

TRANSFORMATION OF TECHNOLOGY-BASED FAMILY INTERACTION PATTERNS AND ITS IMPLICATIONS FOR PSYCHOLOGICAL HEALTH AND EARLY CHILDHOOD CHARACTER BUILDING

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Abstract - The digital age has brought about significant changes in family interaction patterns, with technology-based communication becoming a major part of children's daily lives. This study critically examines the relationship between the intensification of digital device use in the family and children's psychological health, using a psychological and educational literature study approach. The study found that the quality of communication, supervision patterns, and consistency of rules in the family are key factors that can trigger the emergence of psychological risks in children. Children who do not receive adequate emotional support tend to experience decreased social skills and an increased risk of mental distress due to the lack of face-to-face interaction. Recommendations from the study include increasing digital literacy, enforcing rules for using devices, and providing a special space for personal dialog without digital devices, so that the process of building children's character continues to run optimally amid the changing times. Thus, families are able to realize a balance between the benefits of technology and mental health protection for children in the digital era.

Keywords: communication interaction, children's mental health, supervision pattern, family structure, children's character.

INTRODUCTION

The shift in family interaction patterns has attracted significant attention in the digital era, particularly as technology assumes a central role in daily life. Children now grow up with access to digital devices and the internet from an early age, which significantly influences communication patterns and the dynamics of relationships among family members. This transformation encompasses not only changes in means of communication, but also in the social processes that shape children's values, behaviors, and perceptions of the surrounding world. As the smallest social unit, the family provides the primary environment where interactions take place, and now, digital spaces accompany physical spaces in the dialectics of children's character development (Aseptianova et al., 2022).

The presence of technology within the family structure raises critical issues concerning the psychological well-being of children. Unlimited access to various digital communication platforms has rendered interaction patterns faster and more diverse, blurring the boundaries between the virtual and real worlds. This introduces new dynamics such as asynchronous communication, multitasking, and exposure to content that is not always regulated. Within psychological and educational discourse, concerns regarding the fragmentation of family interaction time and the reduction in the quality of face-to-face communication have become increasingly prominent (Nordlund et al., 2019).

Furthermore, the emergence of messaging applications and social media as channels for family interaction has directly impacted children's abilities to manage emotions, empathy, and other social skills. Intensive exposure to digital content and the predominance of virtual interaction can polarize attention and reduce the frequency of direct interpersonal interactions. Such conditions may diminish the sense of security and emotional attachment within the family, traditionally reinforced by verbal communication and physical presence (Selezneva & Pakhomova, 2021).

From a cross-disciplinary perspective, studies on the correlation between technology-based family interaction patterns and children's psychological health are of growing importance. The key challenge lies in balancing digital device use so as not to disrupt children's emotional closeness and cognitive development. Thus, the critical assessment of children's needs in the technological era is a priority in psychological and educational literature, to ensure that technological advancements yield optimal benefits without compromising the mental health of the younger generation.

The main issue that arises in the relationship between technology-based family interaction and children's mental health centers on the fragmentation of family time (Lee et al., 2021). Numerous studies highlight the decline in the quality of communication between parents and children due to digital distractions. Parents who habitually use digital devices in daily life are often unaware that their children may also experience a sense of alienation, despite being physically present in the same household (Tadpatrikar et al., 2021). This phenomenon can have long-term impacts on children's emotional and behavioral development (Evendi et al., 2021).

Another identified issue is the lack of supervision and control over children's use of technology within the family environment. Parents often lack the understanding or ability to manage time limitations or the types of content accessible

by their children. Low digital literacy among parents results in weak supervisory functions, which should ideally protect children from psychological risks such as stress, anxiety, or even digital addiction (Rahman, 2023).

Further obstacles arise in the form of adaptation and parenting approaches. Many families have yet to synergize traditional parenting patterns with the challenges of the digital era, thus creating frequent value conflicts between old parenting styles and contemporary demands (Ivanova, 2023). Without adequate understanding, intergenerational communication gaps widen, increasing the potential for misperceptions and exacerbating stress in family relationships.

A thorough examination of this theme is crucial, given that the digital era presents both opportunities and threats to children's psychological development. Habits of interacting with digital devices within family life can shape communication preferences and influence children's perceptions of personal relationships. Therefore, a standardized literature review offers great potential to adjust parenting patterns in accordance with contemporary dynamics.

