their participation was voluntary.
- Respect for dignity of research participants has been prioritized.

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- The research participants were not subject to any kind of physical or emotional harm.

**RESULTS & DISCUSSION**

This chapter summarises the results of the study on the interplay among smartphone addiction, emotion regulation, and cognitive distortions among young adults in Kerala. Two key strategies of emotion regulation was investigated in this study – cognitive reappraisal and expressive suppression. The Mann–Whitney U test was used to examine disparities between smartphone addicts and non-addicts, as well as gender-based differences in emotional regulation strategies and cognitive distortions. Additionally, the relationships between emotional regulation strategies and cognitive distortions among smartphone addicts and non-addicts were investigated using Spearman's rank correlation. These findings offer a comprehensive picture of how different groups' emotional and cognitive processes interact when using smartphones.

*Table 1: The mean rank and Mann-Whitney U value obtained by groups based on smartphone addiction in expressive suppression emotional regulation strategy.*

Smartphone Addiction	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
<b>Addicted (N=128)</b>	123.69	5479.500*	.036
<b>Non-Addicted (N=102)</b>	105.22		

\*Significant at 0.05 level

Significant differences in emotional regulation were found when people classified as addicted and non-addicted for smartphone addiction were compared. Significantly more expressive suppression was used by participants with higher degrees of smartphone addiction, suggesting that they were more prone to suppress or hide feelings rather than process or express them. This result leads to the rejection of the null hypothesis. These findings are consistent with previous research indicating that excessive smartphone use relates to difficulties in healthy emotional regulation and a greater reliance on suppression methods (Billieux, Maurage, Lopez-Fernandez, Kuss, & Griffiths, 2015). Expressive suppression has been associated to greater psychological distress because it includes limiting emotional manifestations without changing the underlying emotional experience, which can lead to long-term emotional dysregulation (Gross and John, 2003).

*Table 2: The mean rank and Mann-Whitney U value obtained by groups based on smartphone addiction in cognitive reappraisal emotional regulation strategy.*

Smartphone Addiction	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
<b>Addicted (N=128)</b>	119.50	6016.000	.304
<b>Non-Addicted (N=102)</b>	110.48		

Conversely, there was no discernible variation in cognitive reappraisal across stages of addiction. This data implies that either emotional reappraisal alone may not be enough to prevent hazardous digital use, or that the capacity to cognitively reinterpret emotionally arousing events may not necessarily decline due to smartphone dependency. People may have reappraisal skills, but they may not consistently use them in emotionally taxing or socially mediated situations, especially in settings like internet platforms that provide instant emotional relaxation. This conclusion is consistent with prior research demonstrating that

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cognitive reappraisal, as an adaptive strategy, is not necessarily impaired in those with problematic smartphone use (Elhai, Levine, Dvorak, & Hall, 2019). It is possible that anyone, regardless of addiction status, engage in cognitive reappraisal while managing emotions.

**Table 3: The mean rank and Mann-Whitney U value obtained by groups based on smartphone addiction in cognitive distortions.**

Smartphone Addiction	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
<b>Addicted (N=128)</b>	132.52	4349.000*	.000
<b>Non-Addicted (N=102)</b>	94.14		

*\*Significant at 0.05 level*

Participants with higher smartphone addiction scores reported considerably more cognitive distortions, according to a comparison between smartphone addicts and non-addicts, rejecting the null hypothesis. This implies that poor smartphone use may be linked to maladaptive thought habits. Online environments that emphasize idealized lives and rapid feedback exacerbates cognitive distortions such as personalization and catastrophizing. A study by Roubi et al. (2023) indicates a positive correlation between excessive smartphone use and cognitive distortions, linking the rise in gadget usage to increased psychological issues. These distortions agree with Beck's Cognitive Theory of Depression, which posits that maladaptive thought patterns lead to dysfunctional behavior. Smartphone addiction may aid as a coping mechanism, intensifying negative biases. The Self-Regulation Theory further elucidates that individuals with low cognitive control may engage in obsessive smartphone use, reinforcing distorted thinking.

