



Personality Traits, Smartphone Addiction, and Quality of Life Among Urban Indian Parents: A Cross-Sectional Quantitative Study

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Abstract: This study investigated the interrelationships among Big Five personality traits, smartphone addiction, and quality of life (QoL) among 100 urban Indian parents residing in Bangalore. Employing a cross-sectional quantitative design with purposive sampling, three validated self-report instruments were administered: the Big Five Inventory – Short Version (BFI-S), the Smartphone Addiction Scale – Short Version (SAS-SV), and the EUROHIS-QOL 10-Item Index. Descriptive statistics indicated moderate smartphone addiction ($M = 28.8$, $SD = 11.9$), high personality trait expression ($M = 174$, $SD = 21.3$), and moderate quality of life ($M = 29.9$, $SD = 6.65$). Overall scale reliability was strong (Cronbach's $\alpha = 0.842$). Due to non-normality in key variables (Shapiro-Wilk, $p < .05$), non-parametric analyses were employed. Spearman rank correlations revealed significant associations: neuroticism positively predicted smartphone addiction ($\rho = .207$, $p < .01$), while smartphone addiction was negatively correlated with quality of life ($\rho = -.516$, $p < .01$). Conscientiousness showed a positive relationship with quality of life ($\rho = .433$, $p < .01$). Mann-Whitney U tests identified significant gender differences: males scored higher on conscientiousness ($p = .033$), openness ($p = .038$), and smartphone addiction ($p = .019$); females scored higher on neuroticism ($p = .002$); no significant gender difference was found in quality of life ($p = .340$). Findings are consistent with the Interaction of Person-Affect-Cognition-Execution (I-PACE) model, positioning neuroticism as an addiction vulnerability factor and conscientiousness as a protective variable via self-regulation

mechanisms. Results have practical implications for personality-tailored digital wellness interventions in urban India's rapidly expanding digital landscape.

Keywords: *Big Five Personality Traits, Smartphone Addiction, Quality of Life, Parents, Urban India, Gender Differences, I-PACE Model*

1. Introduction

Smartphone use has rapidly expanded in urban India, surpassing 800 million users by 2025 (Statista, 2025). While beneficial, excessive use has led to smartphone addiction, a behavioral concern marked by compulsive use and functional impairment (Billieux et al., 2015).

Parents remain an underexplored group despite high usage levels, averaging 5.5 hours daily and reporting frequent family conflicts (VIVO-CMR, 2025). In urban settings like Bengaluru, work and caregiving pressures may further intensify problematic use.

Personality traits, particularly neuroticism and conscientiousness within the Five-Factor Model (McCrae & Costa, 2008), are key predictors of addiction (Kayış et al., 2016; Zhang et al., 2020). Such patterns negatively impact quality of life (QoL), affecting wellbeing, relationships, and functioning (WHOQOL Group, 1998).

This study examines the links between personality, smartphone addiction, and QoL among 100 urban Indian parents, including gender differences.

1.1 Research Objectives

- To assess the levels of Big Five personality traits, smartphone addiction, and quality of life among urban Indian parents.
- To examine the relationship between personality traits and smartphone addiction.
- To investigate the relationship between smartphone addiction and quality of life.
- To explore gender differences in personality traits, smartphone addiction, and quality of life.

1.2 Hypotheses

H1: There is a significant relationship between personality traits and smartphone addiction among parents.

H2: There is a significant negative relationship between smartphone addiction and quality of life among parents.

H3: There are significant gender differences in personality traits, smartphone addiction, and quality of life among parents.

2. Review of Literature

2.1 Personality Traits and Smartphone Addiction

The Big Five framework highlights personality as a key predictor of smartphone addiction. Neuroticism shows a positive association with problematic use, as individuals use smartphones for emotional regulation, while conscientiousness is negatively associated due to better self-control (Zhang et al., 2020). These patterns are consistent across behavioral addictions (Kayaş et al., 2016). Among parents, neuroticism also indirectly influences children's smartphone addiction through negative parenting (Doo et al., 2022). In urban India, work and family stress may further intensify these effects.

2.2 Smartphone Addiction and Quality of Life

Smartphone addiction is linked to poorer quality of life, particularly through increased anxiety, depression, and social disruption (Elhai et al., 2019). Studies report moderate negative correlations between addiction and QoL (Shahrestanaki et al., 2020). For parents, “technoference” disrupts parent-child interactions, increasing conflict and reducing relational wellbeing (McDaniel & Coyne, 2016). In India, most parents report harm to family relationships due to overuse (VIVO-CMR, 2025).

