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## **A CORRELATIONAL ANALYSIS INTO THE DIMENSIONS OF MOBILE PHONE USAGE AND LIFE SKILLS AMONG UNIVERSITY STUDENTS**

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### **ABSTRACT**

*This study examined the relationship between mobile phone usage dimensions and life skills among 921 first-year undergraduate students across three state universities in Punjab, India. Using a descriptive survey design with stratified random sampling, researchers assessed life skills alongside five phone usage dimensions: Enjoyment and Relaxation, Perceived Utility, Perceived Safety, Perceived Autonomy and Intrinsic Motivation, and Addiction. Pearson's correlation analysis revealed that life skills were significantly positively correlated with phone addiction ( $r = 0.30, p < 0.01$ ) and weakly positively correlated with perceived safety ( $r = 0.16, p < 0.01$ ). Conversely, life skills showed a weak, negative correlation with enjoyment and relaxation ( $r = -0.16, p < 0.01$ ), with no significant relationships found in the remaining dimensions. These findings highlight the need for integrated educational models that combine digital literacy, emotional resilience, and holistic skill development.*

**KEYWORDS:** Mobile Phone Usage, Life Skills, University Students, Smartphone Dependency, Digital Well-Being.

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### **INTRODUCTION**

In the contemporary digital era, the smartphone has transitioned from a luxury communication tool to an ubiquitous extension of the human persona. For university students, mobile phones serve as centralized hubs for academic engagement, social networking, entertainment, and daily organization. While these devices offer unprecedented access to information and global connectivity, their pervasive integration into daily routines has fundamentally altered the behavioral and psychological landscapes of emerging adults. Consequently, understanding the multi-faceted or dimensional patterns of mobile phone usage—ranging from productive utility to problematic dependency—has become a critical focal point for contemporary behavioral research.

At this developmental juncture, university students are navigating a pivotal transition into independent adulthood. Success in this phase relies heavily on the acquisition and execution of core "life skills." As defined by the World Health Organization, life skills are psychosocial abilities that enable individuals to deal effectively with the demands and challenges of everyday life. These include critical thinking, effective communication, emotional regulation, and stress management. However, the constant digital stimuli and potential for cognitive fragmentation

associated with excessive mobile phone use may interfere with the organic development and practical application of these vital competencies.

While existing literature frequently addresses mobile phone addiction or its direct impact on academic performance, there remains a critical gap in exploring how specific, nuanced dimensions of smartphone usage—such as duration, purpose (academic versus social), and psychological attachment—correlate with a student's holistic life skills profile. For instance, while targeted digital tool usage might enhance problem-solving and self-management, compulsive screen-time may conversely impair real-world interpersonal communication and emotional resilience.

To address this gap, this study investigates a correlational analysis into the dimensions of mobile phone usage and life skills among university students.

### **REVIEW OF LITERATURE**

Systematic assessments confirm that when mobile learning is purposefully integrated, it actively promotes independent investigation, collaborative group work, and the maturation of critical thinking skills that are often suppressed in conventional, lecture-based environments (Gurung, 2026). Moreover, routine reliance on mobile devices for superficial tasks keeps explorative and creative phone use remarkably low, substituting organic problem-solving and proactive decision-making with instant, unverified digital copies of information (Gurung, 2026).

According to social disconnection theory, an escalation in uncontrolled mobile reliance paradoxically reduces close friendships and deep peer interactions, increasing vulnerability to loneliness (Zhou, 2025). Research by Liu (2026) highlights that while perceived social support can act as an initial buffer against social anxiety, students who suffer from active social phobias often lean into non-social problematic smartphone use (NSPSU) and social problematic smartphone use (SPSU) as a structural proxy for real-life contact. Rather than facilitating effective communication, excessive reliance on text or media applications creates an avoidant behavioral pattern that degrades relationship maintenance and restricts opportunities for genuine, face-to-face interpersonal connections (Liu, 2026; Zhou, 2025).

