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A COMPREHENSIVE REVIEW OF PARENTAL SELF-EFFICACY AS A PROTECTIVE FACTOR IN MANAGING THE ADOLESCENT DIGITAL DEPENDENCY

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Abstract: *In today's technologically advanced societies, digital devices have become essential components of our daily lifestyle. While existing research highlights the learning and social interaction opportunities that digital technologies provide to us, a significant proportion of studies remain focused on the negative effects of digital dependency on adolescent's development and health. As these technologies become increasingly prevalent in families, questions emerge concerning adolescent's access to these devices and the influence of parental guidance in shaping their usage. The primary aim of this review paper is to explore the role of parental self-efficacy in managing adolescent's digital dependency and its implications for enhancing mental health and well-being in the digital era. Jones and Prinz, 2005 defined 'Parental self-efficacy' as parents' beliefs in their ability to effectively manage their children's behavior can be considered as a key determinant for parenting practices. Research shows how parents with high self-efficacy are more likely to actively engage in monitoring adolescent's digital dependency and set limits on usage of screen time. Parents with high self-efficacy are more likely to establish healthy boundaries for digital usage, practice consistent monitoring, and foster open communication regarding technology use. These practices contribute to lower levels of digital dependency and foster healthier digital engagement among the adolescents. The paper concludes by emphasizing the implication of parent-focused interventions designed to enhance self-efficacy in supporting adolescents' wellbeing within an increasingly digitalized environment.*

Keywords: *Parental Self-Efficacy, Parenting practices, Adolescents, Digital Dependency, Well-being.*

1. Introduction

The 21st century has evolved into an era where digital devices are not merely tools but pervasive environments that shape childhood development. Children from preschool to adolescence, now spend substantial portion of their daily lives engaged with smart phones, tablets, and gaming consoles (Masfufah & Salsabila, 2024). Although these platforms provide educational and social advantages, they have also contributed to "digital dependency," which encompasses a range of problematic behaviors from excessive screen time to clinically significant digital play addiction (Erdogan et al., 2024).

Digital parenting means monitoring, guiding, and regulating a child's digital life, which has become a core component of modern child-rearing practices (Huang et al., 2018). How well parents do this often depends on their own sense of control and confidence. This is captured by the construct of Parental Self-Efficacy, which refers to a parent's belief in their ability to influence their child's digital habits and protect them from online risks (Glatz et al., 2023). Jones and Prinz (2005) define Parental Self-Efficacy (PSE) as parents' beliefs in their competence to effectively influence and guide their child's behavior. In digital world, PSE includes not just traditional parenting skills but also the confidence regarding digital monitoring, technological literacy, and adaptive mediation strategies.

Digital technologies have altered the developmental patterns of adolescence stage. Today, young people grow up in an environment where internet communication tools, social networking sites, online gaming platforms are central to everyday life. These technologies how they socialization, influencing academic engagement, peer relationships, build their identities, and recreational habits. While these tools offer new educational opportunities and social connectivity, there are growing concerns regarding excessive use and maladaptive digital engagement. Adolescent digital dependency refers to using digital technology in ways that are characterized by compulsive engagement, impaired self-regulation, emotionally driven, and interference with academic, social, or psychological functioning. Research shows that excessive smart phone and internet use are associated with anxiety, depression, loneliness, reduced sleep quality, low academic performance, and emotional dysregulation (Sun et al., 2022).

This paper provides a comprehensive review of the role of Parental Self-Efficacy (PSE) in managing digital dependency, exploring its theoretical roots, its impact on parenting strategies, and what strengthens or weakens it. As concerns grow, the need for effective parental strategies to have potential negative outcomes associated with excessive digital engagement among adolescents has become a challenging task (Vassen et al., 2024). In particular, efficacy in digital [arenting skills is now seen as key to helping children use the internet safely and responsibly (Kuldas et al., 2023).

