



# “A Study on the Impact of Digital Dependence on Interpersonal Relationships and Emotional Well-Being”

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## Abstract

The increasing integration of digital technologies into everyday life has significantly transformed patterns of human interaction, raising concerns regarding their influence on interpersonal relationships and emotional well-being. The present study examines the relationship between digital dependence, interpersonal relationship quality, and loneliness among individuals across different age groups.

A quantitative correlational research design was employed. Data were collected from 173 participants aged 16–60 years using a structured questionnaire administered through Google Forms. Standardized instruments, including the Smartphone Addiction Scale – Short Version (SAS-SV), Relationship Assessment Scale (RAS), and UCLA Loneliness Scale (Short Version), were used to measure digital dependence, relationship quality, and emotional well-being.

The findings reveal a statistically significant moderate negative relationship between digital dependence and relationship quality ( $r = -0.45$ ), and a moderate positive relationship between digital dependence and loneliness ( $r = 0.42$ ). These findings highlight the paradoxical nature of digital technology, which simultaneously enhances connectivity while contributing to emotional distance and reduced relational satisfaction.

The study underscores the importance of balanced and mindful digital usage to preserve meaningful interpersonal relationships and promote psychological well-being.

Keywords: digital dependence, interpersonal relationships, loneliness, emotional well-being, social media use.

## 1. Introduction

### 1.1 Background of Study

The rapid advancement of digital technology has fundamentally transformed the way individuals communicate, interact, and maintain interpersonal relationships. Over the past two decades, the proliferation of smartphones, social media platforms, and internet-based communication tools has enabled continuous connectivity, allowing individuals to interact beyond geographical and temporal constraints.

Digital communication platforms such as WhatsApp, Instagram, and Facebook have become central to daily life, serving as primary tools for social interaction, emotional expression, and relationship maintenance. These platforms enable individuals to sustain both strong and weak social ties, contributing to enhanced connectivity (Hampton et al., 2011).

However, this transformation has also raised critical concerns within the field of psychology. While digital technologies increase accessibility and convenience, they may influence the depth, authenticity, and quality of interpersonal relationships. The absence of non-verbal cues, reduced emotional engagement, and increased potential for misinterpretation may limit meaningful communication.

### 1.2 Digital Dependence

Digital dependence refers to excessive or compulsive use of digital devices, particularly smartphones and social media platforms, to the extent that it interferes with daily functioning and well-being. Individuals exhibiting digital dependence often display behaviours such as:

Frequent checking of devices

Difficulty disengaging from digital platforms

Emotional reliance on online interactions

Kuss and Griffiths (2017) conceptualize digital dependence as a behavioural addiction characterized by tolerance, withdrawal, and loss of control.

### 1.3 The Paradox of Connectivity

A central theme in contemporary discourse is the paradox of digital connectivity. While individuals are more connected than ever before, there is growing evidence of increased loneliness and reduced relationship satisfaction.

Turkle (2011) describes this phenomenon as “connected but alone,” where digital communication creates an illusion of closeness without emotional depth. Similarly, Twenge (2019) reports declining psychological well-being associated with increased screen time.

### 1.4 Problem Statement

Despite increased digital connectivity, many individuals report experiencing loneliness, emotional disconnection, and dissatisfaction in relationships. This raises a critical question:

Does digital dependence enhance or diminish the quality of interpersonal relationships?

Existing research largely focuses on social media usage or internet addiction in isolation. There remains a gap in understanding how digital dependence influences relationship quality and emotional well-being simultaneously across age groups.

### 1.5 Objectives of the Study

To assess the level of digital dependence among individuals aged 16–60

To examine its impact on interpersonal relationship quality

To analyse its association with loneliness

To compare digital usage patterns across age groups

To explore the dual impact of digital technologies

#### Significance of Study

This study contributes to understanding the psychological and relational implications of digital dependence. It provides insights for:

Individuals → developing healthier digital habits

Mental health professionals → designing interventions

Educators → promoting digital awareness

Society → fostering balanced digital engagement

## 2. Literature Review

Existing literature highlights both the advantages and disadvantages of digital engagement. Research suggests that digital platforms support connectivity, yet excessive use contributes to loneliness, reduced empathy, and weakened interpersonal bonds. Behavioral addiction frameworks further explain compulsive usage patterns, while theoretical models such as Displacement Theory and the Connectedness Paradox provide insight into how digital communication may replace meaningful interaction.

### 2.1 Digital Dependence as Behavioural Addiction

Digital dependence has been widely studied as a behavioural addiction characterized by compulsive engagement with digital devices (Kuss & Griffiths, 2017). Reinforcement mechanisms such as notifications and social validation contribute to habitual usage patterns.