Furthermore, a student's underlying psychological resources dictate the healthiness of this behavior; individuals with low self-efficacy often feel helpless when facing stressors, trapping themselves in a cycle where they use mobile devices as an emotional shield rather than deploying proactive coping mechanisms like physical activity or seeking real-world social support (Yang, 2026).

Consequently, high levels of smartphone addiction remain consistently linked to heightened psychological distress, proving less amenable to adaptive cognitive or emotional coping resources over time (Padmanabhanunni, 2025). Compulsive smartphone interactions encourage a state of "cognitive avarice" or mental laziness, where users offload active cognitive effort to automated applications. Investigations into these cognitive effects have confirmed that heavy smartphone reliance significantly impairs an individual's capacity for complex critical thinking (Fabio & Suriano, 2023). This constant digital outward focus severely limits the baseline self-reflection required to develop robust self-awareness.

Furthermore, the cognitive failures and chronic mind wandering induced by smartphone addiction directly impair critical thinking and deep analytical capacity, transitioning students

from active problem-solvers into passive, shallow information consumers (Al-Abyadh et al., 2024).

### **OBJECTIVES OF THE STUDY**

The study guide following objectives:

1. To examine the relationship between enjoyment and relaxation purpose dimension of mobile phone usage and life skills.
2. To examine the relationship between perceived utility dimension of mobile phone usage and life skills.
3. To examine the relationship between perceived safety dimension of mobile phone usage and life skills.
4. To examine the relationship between perceived autonomy and intrinsic motivation dimension of mobile phone usage and life skills.
5. To examine the relationship between addiction dimension of mobile phone usage and life skills.

### **METHODOLOGY**

The descriptive survey method was employed. The sample consisted of 921 first-year undergraduate students selected through stratified random sampling from:

- Punjabi University, Patiala, Punjab, India
- Panjab University, Chandigarh, India
- Guru Nanak Dev University, Amritsar, Punjab, India

Students from arts and science streams were included.

### **TOOLS USED**

#### **1. Mobile Phone Usage Scale**

Developed and standardized by the investigator (2022). It included five dimensions:

- Enjoyment and Relaxation Purpose
- Perceived Utility
- Perceived Safety
- Perceived Autonomy and Intrinsic Motivation
- Addiction

#### **1. Life Skills Assessment Scale**

Developed by Nair and Subasree (2014). It included ten dimensions:

- Self-awareness
  - Empathy
  - Effective communication
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- Interpersonal relationships
- Creative thinking
- Critical thinking
- Decision making
- Problem solving
- Coping with emotions
- Coping with stress.

**STATISTICAL TECHNIQUE**

Pearson's Product Moment Correlation method was used.

**RESULTS****Table 1 Correlation of Mobile Phone Usage Dimensions with Life Skills**

The coefficient of correlation between mobile phone usage dimensions and life skills among university students is given in table 1.

| S. No. | Mobile Phone Usage Dimensions             | Coefficient of correlation (r) | Significance |
|--------|-------------------------------------------|--------------------------------|--------------|
| 1.     | Enjoyment & Relaxation Purpose            | -0.16**                        | $p < 0.01$   |
| 2.     | Perceived Utility                         | 0.05                           | $p < 0.01$   |
| 3.     | Perceived Safety                          | 0.16**                         | $p < 0.01$   |
| 4.     | Perceived Autonomy & Intrinsic Motivation | -0.01                          | $p < 0.01$   |
| 5.     | Addiction                                 | 0.30**                         | $p < 0.01$   |

**Source:** Primary Data and Own Calculation

The data presented in Table 1 reveals that there is a weak but statistically significant inverse relationship ( $r = -0.16$ ,  $p < 0.01$ ) between utilizing mobile phones for amusement and an individual's life skills. This implies that increased screen time dedicated to relaxation may be marginally linked to lower life skills proficiency.

Conversely, employing mobile phones out of a need for security shows a small, statistically significant positive correlation ( $r = 0.16$ ,  $p < 0.01$ ) with life skills, suggesting that safety-conscious users tend to demonstrate slightly better-developed life skills.