1.1. Theoretical Frameworks:

The family serves as the primary developmental context, positioning parental influence as central to the formation of adolescent digital behavior. Parents regulate access, model digital habits, establish boundaries, and mediate digital experiences. Among various determinants of parenting, Parental self-efficacy (PSE) has emerged as a critical psychological construct. Integrating key developmental and parenting theories provides a comprehensive framework for understanding parental self-efficacy as a protective factor in managing adolescent digital dependency

Albert Bandura's Social Cognitive Theory posits that self-efficacy is a core mechanism of human agency. Within the parenting domain, self-efficacy refers to the belief that one can facilitate the development of pro-social behaviors and prevent risky behaviors in children (Glatz et al., 2023). This framework suggests that parents possess strong confidence in their ability to regulate and guide adolescents' digital behavior are more likely to engage in proactive monitoring, consistent rule-setting, and adaptive mediation practices. Building on this foundation, Jones and Prinz's (2005) Parental Self-Efficacy Theory defines parental self-efficacy as the belief in one's competence to positively influence a child's development and behavior, identifying it as a critical determinant of parenting quality, consistency, and effectiveness.

Bronfenbrenner's (1979) Ecological Systems Theory broadens this perspective by situating adolescent digital behavior within interconnected systems, such as family, peers, school, culture, and technological environments. This approach emphasizes that parental regulation occurs within broader socio-cultural and digital ecosystems.

The integration of the Parental Mediation Theory (Valkenburg et al., 1999) further elucidates how parents manage children's media engagement through active mediation, restrictive mediation, and co-use strategies. This theory offers a practical behavioral framework for translating parental self-efficacy into everyday digital parenting practices. Protection Motivation Theory (Ronald Rogers, 1975) provides a model for parental responses to the "threat" of digital dependency. It suggests that parents assess the perceived severity and susceptibility of threats, such as smart phone addiction, in relation to their own self-efficacy and response efficacy (Hwang et al., 2017). When parents perceive a high threat but

possess low efficacy, they may experience "learned helplessness" and subsequently disengage from monitoring.

1.2. Significance of the study

Digital dependency refers to problematic engagement with digital devices and online environments, including smart phone addiction, compulsive social media use, gaming disorder, and excessive internet use (Kuss & Griffiths, 2017). In contrast to healthy digital participation, dependency is characterized by loss of control, emotional reliance, withdrawal symptoms, and functional impairment. Although the literature has extensively documented the psychological, social, and developmental risks associated with excessive digital engagement, there has been comparatively limited focus on protective parenting mechanisms that may mitigate these outcomes. This study addresses a critical gap in digital behavior research by shifting the focus from identifying the negative consequences of adolescent digital dependency toward exploring actionable, parent-centered solutions. Recent evidence indicates that perceived parental self-efficacy may be a stronger negative predictor of problematic digital use than parental digital competence alone, highlighting the importance of parents' confidence in regulating and guiding adolescent digital behavior (Almatin et al., 2023). Moreover, as high digital dependency is consistently associated with lower subjective well-being, anxiety, and psychosocial distress, understanding the role of parent-led mediation is essential for promoting adolescent mental health (Hwang & Toma, 2021). By highlighting parental self-efficacy as a preventive developmental factor, this study also underscores the broader significance of parent-focused interventions, digital literacy programs, and family-centered strategies in fostering resilience, balanced technology use, and psychological well-being among adolescents in an increasingly digitalized society.

1.3. Objectives

This review examines Parental Self-Efficacy as a protective factor in adolescent digital dependency. Specifically, it synthesizes current evidence on how Parental Self-Efficacy shapes digital parenting practices, buffers mental health risks, and contributes to adolescent well-being by integrating theoretical and empirical findings, highlighting Parental Self-Efficacy as a preventive framework for digital-age parenting.

2. Methodology

2.1. Study selection criteria

The study involved a review of the existing literature, mix of empirical studies, theoretical discussions on the topic to analyze and understand the protective role of parental self-efficacy in managing digital dependency among the children and adolescents.

Characteristics of the study	Criteria of eligibility
Types of studies	Empirical, Qualitative, Quantitative, Longitudinal
Year of article publication	Between 2015 and 2025
Language of publication	English
Studies' theoretical model	Scientifically recognized

2.2. Data Sources and Search Strategy

The literature search was carried out in the electronic databases and search engines like Google Scholar, DOAJ, Science Direct, Research Gate, DLC, Web of Science, PubMed, APA PsycNet, Concensus, Scite, Scispace, and Elicit were used. The following keywords and combinations were used: “Parental Self-Efficacy, Parenting practices, Adolescents, Digital Dependency, Well-being.”