### 2.2 Impact on Interpersonal Relationships

Research indicates that digital behaviours negatively influence relationship quality:

Phubbing reduces relationship satisfaction (David & Roberts, 2017)

Mobile presence reduces emotional connection (Przybylski & Weinstein, 2013)

Messaging during interactions reduces communication quality (Vanden Abeele et al., 2016)

These findings highlight how digital devices interfere with emotional intimacy and attentional presence.

## 2.3 Emotional Well-Being and Loneliness

Studies consistently link digital dependence with loneliness and psychological distress:

Twenge (2019) → increased loneliness

Sbarra et al. (2019) → evolutionary mismatch

Drouin & McDaniel (2021) → reduced relationship satisfaction

## 2.4 Theoretical Framework

This study integrates multiple theories:

Displacement Theory

Digital usage replaces meaningful face-to-face interaction.

Attachment Theory

Digital dependence affects emotional bonding and attachment patterns.

Social Exchange Theory

Digital interactions alter perceived relational rewards and costs.

Connectedness Paradox

High connectivity coexists with emotional isolation.

## 2.5 Research Gap

Existing literature:

Focuses on younger populations

Examines variables independently

Lacks integrated models

This study addresses these gaps by examining digital dependence, relationships, and loneliness together.

## 3. Methodology

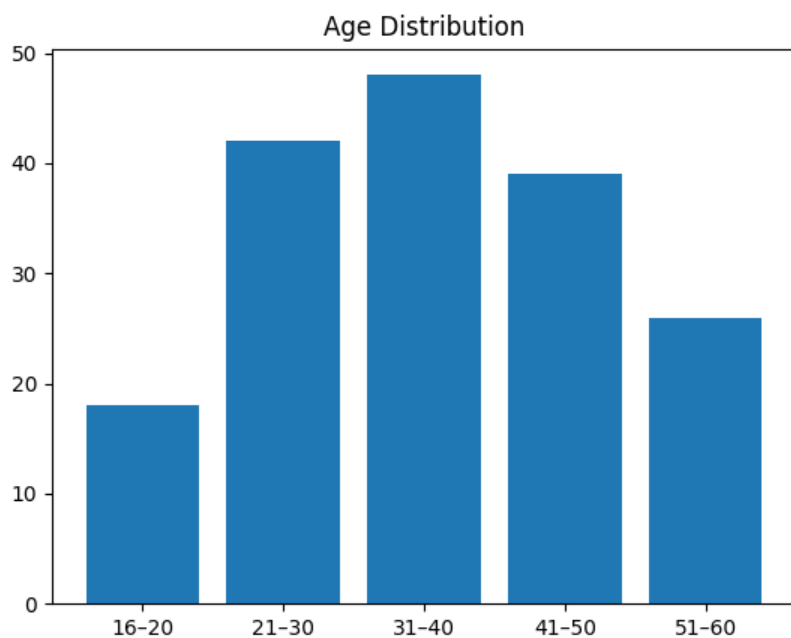
A quantitative correlational design was adopted. The sample comprised 173 participants aged 16–60 years selected through convenience sampling. Data were collected using standardized tools including SAS-SV, RAS, and UCLA Loneliness Scale. Statistical analysis involved descriptive statistics and Pearson correlation.

### 3.1 Research Design

Quantitative, correlational design

### 3.2 Sample

Figure 1. Demographic and Usage Profile of Participants



Note. Shows age distribution across sample (N=173).

N = 173

Age: 16–60 years

Convenience sampling

### 3.3 Instruments

SAS-SV → Digital dependence

RAS → Relationship quality

UCLA Scale → Loneliness

### 3.4 Data Collection

Online survey via Google Forms with informed consent

### 3.5 Data Analysis

Descriptive statistics

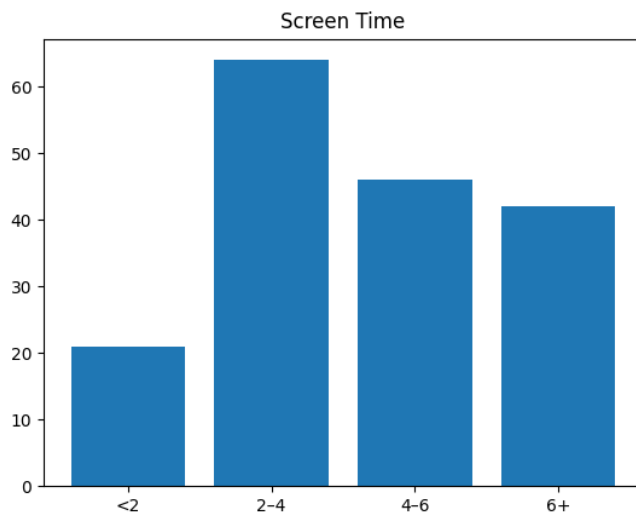
Pearson correlation

### 4. Results

Results indicate moderate to high digital dependence among participants. Correlation analysis shows a negative relationship between digital dependence and relationship quality and a positive relationship with loneliness, supporting the study hypothesis.