Furthermore, educational interventions and the strengthening of digital literacy for families based on cultural values have become increasingly urgent. This is expected to provide integrative solutions to mitigate risks arising from technology use within family environments, as well as enhance the quality of life for children in the digital era.

The aim of this study is to comprehensively understand how technology-based family interaction patterns affect children's psychological well-being. This research also seeks to identify and analyze key factors that trigger mental health issues among children in families where interactions are largely mediated by digital devices. By closely examining these aspects, it is hoped that this study will contribute to the formulation of relevant strategies or recommendations for families to balance technology utilization with the need for healthy interaction in supporting children's psychological development.

RESEARCH METHODS

This research utilizes a systematic literature review approach, examining various scientific journals and academic books related to technology-based family interaction patterns and their implications for children's mental health. A literature review method is chosen as it allows the researcher to identify, critically evaluate, and synthesize previous research findings, thereby achieving a comprehensive understanding of current dynamics. The systematic literature review model proposed by Kitchenham and Charters (2007) serves as the foundation for collecting secondary data, filtering relevant articles, and analyzing findings objectively. Source selection is carried out through leading databases such as Scopus and Web of Science to ensure data reliability. The literature search is focused on English-language sources as well as studies employing psychological and educational approaches closely related to digital family dynamics.

The analytical stages adhere to interpretive principles, concentrating on the interrelationships between digital family interaction patterns, children's psychological health, and the involved social determinants. This literature review emphasizes the synthesis of empirical findings on technology-based family communication practices, the opportunities and challenges encountered, and the role of parents in safeguarding children's mental health. The analytical framework is developed through the metasynthesis method as described by Creswell (2014), enabling the integration of diverse findings while maintaining principles of validity and reliability. The results of this literature synthesis are expected to provide a comprehensive understanding that is responsive to contemporary dynamics and can serve as a basis for further research or the formulation of public policy.

RESULTS AND DISCUSSIONS

Patterns of Technology Interaction and Children's Psychological Health

The shift in communication within the family environment is greatly influenced by advances in digital technology. Interactions that were once dominated by direct conversations have now moved into the virtual domain, where family members exchange messages via electronic devices, messaging applications, or social media platforms. This transformation not only alters the methods of communication but also gradually shapes the emotional atmosphere within the household. Children who grow up in families that primarily communicate through digital devices tend to adopt similar communication patterns, including word choice, message formats, and response intervals. Such changes may affect their ability to establish emotional closeness, as digital communication is generally briefer and more contextual, often lacking the emotional nuances conveyed in face-to-face interactions (Tadpatrikar et al., 2021).

The relationship between the intensity of digital device use and emotional attachment within families is becoming increasingly relevant for investigation. Many families rely on technology as the primary link between members when distance is a barrier. However, this ease of communication can potentially diminish the quality of meaningful conversations that typically occur during face-to-face encounters. Children accustomed to conversing through digital devices may experience difficulties in expressing emotions or interpreting body language, which can result in more rigid relationships with their parents. Such conditions carry the risk of hindering the development of interpersonal skills and empathy in children (Rahman, 2023).

In addition to changes in communication quality, the dynamics of attention within family life have also shifted due to technological presence. Individual focus is often divided between digital activities and real-world interactions. When parents are preoccupied with digital devices during family time, children are likely to imitate this behavior (Rojak, 2022). Such situations can create emotional distance and reduce quality time spent together. These patterns ultimately shape children's perceptions of priorities in daily life, wherein the virtual world often appears more appealing than direct communication with family members (Lee et al., 2021).

The acceptance of technology in family interactions also leads to variations in parenting patterns. Some families utilize digital devices to establish more flexible and open lines of communication, such as monitoring children's activities or providing support remotely. However, many families struggle to define boundaries between personal and collective spaces in the digital sphere. A lack of clarity in establishing rules and time limits for device usage can eventually confuse children about the boundaries between virtual and real worlds (Zounek et al., 2022).

The use of technology as a communication tool within families has the potential to strengthen parent-child relationships if managed wisely. The implementation of online family discussions, sharing daily activities, or offering motivation via digital messages can foster new forms of connectedness. However, the realization of these opportunities greatly depends on the quality of communication established and the family's ability to balance digital aspects with personal interactions (Tadpatrikar et al., 2021).