2.3 Theoretical Framework

The I-PACE model (Brand et al., 2019) explains how personality traits influence addiction via emotional and cognitive processes. Neuroticism increases vulnerability to compulsive use, while conscientiousness provides regulatory control, ultimately affecting quality of life.

2.4 Research Gaps

There is limited research integrating personality, smartphone addiction, and QoL among Indian parents. Gender differences in these relationships also remain underexplored, especially in high-pressure urban contexts.

3. Methodology

3.1 Research Design

A cross-sectional, correlational design was used to examine associations and group differences at a single time point within a positivist framework.

3.2 Participants and Sampling

The sample included 100 urban Bangalore parents (49 males, 51 females), recruited through purposive and convenience sampling via WhatsApp, school networks, and social media. Inclusion required active smartphone use and consent; non-parents and non-users were excluded.

3.3 Instruments

Big Five Inventory – Short Version (BFI-S): A 10-item measure (John & Srivastava, 1999) assessing Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness on a 5-point Likert scale. Internal consistency for short formats ranges from $\alpha = 0.65$ – 0.82 per subscale.

Smartphone Addiction Scale – Short Version (SAS-SV): A 10-item unidimensional scale (Kwon et al., 2013) scored on a 6-point Likert scale. Cronbach's alpha ≈ 0.91 , demonstrating excellent reliability. Scores ≥ 31 indicate addiction risk.

EUROHIS-QOL 10-Item Index: A 10-item quality of life measure derived from the WHOQOL-BREF (WHOQOL Group, 2003), covering physical, psychological, social, and environmental QoL domains. Cross-cultural validity is well-established ($\alpha = 0.78$ – 0.85).

3.4 Data Collection and Ethical Considerations

Data were collected via Google Forms. Ethical approval was obtained, and informed consent, anonymity, and voluntary participation were ensured.

3.5 Statistical Analysis

SPSS was used for analysis. Descriptive statistics and reliability tests were conducted. Due to non-normality, Spearman correlations and Mann-Whitney U tests were applied, with significance set at $p < .05$.

4. Results

Descriptive Statistics

The sample comprised 100 parents (49% male, 51% female). Table 1 presents descriptive statistics for the three primary constructs.