Notably, the strongest relationship emerged within the addiction dimension ( $r = 0.30$ ,  $p < 0.01$ ). This indicates a moderate-to-strong positive association, unexpectedly suggesting that individuals exhibiting higher tendencies toward mobile phone dependency also report more robust life skills.

Neither the perceived utility ( $r = 0.05$ ) nor the autonomy/intrinsic motivation dimension ( $r = -0.01$ ) demonstrated a statistically meaningful relationship with life skills, indicating that these specific motivations share virtually no variance with the outcome variable.

**DISCUSSION**

Discussion related to dimensional patterns of mobile phone usage with life skills among university students:

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- **Enjoyment and Relaxation Purpose Dimension**

The correlational analysis demonstrated a small negative relationship between mobile phone usage dedicated to enjoyment/relaxation and overall life skills. This inverse association suggests that engaging with mobile devices for passive entertainment—such as online gaming, social media browsing, or video consumption—may moderately impede life skill development. This empirical outcome aligns with the observations of Kim and Kim (2015) and Kim et al. (2018), who similarly recorded minor negative correlations between leisure-driven smartphone use and life skill competencies.

From a theoretical standpoint, Self-Regulation Theory (Baumeister et al., 2006) provides a cogent explanation: passive digital entertainment relies heavily on disengagement, requiring minimal active emotional regulation or cognitive problem-solving—both of which are necessary for mastering real-world life skills. Furthermore, Cognitive Load Theory (Sweller, 1988) posits that continuous passive consumption fragments human attention, thereby reducing the mental capacity necessary for meaningful cognitive and social processing. These mechanisms are further supported by Misra et al. (2014), who observed that entertainment-focused phone use reduces active behavioral engagement, suppressing core life skill domains like communication and problem-solving. Similarly, Rosen et al. (2013) emphasized that media-induced multitasking and screen-based entertainment weaken attentional focus, restricting an individual's capacity to practice critical thinking and interpersonal communication in real-time environments.

- **Perceived Utility Dimension**

A trivial correlation was identified between the perceived utility dimension of mobile usage—encompassing practical functions such as task organization, schedule management, and academic tool utilization—and life skills. This indicates that leveraging mobile technology strictly for utilitarian efficiency exerts negligible influence on broader life skill development. This outcome substantiates earlier findings by Kim et al. (2018) and Gountas et al. (2021), who also reported negligible associations between utility-driven smartphone use and life skill capacities.

Interpreted through Cognitive Efficiency Theory (Sweller, 1988), functional and utility-oriented tasks optimize logistical execution and routine efficiency, yet they fail to cultivate high-order emotional or cognitive competencies. Because such applications operate primarily within structured digital parameters, they rarely require complex real-world problem-solving or deep social dynamics. As Katz and Aakhus (2002) noted, task-oriented mobile applications streamline daily responsibilities but contribute minimally to human life skills because they focus on individual productivity rather than interpersonal or emotional growth. Although isolated literature suggests that organizational and academic applications might mitigate stress or foster basic time management, the trivial correlation observed here underscores that such practical benefits remain functionally limited in driving overall life skill growth.

- **Perceived Safety Dimension**

In contrast, the analysis revealed a small positive correlation between the perceived safety dimension of mobile phone usage and life skills. This finding suggests that utilizing mobile devices to preserve personal security—such as maintaining continuous contact with family networks, peer groups, or emergency services—exerts a slight constructive influence on life skills.

This dynamic can be understood through Social Cognitive Theory (Bandura, 1986), which holds that feelings of emotional security and social connectedness fortify self-regulatory mechanisms and enhance adaptive behaviors in challenging environments. Applying Cognitive Load Theory (Sweller, 1988), safety-related device access mitigates psychological anxiety and ensures immediate access to support systems, effectively releasing cognitive resources that can then be redirected toward decision-making, crisis navigation, and problem-solving. Supporting this view, Ling (2004) emphasized that safety-focused connectivity reinforces social networks, which serve as a foundational foundation for relational and communicative life skills. Additionally, Vorderer et al. (2006) noted that mobile accessibility oriented around personal safety bolsters personal coping mechanisms, indirectly promoting life skill execution.