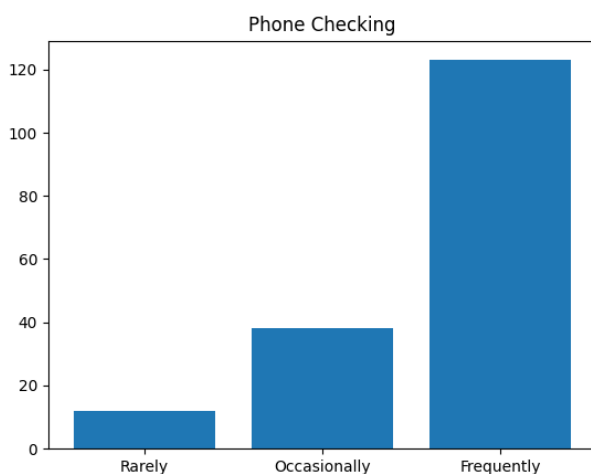
#### 4.1 Descriptive Findings

Figure 2. Daily Screen Time Distribution



Note. Indicates high digital engagement among participants.

Figure 3. Phone Checking Frequency



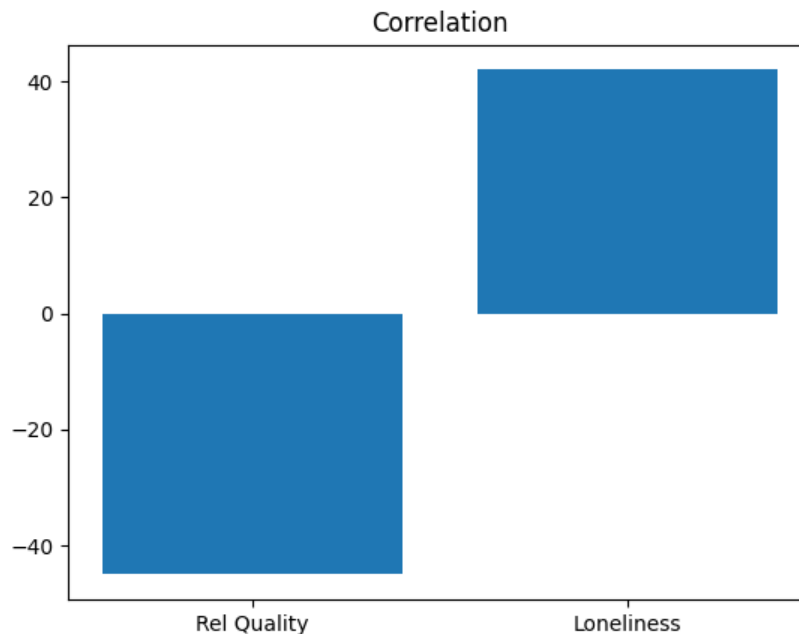
Note. Reflects habitual digital usage patterns.

Participants reported moderate to high digital usage, with frequent phone-checking behavior indicating habitual engagement.



## 4.2 Correlation Results

Figure 4. Correlation Between Variables



Note. Negative relation with relationship quality and positive with loneliness.

### 4.3 Interpretation

The results indicate that higher digital dependence is associated with:

Reduced relationship quality

Increased loneliness

These findings support the hypothesis.

## 5. Discussion

The findings demonstrate that digital technology plays a dual role. While it enhances communication, excessive use reduces emotional depth and interaction quality. The concept of connected loneliness explains the coexistence of connectivity and isolation. These findings align with behavioral addiction theories and highlight the psychological implications of digital dependence.

### Positive Aspects

Enhances communication

Maintains long-distance relationships

Provides social support

### Negative Aspects

Reduces emotional depth

Increases loneliness

Causes attentional fragmentation

The coexistence of connection and loneliness reflects the Connectedness Paradox.

Frequent phone-checking behaviour indicates habit formation and behavioural dependency, aligning with addiction models.

## 6. Conclusion

The study concludes that digital dependence has a complex impact on interpersonal relationships and emotional well-being. Balanced digital usage is essential to preserve meaningful human connections.

The study demonstrates that digital dependence has a complex and non-linear impact on interpersonal relationships and emotional well-being.

While digital platforms enhance connectivity, they cannot replace the depth of real-life interactions. Excessive digital dependence may weaken emotional intimacy and relationship quality.

A balanced approach to digital usage is essential.

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