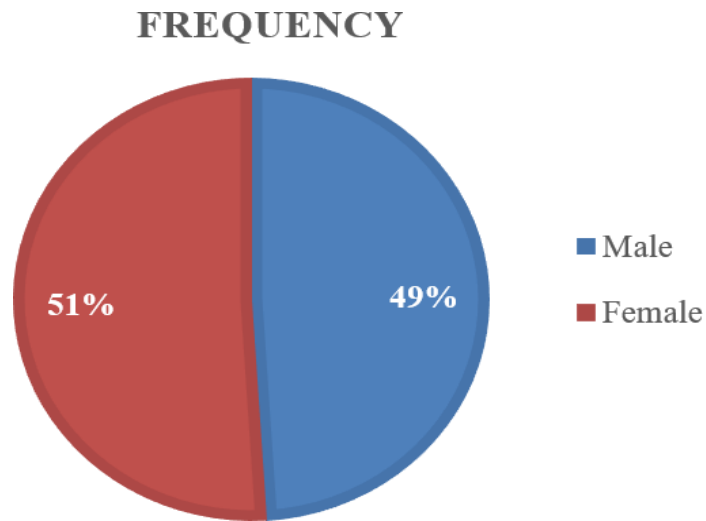
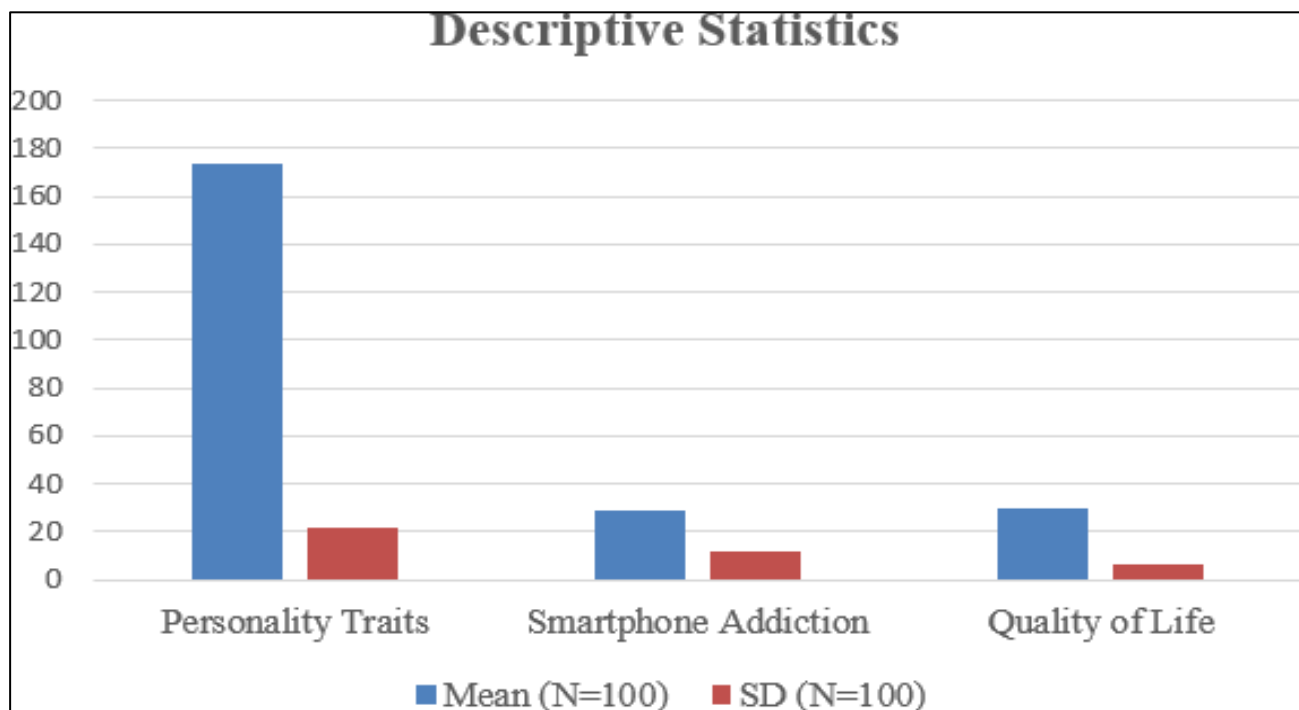


Table 1: Descriptive Statistics for Primary Study Variables (N = 100)

Variable	Mean (M)	Standard Deviation (SD)
Personality Traits (Total)	174.00	21.30
Smartphone Addiction	28.80	11.90
Quality of Life	29.90	6.65



Participants demonstrated moderate smartphone addiction levels with high variance, suggesting heterogeneous usage patterns within the sample. Quality of life scores were moderate with relatively low variability, indicating broadly comparable perceived wellbeing across

participants. Personality trait expression was elevated overall.

Reliability Analysis

Internal consistency was assessed for all scales (Table 2). All instruments demonstrated acceptable to excellent reliability, supporting measurement validity within this sample.

Table 2: *Reliability Statistics (Cronbach's Alpha).*

Construct	Cronbach's α	No. of Items
Personality Traits (BFI-S)	0.812	10
Smartphone Addiction (SAS-SV)	0.876	10
Quality of Life (EUROHIS-QOL)	0.791	8
Overall (Combined)	0.842	28

Normality Testing

Shapiro-Wilk tests assessed distributional normality (Table 3). Significant non-normality in personality traits and smartphone addiction justified the use of non-parametric statistical procedures.

Table 3: *Shapiro-Wilk Normality Test Results*

Variable	Statistic (W)	df	p-value	Distribution
Personality Traits	0.953	100	.001	Non-normal
Smartphone Addiction	0.966	100	.011	Non-normal
Quality of Life	0.991	100	.702	Normal

