National Research Journal of Information Technology & Information Science
Volume No: 13, Issue No: 1, Year: 2026 (January-June)
PP: 378-384
ISSN: 2350-1278
Peer Reviewed & Refereed Journal (IF: 7.9)
Journal Website www.nrjitis.in

INTERNET OF THINGS (IOT) AND THE RISING DIFFERENCES IN RELATIONSHIPS DUE TO EXCESSIVE USE OF GADGETS.

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ABSTRACT

The rapid expansion of the Internet of Things (IoT) has transformed human interaction, communication patterns, and daily life. IoT connects billions of devices—including smartphones, wearables, smart home systems, and social platforms—creating a hyperconnected environment that reshapes social relationships. While IoT enhances convenience, efficiency, and accessibility, excessive gadget use has contributed to emotional distance, communication breakdown, and relational conflicts among individuals, families, and communities. This research paper explores the intersection between IoT proliferation and the increasing strain on interpersonal relationships due to excessive digital engagement. Drawing upon interdisciplinary studies in psychology, communication, sociology, and information systems, the paper examines theoretical foundations, behavioral patterns, psychological consequences, family dynamics, romantic relationships, workplace interactions, and long-term societal implications. The study concludes by proposing balanced digital usage frameworks and policy recommendations to mitigate relational damage while preserving the benefits of technological advancement.

Keywords : Gadgets, Relationship, Psychological, Social Fragmentation, Transforming**.**

1. INTRODUCTION

The Internet of Things (IoT) refers to a network of interconnected devices embedded with sensors, software, and communication technologies that enable data exchange across digital platforms [1]. From smartphones and smartwatches to voice assistants and smart home appliances, IoT technologies are increasingly integrated into everyday life. As of recent estimates, billions of devices are connected globally, transforming communication, entertainment, and work environments. However, alongside these technological advancements, concerns are rising about the social and psychological consequences of excessive gadget usage.

Human relationships have historically depended on face-to-face communication, emotional presence, and shared experiences. The emergence of IoT-enabled gadgets has redefined these interactions, sometimes enhancing connectivity but also introducing new relational tensions. Research suggests that constant device engagement may lead to reduced empathy, decreased emotional availability, and increased misunderstandings

among partners, families, and peers [2]. This paper investigates whether IoT acts merely as a communication enhancer or whether excessive use contributes to widening relational differences and social fragmentation.

2. CONCEPTUAL FRAMEWORK: IOT AND DIGITAL DEPENDENCY

IoT extends beyond traditional internet connectivity by enabling devices to communicate autonomously through machine-to-machine (M2M) interactions [1]. This interconnected ecosystem fosters convenience but also encourages continuous engagement with digital environments. Behavioral theories suggest that repeated exposure to rewarding digital stimuli may cultivate dependency patterns similar to behavioral addiction [3]. The portability and omnipresence of IoT gadgets amplify this exposure.

Digital dependency theory posits that when individuals increasingly rely on devices for social validation, entertainment, and communication, interpersonal engagement may decline. Excessive gadget use shifts attention from in-person interactions to screen-mediated communication, creating emotional displacement. Scholars have linked heavy smartphone use with decreased relationship satisfaction and increased conflict due to perceived neglect [4]. The concept of "technoference," or technology-based interruptions during interpersonal interactions, further explains how IoT gadgets intrude into meaningful conversations and shared experiences [5].

3. PSYCHOLOGICAL IMPACTS OF EXCESSIVE GADGET USE

Excessive gadget use has been associated with increased anxiety, depression, and reduced emotional regulation [6]. IoT-enabled platforms provide instant gratification through notifications, likes, and messages, reinforcing habitual checking behaviours. Neuropsychological research indicates that such patterns activate dopamine pathways associated with reward-seeking behaviour, potentially leading to compulsive usage [3]. As individuals prioritize digital interactions, real-world relationships may suffer from reduced attention and empathy.

Moreover, constant exposure to curated online identities fosters social comparison and insecurity, which can negatively affect romantic and peer relationships. Studies show that high social media engagement correlates with jealousy and mistrust in intimate partnerships [7]. Emotional availability becomes fragmented when attention is divided between digital devices and physical presence. Over time, this may contribute to misunderstandings, decreased intimacy, and emotional detachment.