The use of technology within families is not solely a matter of facilitating communication, but also a process in shaping children's self-identity. Children observe communication patterns among family members, learn how parents handle disagreements, and internalize values conveyed through digital discussions. Despite its convenience, digital devices may sometimes facilitate rapid decision-making at the expense of reflective and nuanced dialogue. Such imbalances may limit emotional exploration and the strengthening of affective bonds within the family (Valencia-Arias et al., 2017).

Family connectedness dominated by digital communication also has significant implications for the psychological health of children. In daily routines, children who receive insufficient personal attention are at risk of experiencing feelings of loneliness and may tend to seek validation outside the home. Spending more time in the virtual world than in direct interaction can undermine emotional resilience, increase the risk of stress, and disrupt the development of critical thinking skills (Ivanova, 2023). Children who more frequently receive brief responses or emoticons without eye contact lose opportunities to interpret nonverbal expressions and to develop social competence.

A lack of control over the intensity of technology use within families also affects children's emotional stability and behavior. In the absence of clear boundaries, digital activity may lead to impulsive communication patterns, marked by incomplete emotional responses. Rapid adaptation to short messages and instant interaction approaches fosters habits of expressing feelings superficially and diminishes children's capacity to resolve conflicts in a mature manner (Kumar & Sriram, 2019).

Children who grow up in a family environment based on digital interaction often experience complex psychological dynamics (Shalani et al., 2022). The tendency to rely on devices for communication results in postponing important conversations, leaving various emotional issues unresolved. In the long term, this can diminish their ability to manage stress and to navigate life's challenges adaptively (Kurniawan & Darmawan, 2021).

Families that are unable to adapt to technological changes tend to fail in providing a safe space for children's self-expression. Children may become more open with online communities than with their own families, leading to decreased emotional attachment. Weakened family emotional involvement can influence children's perceptions of self-identity and their social relationships outside the home environment (Rahman, 2023).

Ultimately, cultivating technology-based family interaction patterns requires a critical understanding of changes in communication structures, emotional regulation, and the character formation of children. Building a culture of inclusive and reflective communication is essential for successfully integrating the potential of technology without compromising children's psychological well-being. In the digital era, a healthy family narrative is not merely measured by the frequency of communication, but by the quality and depth of interactions established among all family members.

Triggering Factors for Children's Mental Health Problems in the Digital Age

The transition of families toward technology-based interaction patterns has generated a number of factors that trigger psychological issues in children. One of the primary drivers of such problems is the intensity of digital device use within the home environment, which is often not accompanied by effective parental guidance. Many families permit children to access devices for extended periods without supervision, making them more susceptible to age-inappropriate content and risky online interactions (Lee et al., 2021). Such an environment increases the likelihood that children will experience stress, identity confusion, or social anxiety resulting from disparities between their digital persona and everyday family realities.

In addition to inadequate supervision, there is also an imbalance between the need for face-to-face and virtual communication. Children who grow up in families where interaction occurs predominantly through text messaging or online conversations tend to encounter obstacles in developing social sensitivity and empathetic skills. The absence of personal touch, eye contact, and the warmth of direct communication can lower feelings of security and emotional support.

As a result, children may seek recognition outside the family or within other digital communities, which may, at times, lead to feelings of isolation, low self-esteem, or increased susceptibility to peer pressure (Arifin & Rojak, 2022).

Moreover, inconsistency in the enforcement of rules regarding technology use at home also contributes to the disruption of children's mental health (Ivanova, 2023). Variations in standards among family members regarding when, how, and for what purposes technology is used give rise to confusion and psychological uncertainty. Children often find it difficult to adjust to shifting norms, making them more vulnerable to self-control issues and compulsive digital device habits. If left unaddressed, this situation increases the risk of internal conflict and difficulties in developing healthy coping mechanisms.

The process of communication transformation within families in the digital era not only brings convenience but also poses serious challenges to the instillation of values and ethics in children (Rahman, 2023). Family interactions, now often characterized by brief conversations, the use of digital symbols such as emoticons, and a tendency to overlook deep reflection, deprive children of opportunities to observe life values in practice. Consequently, children tend to grow up with limited experience in witnessing firsthand how parents make decisions based on norms, customary practices, or wisdom, all of which should serve as their moral foundation. This situation is exacerbated by the further shrinking space for open discussion among family members, making it increasingly difficult for noble values to be effectively conveyed (Asmaya, 2018).