**Table 4: The mean rank and Mann-Whitney U value obtained by groups based on smartphone addiction in screen time.**

Smartphone Addiction	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
<b>Addicted (N=128)</b>	137.33	3734.000*	.000
<b>Non-Addicted (N=102)</b>	88.11		

*\*Significant at 0.05 level*

Increased screen time was also noted by those who were more addicted to smartphones. Higher screen time seems to be associated with increased psychological vulnerability, even though screen time itself is not intrinsically hazardous. Due to frequent exposure to comparison-driven content, perceived social pressures, and emotional dependence on digital engagement, spending too much time online might exacerbate cognitive distortions. A research sheds light on the complex relationship between screen time and smartphone addiction, demonstrating that, while excessive screen exposure is frequently related with problematic smartphone usage, it is not the only predictor (Tomczyk & Lizde, 2023). The Compensatory Internet Use Theory (Kardefelt-Winther, 2014) suggests that excessive smartphone use helps people escape negative feelings or stress. Excessive screen time has also been associated to poor self-regulation, sleep difficulties, and emotional distress, which reinforces compulsive use (Montag, Sindermann, Becker, & Panksepp, 2021).

The distribution of smartphone addiction based on gender indicates that 60.9% of male participants (N=115) and 50.4% of female participants (N=115) are identified as smartphone

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addicts, with a slightly higher addiction rate among males. Differences in smartphone usage patterns are suggested as a factor, where males engage more in gaming and social networking, while females focus on communication and productivity. Additionally, gender disparities, particularly in contexts like India, influence smartphone access and usage, as prevailing norms may hinder women's engagement with mobile technology due to their multifaceted roles and responsibilities. These factors contribute to the observed variations in addiction rates (Yale Economic Growth Centre, n.d.).

**Table 5: The mean rank and Mann-Whitney U value obtained by groups based on gender in cognitive appraisal.**

Gender	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
Males (N=115)	117.74	6355.000	.608
Females (N=115)	113.26		

**Table 6: The mean rank and Mann-Whitney U value obtained by groups based on gender in expressive suppression.**

Gender	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
Males (N=115)	129.86	4961.500*	.001
Females (N=115)	101.14		

\*Significant at 0.05 level

Gender-based comparison with respect to emotional regulation strategy revealed that while there is no substantial difference in the usage of cognitive reappraisal between the genders, males tend to resort to expressive suppression more than females, rejecting the null hypothesis.

Previous research indicates that cognitive appraisal, the evaluation of stressors, depends more on individual differences than demographic factors (Lazarus & Folkman, 1984). The current study reveals no significant gender differences in cognitive appraisal, suggesting similar evaluative processes between males and females, likely due to shared experiences. Males tend to suppress emotions, likely influenced by societal norms that associate emotional restraint with strength (Gross & John, 2003), while females are more inclined to use adaptive strategies like cognitive reappraisal, linked to better psychological health (Nolen-Hoeksema, 2012). The cultural context of Kerala reinforces these gendered behaviors, with traditional expectations reinforcing males to remain emotionally reserved, contrasting with the socialization of females to express their feelings more openly.

**Table 7: The mean rank and Mann-Whitney U value obtained by groups based on gender in cognitive distortions.**

Gender	Mean Rank	Mann-Whitney U	Asymptotic Sig. (2-sided test)
Males (N=115)	114.05	6779.500	.741
Females (N=115)	116.95		

The gender-based comparison with respect to cognitive distortions in this research implies that males and females have similar amounts of cognitive distortions, accepting the null

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hypothesis. Previous research has shown that, while cognitive distortions such as overgeneralisation, catastrophising, and personalisation are prevalent across genders, their expression and impact may differ depending on individual experiences rather than gender. (Leung & Poon, 2001). According to studies, personality qualities, stress exposure, and coping methods are more important in cognitive distortions than biological sex differences (O'Connor, Berry, & Weiss, 1999). Furthermore, Wenzel, Chapman, & Newman (2008) found that cognitive distortions are influenced by underlying psychopathology, such as anxiety and depression, rather than being gendered.

**Table 8: Spearman correlation between the two emotional regulation strategies and cognitive distortions among smartphone-addicted individuals**

Cognitive Distortions (N=128)	Cognitive Reappraisal		Expressive Suppression
	Correlation Coefficient	.065	
	Sig. (2-tailed)	.463	.521

The correlation analysis revealed non-significant results, supporting the null hypothesis that smartphone addiction's emotional regulation strategies do not significantly relate to cognitive distortions. Instead, the effects of emotional regulation may be influenced by situational factors. It was suggested that smartphone addiction might serve as an external coping mechanism, distracting from internal emotional management. Previous research indicates excessive smartphone use often leads to emotional avoidance rather than active management (Elhai, Levine, Dvorak, & Hall, 2019). Additionally, factors like personality traits, stress, and impulsivity may affect cognitive distortions more than emotion regulation alone. Future studies should explore mediating and moderating variables for a deeper understanding of this relationship.