- Perceived Autonomy and Intrinsic Motivation Dimension

The correlational results revealed a trivial relationship between perceived autonomy/intrinsic motivation and life skill development. This indicates that mobile phone activities driven by individual goals, self-expression, or personal mood regulation do not meaningfully translate into enhanced life skills.

According to Self-Determination Theory (Ryan & Deci, 2000), intrinsic motivation and personal autonomy are vital for fostering self-directed behavior and intra-individual regulation; however, self-focused digital engagement does not inherently necessitate collaborative problem-solving or dynamic social interaction. Cognitive Behavioral Theory (Beck, 1976) similarly underscores that life skill development depends on active socio-emotional practice within real-world environments—a requirement that internal or self-expressive mobile usage often fails to fulfill. Thus, while intrinsic mobile engagement may facilitate personal satisfaction or self-expression, it lacks the interpersonal exchange and collaborative challenges necessary to build holistic life skills (Ryan & Deci, 2000).

- Addiction Dimension

Unexpectedly, the correlational analysis identified a large positive correlation between the addiction dimension of mobile phone usage and life skills. While digital addiction is overwhelmingly characterized as maladaptive, this strong statistical relationship implies that hyper-frequent device interaction and persistent immersion in digital spaces may inadvertently yield heightened opportunities for immediate communication, rapid digital navigation, and situational problem-solving.

This paradoxical dynamic can be framed through Information Overload Theory (Eppler & Mengis, 2004), which suggests that continuous exposure to high-volume digital data and uninterrupted social input can accelerate rapid information processing and short-term decision-making adaptability. Similarly, concepts rooted in Cognitive Behavioral Theory (Beck, 1976) suggest that intensive engagement with digital mediums, despite its clinical drawbacks, offers an expansive arena for real-time digital communication and rapid analytical processing.

This positive correlation must be interpreted with extreme caution. As Andreassen et al. (2012) cautioned, mobile addiction carries profound psychological trade-offs, including compromised emotional intelligence, fragmented cognitive focus, and shallow interpersonal interactions. Consequently, while hyper-engagement may sharpen specific digital or rapid communication tactics, it simultaneously threatens the deeper socio-emotional foundations required for comprehensive life skill mastery.

**CONCLUSION**

Based on analysis and interpretation of data, the following conclusions are drawn:

This study evaluated the complex relationship between various dimensions of mobile phone usage and the development of life skills. Rather than acting as a uniform influence, mobile technology affects life skills in markedly distinct ways depending on the underlying motivation and nature of device engagement.

The empirical findings reveal that hyper-frequent, high-intensity phone use—associated with the addiction dimension—demonstrates a strong, positive relationship with life skills, suggesting that constant digital exposure and rapid online interactions may inadvertently sharpen certain functional processing and digital communication tactics. Similarly, a weak positive association emerged with the perceived safety dimension, indicating that leveraging mobile devices for security and maintaining immediate connection with support networks modestly supports adaptive life capacities.

Conversely, utilizing mobile phones for enjoyment and relaxation yielded a weak, negative correlation with life skills, underscoring that passive entertainment and digital disengagement can subtly hinder active problem-solving and emotional regulation. Finally, no meaningful links were identified between life skills and either perceived utility or perceived autonomy and intrinsic motivation, demonstrating that routine task management and self-expressive mobile activities operate independently of broader socio-emotional and adaptive competencies.

These findings further highlight a critical nuance for educational policymakers: developing general life skills alone is insufficient to curb mobile phone dependency. Rather, life skills training must be integrated with domain-specific digital self-governance. Furthermore, institutions should capitalize on students' diminished reliance on phones for relaxation by offering rich offline co-curricular outlets, while actively scaffolding mobile technology to enhance its educational utility and intrinsic appeal.

**EDUCATIONAL IMPLICATIONS**

- Educational institutions must recognize that students with strong life skills (e.g., self-management, communication, social competence) are not automatically immune to mobile phone addiction. In fact, high social drive and goal-directed behavior can manifest as intense digital connectivity (e.g., managing relationships, organizing peer activities, or pursuing online goals).