Psychological Factor	**Moderate Use**	**Excessive Use (5+ hrs/day non-work)**
Anxiety Symptoms (%)	18%	39%
Depressive Symptoms (%)	15%	34%

ISSN: 2350-1278
Peer Reviewed & Refereed Journal (IF: 7.9)
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Sleep Disturbance (%)	22%	47%
Reported Loneliness (%)	20%	38%

Table 1: Psychological Effects Associated with Excessive Gadget Use [6][12]

4. FAMILY RELATIONSHIPS AND IOT-INDUCED CONFLICTS

Family dynamics have undergone significant transformation in the digital age. IoT devices such as smart TVs, tablets, and voice assistants create individualized media environments within shared living spaces. Although these devices provide entertainment and educational resources, they may reduce collective family interactions. Research indicates that excessive screen time correlates with diminished parent-child communication quality [8].

Parental modeling of gadget usage also influences children's behaviour. When parents frequently engage with smartphones during family time, children may perceive reduced attentiveness, leading to feelings of neglect [5]. Additionally, generational gaps in digital literacy create tension between older and younger family members. Adolescents immersed in digital cultures may struggle to connect with parents who emphasize traditional communication norms. Such discrepancies can intensify misunderstandings and weaken familial bonds.

Age Group	**Average Daily Screen Time (Hours)**	**Primary Device Used**	**Reported Impact on Relationships (%)**
13–17 years	7–9 hours	Smartphone	41% report family conflicts due to screen time
18–29 years	6–8 hours	Smartphone/Laptop	36% report reduced face-to-face interaction
30–49 years	5–7 hours	Smartphone/Work Devices	32% report partner complaints about device use
50+ years	3–5 hours	Smartphone/Tablet	18% report relational strain

Table 2: Average Daily Gadget Usage by Age Group [6][12]

5. ROMANTIC RELATIONSHIPS AND DIGITAL DISRUPTIONS

Romantic relationships are particularly vulnerable to excessive gadget use. Studies demonstrate that frequent smartphone interruptions during conversations reduce perceived relationship satisfaction [4]. Partners may interpret device engagement as disinterest or rejection, even if the intention is unrelated to the relationship. This perception gap fosters resentment and emotional distance.

Social media integration into romantic life introduces further complications. Online interactions with former partners or ambiguous digital relationships can trigger jealousy and conflict [7]. Moreover, IoT devices enable constant connectivity, reducing opportunities for personal space and healthy boundaries. While digital communication can enhance long-distance relationships, overreliance may diminish face-to-face emotional intimacy. Consequently, excessive gadget use may create relational instability despite increased connectivity.

6. WORKPLACE RELATIONSHIPS AND DIGITAL OVERLOAD

IoT technologies have transformed professional environments through remote work systems, smart offices, and real-time collaboration platforms. Although these innovations increase productivity and flexibility, they blur boundaries between personal and professional life [9]. Employees often remain connected to work through smartphones and wearable devices beyond office hours, contributing to burnout and relational strain at home.

Workplace communication mediated by IoT tools may lack nonverbal cues essential for empathy and trust-building. Misinterpretations in digital communication can escalate conflicts among colleagues. Furthermore, excessive digital multitasking reduces attentional focus, impairing meaningful engagement with coworkers. Thus, while IoT enhances operational efficiency, it may inadvertently weaken interpersonal workplace relationships.

7. SOCIAL ISOLATION IN A HYPERCONNECTED WORLD

Paradoxically, increased digital connectivity does not necessarily equate to stronger social bonds. Research suggests that excessive online interaction may reduce in-person social participation, contributing to loneliness [6]. IoT-enabled platforms create an illusion of companionship through virtual engagement, yet lack the emotional depth of physical presence. This phenomenon has been described as “alone together,” where individuals share physical spaces but remain immersed in separate digital environments [10].

The displacement hypothesis posits that time spent on digital devices replaces time allocated to direct social interaction [11]. When gadget usage dominates daily routines, opportunities for spontaneous conversation and shared experiences diminish. Over time, this can weaken community cohesion and foster emotional isolation despite technological interconnectedness.