**Table 9: Spearman correlation between the cognitive reappraisal and cognitive distortions among smartphone non-addicted individuals**

Cognitive Distortions (N=102)	Cognitive Reappraisal	
	Correlation Coefficient	
	Sig. (2-tailed)	.008

\*Significant at 0.01 level

Among smartphone non-addicted individuals, a strong negative correlation was observed between cognitive reappraisal and cognitive distortions, rejecting the null hypothesis. The observed negative connection shows that people who practise cognitive reappraisal—an adaptive emotion control strategy—have fewer cognitive distortions. This is consistent with prior research highlighting the function of cognitive reappraisal in reforming maladaptive thought patterns and improving psychological resilience (Gross & John, 2003). This data lends support to the idea that those who are not addicted to cell phones may have stronger self-regulation abilities, allowing them to engage in more constructive cognitive and emotional techniques.

**Table 10: Spearman correlation between the expressive suppression and cognitive distortions among smartphone non-addicted individuals**

Cognitive Distortions (N=102)	Expressive Suppression	
	Correlation Coefficient	
	Sig. (2-tailed)	.269

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The Spearman correlation analysis revealed no significant relationship between expressive suppression and cognitive distortions in smartphone non-addicts, supporting the null hypothesis. This indicates that expressive suppression, aimed at diminishing outward emotional responses, does not affect cognitive distortions in this group. This is in line with previous research suggesting that while expressive suppression can regulate emotional displays, it does not necessarily impact cognitive errors. The findings may be attributed to expressive suppression's greater influence on social functioning than cognitive processes, and individuals without addiction might possess sufficient emotional control, reducing the efficacy of expressive suppression in affecting cognitive distortions.

In conclusion, the study shows that emotional regulation and cognitive distortions are significantly linked to smartphone addiction among young adults. The involvement of internal emotional and cognitive systems in digital reliance is highlighted by these psychological processes, which may encourage harmful use habits. Mental health and educational stakeholders can help young people navigate technology with more awareness, balance, and emotional resilience by comprehending these relationships.

### **CONCLUSION**

The study investigates the interplay between young individuals' cognitive distortions and emotional regulation strategies in relation to smartphone addiction. Key findings indicate that cognitive reappraisal—the ability to adaptively manage emotions—is unaffected by smartphone dependency, while those with higher addiction scores tend to resort to expressive suppression, a less effective coping mechanism. Notably, smartphone addicts exhibit higher levels of cognitive distortions, reflecting impulsive and maladaptive thinking, which can impact emotional stability and mental health. Gender differences emerged, with males exhibiting more emotion suppression, though both genders used cognitive reappraisal equally. The research indicates that heightened smartphone use correlates with cognitive distortions but notes that emotional regulation strategies may lose their effectiveness once addiction is present. Overall, cognitive reappraisal is highlighted as a crucial factor in mitigating negative thought patterns before addiction develops.

### ***Implications of the Study***

The outcomes of this study have significant inferences for digital health, sociocultural behaviors, and emotional well-being in a culture that is becoming increasingly dependent on technology. Males rely more on expressive suppression, which highlights the need to question ingrained cultural norms that inhibit men from expressing their emotions. Normalizing emotional openness across genders may encourage better emotional regulation and lessen unhealthy coping mechanisms.

The need of developing healthy digital habits is further highlighted by the increased cognitive distortions and prolonged screen time seen in smartphone addicts. Young adults can build healthy relationships with technology while safeguarding cognitive and emotional functioning by promoting digital health in homes and educational institutions through screen-time awareness, structured device use, and digital literacy education.

Early psychological interventions emphasizing adaptive emotional regulation, especially cognitive reappraisal, are crucial from a clinical and preventive standpoint. Mental health professionals should incorporate digital behavior assessments into evaluations and address coping styles linked to technology in therapy. Psychoeducation and cognitive-behavioral

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interventions can assist individuals in recognizing maladaptive thoughts, minimizing digital dependence, and enhancing emotional resilience, ultimately supporting healthier digital engagement, and promoting psychological well-being at individual, familial, and societal levels.