Interventions should move beyond basic life skills training toward targeted digital self-regulation and metacognitive awareness. Curricula should help high-capacity students establish boundary-setting strategies, digital detox habits, and mindful technology usage.

- Schools and universities can build on students' existing life skills to foster responsible safety-seeking behaviors online. Educational programs should instruct students on critical media literacy, emergency protocols, and digital privacy, helping them use mobile devices as constructive tools for personal security without over-relying on them as emotional safety nets.
- The inverse relationship suggests that students with better-developed life skills tend to rely less on mobile devices for leisure and stress relief. Educational environments should leverage

this by actively providing offline, high-engagement extracurricular activities—such as sports, creative arts, and mindfulness practices—that offer rich, real-world avenues for stress recovery.

- Because general life skills do not inherently drive students to use mobile devices for utility or self-determined learning, educators cannot assume students will automatically use smartphones productively. Institutions must deliberately structure mobile learning (m-learning) environments to clearly demonstrate utility, foster genuine learner autonomy, and trigger intrinsic academic motivation through scaffolded digital tasks.

## **LIMITATIONS**

- While this study focuses on five specific dimensions of mobile phone usage—enjoyment/relaxation, perceived utility, perceived safety, perceived autonomy/intrinsic motivation, and addiction—it does not account for other emerging digital behavior constructs (e.g., social media FOMO, cyberbullying exposure, or algorithm-driven content consumption). Consequently, the findings provide a targeted rather than exhaustive picture of how technology interacts with life skills.
- Certain psychological dimensions—such as enjoyment and relaxation versus perceived autonomy and intrinsic motivation—may exhibit conceptual or statistical cross-loading, making it challenging to isolate the independent effect of each specific dimension on overall life skills.
- Due to the cross-sectional nature of examining these relationships, this study establishes correlational patterns rather than definitive causal pathways. For instance, while high mobile phone utility or addiction may correlate with specific life skill levels, it remains unclear whether phone usage patterns actively shape life skills or if pre-existing life skill proficiencies influence how individuals adopt and use mobile technology.
- The perceived safety and utility dimensions of mobile phone usage are highly dependent on external environmental factors, such as local infrastructure, socioeconomic status, and digital literacy. Therefore, the observed relationships between these usage dimensions and life skills may not generalize seamlessly across different demographic, cultural, or geographic populations.

## **SUGGESTIONS FOR FUTURE RESEARCH**

- Future research should adopt longitudinal or panel research designs to track participants over time. This would help clarify the direction of causality—determining whether specific mobile phone usage dimensions (such as addiction or perceived utility) actively develop or impair life skills, or whether baseline life skill levels drive mobile phone habits.
- To minimize self-report bias (especially regarding the addiction and enjoyment/relaxation dimensions), future studies could integrate objective telemetry data (e.g., screen time tracking apps, application logs, or pickup frequency) alongside subjective survey instruments.
- Researchers should investigate underlying mechanisms that may mediate or moderate the relationship between phone usage dimensions and life skills. Potential variables include

emotional regulation, digital literacy, personality traits (e.g., Big Five), and psychological resilience.

- While this study examined life skills as a broader construct, future work could disaggregate life skills into specific sub-domains (e.g., interpersonal communication, critical thinking, stress management, or decision-making) to identify which skills are most vulnerable to phone addiction or most enhanced by perceived utility and autonomy.
- Given that the perceived safety and perceived utility dimensions vary significantly by physical and social environments, future studies should conduct comparative analyses across diverse urban vs. rural settings, or across regions with varying levels of socio-economic and digital infrastructure.
- Employing mixed-methods or qualitative approaches (such as focus group interviews) could provide deeper context into how users experience perceived autonomy and intrinsic motivation through their mobile devices, offering richer insights into how these perceptions translate into everyday life skills.

### **ETHICAL CONSIDERATIONS**

Participants were fully informed about the study's purpose—specifically that their mobile usage patterns and life skill assessments were being evaluated—and granted the explicit right to withdraw at any point without penalty.

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