8. ADOLESCENTS, YOUTH, AND DEVELOPMENTAL CONCERNS

Adolescents are among the most active users of IoT devices. Developmental psychology emphasizes the importance of peer interaction, emotional learning, and identity formation during adolescence. Excessive gadget use may interfere with these developmental

processes. Studies have linked heavy smartphone use among teenagers to increased depressive symptoms and reduced face-to-face social skills [12].

Online validation mechanisms may also influence self-esteem and peer relationships. Dependence on digital approval can intensify peer pressure and cyberbullying incidents. Additionally, disrupted sleep patterns caused by late-night device use negatively impact mood regulation and interpersonal behavior. These factors collectively contribute to rising relational conflicts among youth populations.

9. CULTURAL AND SOCIETAL DIMENSIONS

The impact of IoT on relationships varies across cultural contexts. Collectivist societies that prioritize face-to-face interaction may experience stronger resistance to excessive gadget use compared to individualistic cultures emphasizing digital independence. Nevertheless, global digitalization trends are reshaping social norms worldwide. The normalization of constant device checking during social gatherings reflects shifting expectations of availability and responsiveness.

Societal reliance on IoT infrastructure also reinforces productivity-focused lifestyles, leaving limited time for relational engagement. As smart cities and automated systems expand, human interactions may become increasingly mediated by technology. While digital innovation promotes economic growth, it may simultaneously challenge traditional relationship structures.

10. POSITIVE ASPECTS OF IOT IN RELATIONSHIPS

Despite concerns, IoT technologies offer benefits for relationships when used responsibly. Video calls, messaging apps, and shared digital calendars enhance coordination and maintain connections across geographical distances. Smart home devices can facilitate shared responsibilities and improve household efficiency. For elderly individuals, IoT-enabled health monitoring systems support independent living while keeping family members informed [1].

The key issue is not IoT itself but patterns of excessive or unregulated use. When integrated mindfully, IoT can strengthen communication and emotional closeness. Balanced usage strategies may mitigate relational conflicts while preserving technological advantages.

11. ETHICAL CONSIDERATIONS AND DIGITAL WELL-BEING

Ethical concerns surrounding IoT include data privacy, surveillance, and algorithmic manipulation [13]. Personalized content feeds may intensify polarization and reduce exposure to diverse perspectives, indirectly affecting social relationships. Moreover, persuasive design techniques encourage prolonged engagement, potentially exacerbating dependency behaviors.

Digital well-being frameworks advocate mindful technology use, including screen-time monitoring, device-free zones, and intentional communication practices. Educational institutions and policymakers increasingly recognize the need for digital literacy programs that address relational and psychological impacts alongside technical skills.

12. STRATEGIES FOR MITIGATING RELATIONSHIP STRAIN

Addressing relational differences arising from excessive gadget use requires multi-level interventions. At the individual level, self-regulation practices such as scheduled device-free periods and mindful communication can enhance relational presence. Couples and families may establish shared technology guidelines to promote quality interaction time. Workplace policies that limit after-hours digital communication can reduce work-life conflict.

Technological solutions such as screen-time tracking applications also promote awareness of usage patterns. Importantly, open dialogue about digital boundaries strengthens trust and mutual understanding. By aligning technological habits with relational values, individuals can harness IoT benefits without sacrificing emotional connections.

13. CONCLUSION

The Internet of Things has reshaped human interaction by embedding connectivity into daily life. While IoT technologies enhance communication efficiency and global accessibility, excessive gadget use has contributed to rising relational differences across families, romantic partnerships, workplaces, and communities. Psychological dependency, emotional displacement, and techno Ference undermine interpersonal satisfaction and social cohesion. However, IoT is not inherently detrimental; its impact depends on usage patterns and contextual factors. By promoting digital literacy, mindful engagement, and balanced technology policies, society can mitigate relational strain while leveraging IoT for positive connectivity. Future research should further examine longitudinal impacts of IoT usage on relational well-being and develop evidence-based intervention strategies.

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