Correlation Analysis

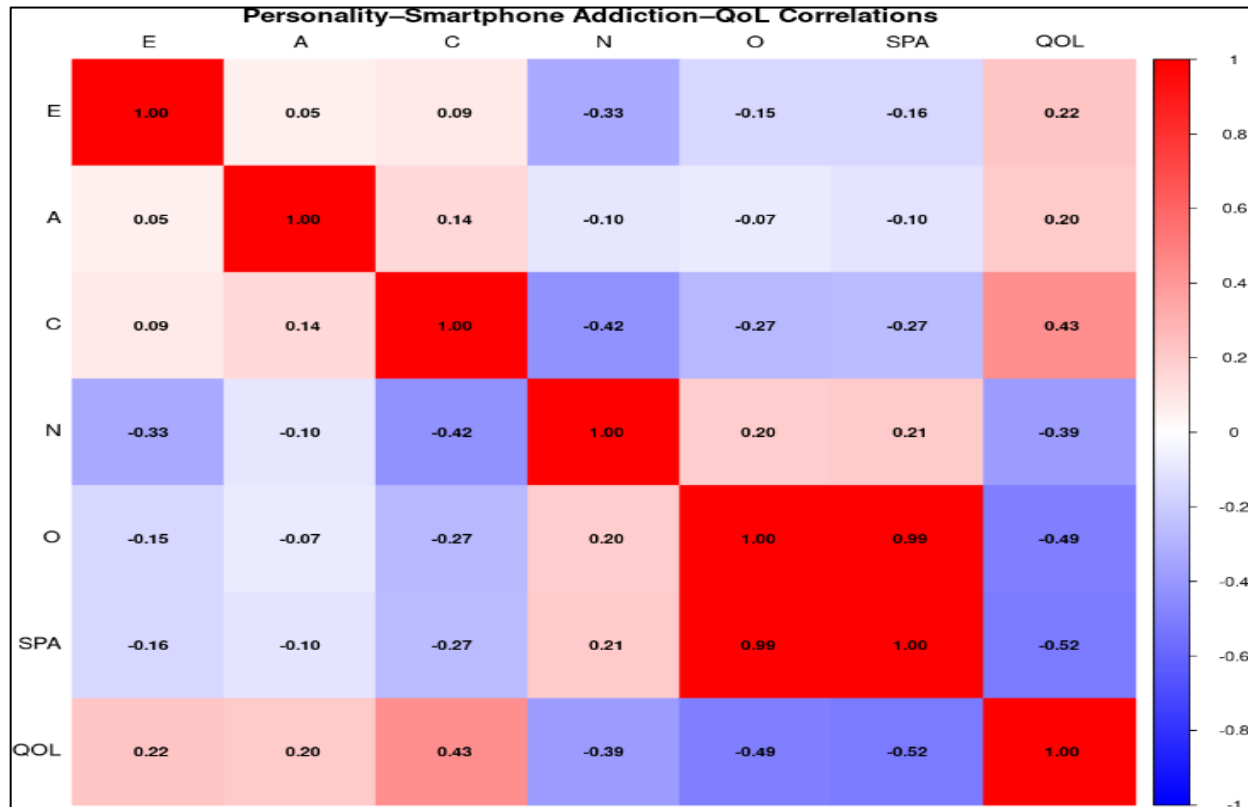
Spearman rank-order correlations examined associations among all study variables. Table 4 presents the complete correlation matrix. Key significant findings are described below.

Table 4: *Spearman Rank-Order Correlation Matrix (N = 100)*

Variable	E	A	C	N	O	SPA	QOL
Extraversion (E)	1.000	.053	.089	-.332	-.153	-.156	.223
Agreeableness (A)	.053	1.000	.145	-.097	-.071	-.104	.202
Conscientiousness (C)	.089	.145	1.000	-.424	-.272	-.268	.433*

Neuroticism (N)	-.332	-.097	-.424	1.000	.197	.207*	-.388
Openness (O)	-.153	-.071	-.272	.197	1.000	.990	-.491
Smartphone Addiction (SPA)	-.156	-.104	-.268	.207*	.990	1.000	-.516**
Quality of Life (QOL)	.223	.202	.433*	-.388	-.491	-.516**	1.000

* $p < .05$. ** $p < .01$.



Neuroticism was significantly and positively associated with smartphone addiction ($\rho = .207$, $p < .01$), supporting H1 partially. Conscientiousness was positively correlated with quality of life ($\rho = .433$, $p < .05$) and negatively correlated with neuroticism ($\rho = -.424$), indicating a pattern of mutual protective and risk-conferring traits. Most critically, smartphone addiction showed a strong negative correlation with quality of life ($\rho = -.516$, $p < .01$), fully supporting H2. Neuroticism also showed a negative relationship with quality of life ($\rho = -.388$), highlighting its pervasive influence on wellbeing.