Furthermore, digitalization has increasingly limited the quality time shared between parents and children, resulting in the rarity of heartfelt, meaningful conversations. The lack of empathetic and open communication creates a void which, often unconsciously, can develop into a gap that fosters psychological issues in children. A virtual environment saturated with negative narratives, coupled with the absence of personal guidance or parental support, renders children vulnerable to forming unhealthy self-concepts and perceptions (Hariani et al., 2021). In this unregulated digital space, children can easily absorb and internalize values that frequently conflict with family culture or ethical standards, underscoring the necessity for families to adapt their communication strategies to safeguard children's psychological health and support character development (Kimik et al., 2022).

The tension between technological demands and the emotional needs of the family indeed represents a major challenge in modern life. Families are not only required to keep pace with technological advancements to ensure efficiency and connectivity, but must also strive to maintain warmth, emotional support, and the core values that underpin the healthy development of children's character (Tadpatrikar et al., 2021). This adaptation process often results in clashes between traditional face-to-face values and new digital norms, emphasizing the need for families to develop critical awareness of both the positive and negative impacts of technology use within the household (Safira et al., 2022). As the most vulnerable parties, children especially require adequate direction and guidance to avoid being swept into poorly filtered streams of information.

Optimizing the digital environment within the family fundamentally requires clear rules and strategies. Parents play a pivotal role in establishing boundaries regarding digital device usage, including limits on time, content types, and the nature of interactions built through social media. Active parental involvement is crucial so that children learn to filter information, comprehend risks arising from limited direct interaction, and recognize the dangers associated with exposure to negative online content. Collaborative efforts among family members in formulating consensus on technology use can foster a sense of togetherness while instilling values of responsibility and independence in children (Masnawati et al., 2022).

Deliberately fostering quality interactions amidst daily digital routines needs to be prioritized, for example, by designating specific gadget-free times for heartfelt conversations or engaging in joint educational and recreational activities. Simple practices, such as having meals together without devices, sharing daily stories, or informal discussions, can foster openness and strengthen emotional bonds between parents and children. These activities help minimize feelings of alienation that often arise from a lack of direct communication, while also shaping children's character through direct role modeling and value internalization.

In addition to strengthening intrafamilial interactions, it is also essential to equip children with adequate digital literacy. This includes critical thinking skills, the ability to filter information, and an understanding of the consequences of technology use in daily life. Parents can serve as primary educators by providing relevant explanations regarding internet ethics, privacy, and emotional management in the face of various online scenarios. Such efforts help children build robust defenses against the temptations and challenges of the digital world, thus achieving a balance between technological utilization and healthy personal development.

Ultimately, the quality of family digital space management is a key determinant in maintaining children's mental health and shaping their character in the technological era (Aisyah & Issalillah, 2021). With appropriate strategies, intensive accompaniment, and consistency in instilling values, families can create an environment that is safe, supportive, and adaptive to contemporary developments. These challenges will persist; however, with shared family commitment, technology can become an enriching tool—rather than one that erodes identity, psychological well-being, and the core human values that must be preserved for future generations.

CONCLUSIONS

The various transformations experienced by families in the digital era result in complex consequences regarding communication patterns and parenting approaches toward children. The ability of families to navigate technology-based interactions is a critical determinant of the quality of emotional attachment and character development in children, as well as influencing their psychological well-being. The shift from face-to-face communication structures to digital platforms introduces specific challenges, particularly in reinforcing family values, safeguarding emotional security, and fostering children's social and emotional competencies.

The findings of this study underscore the necessity for every family to critically adapt to technological advances. The benefits of digitalization can only be maximized when families are able to establish a balanced communication system, maintain relational warmth, and enforce boundaries on digital device usage. Family awareness and reflective capacity are essential in preserving children's psychological integrity, especially in responding to the challenges posed by the flow of information, instant communication, and shifting family social dynamics.

A key recommendation is the need to strengthen digital literacy within families, enhance the quality of device-free togetherness, and cultivate open discussions to anticipate the negative impact of technology on children's mental health. Collaborative efforts involving parents, educational institutions, and the government form the foundational basis for constructing a holistic support system capable of protecting the younger generation from psychological risks in the digital age.

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