### *Limitations & Suggestions*

- Self-report bias: The study is based on self-reported data, which may be skewed by social desirability bias or false self-perceptions. Future research should include objective measurements such as screen time tracking or experimental activities to validate findings.
- Cross-sectional design: The study examines associations rather than causal links. Longitudinal study is required to investigate the longstanding impact of smartphone addiction on cognitive distortions and emotional control mechanisms.
- Limited generalisability: The sample is made up of young adults from certain parts of Kerala, which limits the findings' broader applicability. The use of purposive sampling may have created selection bias, reducing the sample's representativeness. In future research, using a random sampling method might improve findings' generalisability and provide a more diverse and representative sample.
- Lack of qualitative insights: The study focusses mostly on quantitative data, leaving out more in-depth human experiences and motivations driving smartphone addiction and emotional regulation strategies. Future study could benefit from mixed-method approaches that include interviews or open-ended questions to get a more complete picture.

In conclusion, the findings of the study demonstrate how smartphone addiction affects cognitive distortions and emotional control tendencies. Adaptive emotional techniques like cognitive reappraisal provide a potential basis for rehabilitation, even though dependency seems to reinforce maladaptive methods and cognitive distortions. The findings highlight the increasing necessity in technologically advanced cultures for balanced digital participation and mental health awareness. Future initiatives can help people navigate the digital environment without jeopardizing their mental or emotional health through focused study, well-informed solutions, and ongoing investigation.

### **REFERENCES**

- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 217- 237.
- Almeida, F. (2018). Strategies to perform a mixed model study. *European Journal of Education Studies*.
- Arrivillaga, C., & Elhai, J. D. (2023). Depressive symptomatology is associated with problematic smartphone use severity in adolescents: The mediating role of cognitive emotion regulation strategies. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*.
- Baumeister, R. F., & Vohs, K. D. (2004). *Handbook of self-regulation: Research, theory, and applications*. Guilford Press.
- Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. University of Pennsylvania Press.
- Billieux, J., M. P., Lopez-Fernandez, O., Kuss, D. J., & Griffiths, M. D. (2015). Can disordered mobile phone use be considered a behavioral addiction? An update on

## The Interplay between Smartphone Addiction, Emotional Regulation, and Cognitive Distortions among Young Adults in Kerala

- current evidence and a comprehensive model for future research. *Current Addiction Reports*.
- Burns, D. D. (1980). *Feeling Good: The New Mood Therapy*. HarperCollins.
- Das, P., Saraswathy, K. N., & Chaudhary, V. (2024). Prevalence of Smartphone Addiction and its Relationship with Obesity among Young Adults: A Cross-sectional Study from Delhi, India. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 544-548.
- Deperrois, R., & Combalbert, N. (2022). Links between cognitive distortions and cognitive emotion regulation strategies in non-clinical young adulthood. *Cognitive processing*, 69-77.
- Elhai, J. D., Levine, J. C., Dvorak, R. D., & Hall, B. J. (2019). Non-social features of smartphone use are most related to depression, anxiety and problematic smartphone use. *Computers in Human Behavior*.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 41-54.
- Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system*. Oxford Press.
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 271-299.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 348-362.
- Hale, L., & Guan, S. (2015). Screen time and sleep among school-aged children and adolescents: a systematic literature review. *Sleep medicine reviews*, 50-58.
- Hoffner, C., & Lee, S. (2015). Mobile Phone Use, Emotion Regulation, and Well-Being. *Cyberpsychology, behavior and social networking*, 411-416.
- Hofmann, W., Friese, M., & Strack, F. (2009). Impulse and Self-Control from a Dual- Systems Perspective. *Perspectives on Psychological Science*, 162-176.
- Ingram, R. E., & Hollon, S. D. (1986). Cognitive therapy of depression: Theory and application. *Applied & Preventive Psychology*, 7-13.
- Kardefelt-Winther, D. (2014). A conceptual and methodological critique of internet addiction research: Towards a model of compensatory internet use. *Computers in Human Behavior*, 351-354.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Uses and gratifications research. *Public Opinion Quarterly*, 509-523.
- Koob, G. F., & Volkow, N. D. (2010). Neurocircuitry of addiction. *Neuropsychopharmacology*, 217-238.
- Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion*, 4-41.
- Kwon, M., Kim, D. J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: Development and validation of a short version for adolescents. *PloS One*.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing.
- Lederbogen, F., Kirsch, P., Haddad, L., Streit, F., Tost, H., Schuch, P., . . . Meyer-Lindenberg, A. (2011). City living and urban upbringing affect neural social stress processing in humans. *Nature*, 498-501.
- Leon, A. C. (1998). *Comprehensive Clinical Psychology*.