Gender Differences

Mann-Whitney U tests examined gender differences across all constructs. Results are presented in Table 5.

Table 5: Mann-Whitney U Test Results for Gender Differences

Variable	Mean Rank (M)	Mean Rank (F)	Z	p-value	Result
Extraversion	55.92	45.29	-1.85	.064	Not Significant
Agreeableness	50.12	50.86	-0.13	.897	Not Significant
Conscientiousness	56.49	44.75	-2.13	.033*	Significant
Neuroticism	41.21	59.42	-3.17	.002**	Significant
Openness	56.65	44.59	-2.08	.038*	Significant
Smartphone Addiction	57.46	43.81	-2.35	.019*	Significant
Quality of Life	53.32	47.79	-0.95	.340	Not Significant

Note. M = Male; F = Female. * $p < .05$. ** $p < .01$.

Male parents scored significantly higher on conscientiousness ($p = .033$), openness ($p = .038$), and smartphone addiction ($p = .019$). Female parents scored significantly higher on neuroticism ($p = .002$). No significant gender difference was observed in quality of life ($p = .340$), partially supporting H3. Gender differences thus emerged in personality trait dimensions and addiction levels but converged on broadly similar wellbeing outcomes.

5. Discussion

Personality Traits and Smartphone Addiction

Neuroticism was positively associated with smartphone addiction ($\rho = .207$), indicating that emotionally unstable parents may use smartphones for coping and emotional regulation, consistent with prior research and the I-PACE model (Zhang et al., 2020; Brand et al., 2019). Conscientiousness showed a negative association ($\rho = -.268$), suggesting that self-disciplined individuals better regulate device use. In high-demand environments like Bengaluru's IT sector, this self-control may help distinguish between necessary and compulsive usage.

Smartphone Addiction and Quality of Life

A strong negative relationship between smartphone addiction and QoL ($\rho = -.516$) highlights its detrimental impact on wellbeing. Excessive use disrupts sleep, reduces social interaction, affects parenting quality, and lowers productivity (Elhai et al., 2019). These effects

are amplified for urban parents balancing work and family roles.

Personality Traits and Quality of Life

Neuroticism ($\rho = -.388$) negatively and conscientiousness ($\rho = .433$) positively predicted QoL, indicating both direct and indirect effects. Emotional instability reduces wellbeing, while discipline and structure enhance overall life quality.

Gender Differences

Males reported higher smartphone addiction despite higher conscientiousness, suggesting occupational demands may override self-regulation. Females showed higher neuroticism, but no significant gender difference in QoL, possibly due to shared coping or support systems.

5.1 Implications

The findings support the I-PACE model in an urban Indian parental context. Interventions should be personality-informed—targeting emotional regulation for high-neuroticism individuals and leveraging self-control in conscientious users—while workplace policies can promote healthier digital habits.

6. Conclusion

This study provides empirical evidence that personality traits, particularly neuroticism and conscientiousness, are meaningful predictors of smartphone addiction and quality of life among urban Indian parents. Neuroticism increases vulnerability to problematic device use through emotional dysregulation mechanisms, while conscientiousness confers resilience through superior impulse control and self-regulatory capacity. Smartphone addiction, in turn, exerts a strong negative influence on perceived quality of life, consistent with established theoretical models of behavioral addiction.

Gender differences reveal that males exhibit higher addiction despite stronger conscientiousness, suggesting that occupational and contextual factors may moderate the protective effects of self-regulatory traits in digital environments. Females' higher neuroticism did not translate into significantly lower quality of life compared to males, pointing to adaptive resilience processes that warrant further investigation.

These findings carry practical significance in the context of India's rapidly expanding smartphone penetration and the growing prevalence of digital behavioral health concerns among adult populations. Personality-tailored interventions, occupational digital wellness

programs, and family-focused psychoeducation represent evidence-informed pathways for promoting healthier technology use and improved wellbeing among urban Indian parents.

Future research should employ longitudinal designs to establish causal directionality, utilize objective digital behavior tracking (e.g., screen time logs) to validate self-reports, and expand samples to encompass rural populations and diverse socioeconomic strata. Structural equation modeling in larger samples could formally test the mediation of smartphone addiction in the personality–quality of life relationship, offering a more complete empirical mapping of the I-PACE model in parental populations.

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