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- Leung, P. W., & Poon, M. W. (2001). Dysfunctional schemas and cognitive distortions in psychopathology: A test of the cognitive model of depression. *Behavior Research and Therapy*, 583-597.
- Méndez, M. L., Padrón, I., Fumero, A., & Marrero, R. J. (2024). Effects of internet and smartphone addiction on cognitive control in adolescents and young adults: A systematic review of fMRI studies. *Neuroscience & Biobehavioral Reviews*.
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anasthesia*, 67-72.
- Montag, C., Sindermann, C., Becker, B., & Panksepp, J. (2021). An affective neuroscience framework for the molecular study of internet addiction. *Frontiers in Psychology*.
- Mukherjee, D. C., & Pandey, V. (2024). Smartphone addiction, personality Factors, emotional regulation and Mental Health: Gender based studies. *International Journal of Psychological Studies*.
- Nolen-Hoeksema, S. (2012). Coping with stress and gender differences. *Annual Review of Psychology*, 35-39.
- O'Connor, R. C., Berry, L. M., & Weiss, J. (1999). Gender differences in the associations between cognitive distortions and psychological distress. *Personality and Individual Differences*, 1059-1071.
- Özparlak, A., & Karakaya, D. (2022). The associations of cognitive distortions with internet addiction and internet activities in adolescents: A cross-sectional study. *Journal of child and adolescent psychiatric nursing: official publication of the Association of Child and Adolescent Psychiatric Nurses, Inc*, 322-330.
- Penn LPS Online. (2024, July 30). *The importance of ethical considerations in research and clinical trials*. Retrieved from Penn LPS Online: <https://lpsonline.sas.upenn.edu/features/importance-ethical-considerations-research-and-clinical-trials>
- Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 1841-1848.
- Ratan, Z. A., Zaman, S. B., Islam, S. M., & Hosseinzadeh, H. (2021). Smartphone overuse: A hidden crisis in COVID-19. *Health Policy and Technology*, 21-22.
- Roubi, M., Rathee, S., & Kumar, P. (2023). Use Of Smartphone and Cognitive Distortion: A Correlational Study. *Journal for ReAttach Therapy and Developmental Diversities*, 1975-1980.
- Rozgonjuk, D., & Elhai, J. (2018). Problematic smartphone usage, emotion regulation, and social and non-social smartphone use. *Proceedings of the Technology, Mind, and Society*.
- 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*.
- Sheppes, G., Suri, G., & Gross, J. J. (2014). Emotion regulation and psychopathology. *Annual Review of Clinical Psychology*, 379-405.
- Sundjaja, J. H., Shrestha, R., & Krishan, K. (2017). McNemar and Mann-Whitney U tests. *StatPearls - NCBI Bookshelf*.
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review. *Personality and Social Psychology Review*, 2-30.
- Ting, C. H., & Chen, Y. Y. (2020). Smartphone Addiction. In C. A. Essau, & P. H. Delfabbro, *Adolescent Addiction* (pp. 215-240). Elsevier eBooks.

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- Tomczyk, L., & Lizde, E. (2023). Is real screen time a determinant of problematic smartphone and social network use among young people? *Telematics and Informatics*.
- Yale Economic Growth Centre. (n.d.). *Accelerating Indian Women's Use of Mobile Phones through Low-Cost Training in Digital Skills Improves Their Mental Health*. Retrieved from Yale Economic Growth Centre: <https://egc.yale.edu/gender-and-growth-gaps-project/policy-briefs/accelerating-indian-womens-use-mobile-phones-through-low-cost-training-digital-skills-improves-their#:~:text=In%20gender%2Dunequal%20countries%20like%20India%2C%20where%20women,roles%20cont>
- Zaman, F., Rahim, R., Monira, M., Omei, N., & Zaman, M. (2020). A Comparative Exploration of Smartphone and Internet Addiction on Cognitive Distortion among Urban and Rural Students. *Bangladesh Journal of Psychology*, 115-134.

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