2.3. Analysis and Synthesis

A thematic synthesis approach was used to organize the literature into certain conceptual categories. The research findings were grouped under major themes. *Theme 1: Parental Self-Efficacy as a Central Construct, Theme 2: Parental Mediation Practices, Theme 3: Adolescent Outcomes and Wellbeing, Theme 4: Factors Influencing the behaviour. and Theme 5: Barriers and Challenges.* Within each theme, recurring patterns, theoretical implications, and cross-cultural differences were analyzed.

3. Result and Discussion

The present comprehensive review synthesized empirical, theoretical, longitudinal, and systematic evidence to examine Parental Self-efficacy (PSE) as a protective factor in managing adolescent digital dependency. Across the reviewed studies, five major themes emerged, highlighting the multidimensional role of parental self-efficacy in shaping digital parenting practices, adolescent digital outcomes, and preventive intervention strategies.

Theme 1: Parental Self-Efficacy as a Central Construct

Recent reviews have identified parental self-efficacy as a foundational psychological determinant of effective digital parenting. Multiple studies examine parental self-efficacy as a key factor demonstrating that parents’ confidence in their ability to guide and regulate digital behavior significantly predicts their engagement in mediation strategies. Glatz, Crowe, and Buchanan (2018) conducted a cross-sectional study examining how parental self-efficacy for internet mediation varies across child developmental stages. These findings indicate that parental self-efficacy is not merely a general parenting attribute but a specialized developmental resource essential for digital-age parenting. The literature further distinguishes between general parenting self-efficacy and digital-specific parental self-efficacy, emphasizing that competence in traditional parenting does not automatically translate into effective digital mediation.

The taxonomy of digital parenting self-efficacy further identifies two critical domains: media competency, which refers to parents’ confidence in their own digital literacy, and perceived control, which refers to parents’ belief in their capacity to influence adolescent digital behavior. Evidence indicates that parents with stronger digital competence are more likely to feel empowered to set rules, discuss online risks, and maintaining regulatory authority (Benedetto & Ingrassia, 2020). This domain-specific understanding is particularly significant in contemporary digital ecosystems, where technological proficiency is increasingly central to effective parenting.

Theme 2: Parental Mediation Practices as Mechanisms of Protection

A substantial body of evidence demonstrated that parental self-efficacy is enacted primarily through digital mediation practices. These findings identify parental mediation as the principal behavioral mechanism by which parental self-efficacy exerts a protective influence. Rather than merely controlling adolescent behavior, effective mediation fosters the development of adolescents’ internal regulatory

capacities. This suggests that parental self-efficacy contributes to both immediate behavioral management and the cultivation of long-term self-regulation.

Research has identified three primary mediation pathways: active mediation, restrictive mediation, and monitoring. Parents with high levels of self-efficacy are more likely to engage in discussion-based active mediation, which involves explaining online risks, encouraging critical thinking, and supporting adolescents' digital decision-making (Shin, 2018). Restrictive mediation, encompassing screen-time limits, content restrictions, and device-location rules, was also strongly associated with high parental efficacy (Nagata et al., 2024). Milford et al. (2024) reported that confidence in screen-time management was directly linked to reduced child screen exposure. Additionally, Sun et al. (2022) proposed a sequential mediation model indicating that parental monitoring strengthens adolescent self-efficacy and self-control, thereby reduces problematic smart phone use.

Theme 3: Adolescent Outcomes and Mental Health Implications

Multiple studies have demonstrated that higher parental self-efficacy is consistently associated with healthier adolescent digital engagement, reduced problematic smartphone and internet use, and improved psychosocial well-being (Almatin et al., 2023; Hwang & Toma, 2021). These findings underscore parental self-efficacy as a significant preventive developmental factor. By promoting healthier digital habits and emotional resilience, parental self-efficacy contributes not only to behavioral regulation but also to broader adolescent mental health protection. Adolescents whose parents exhibit strong supportiveness, monitoring, and mediation practices were less likely to develop compulsive digital behaviors and more likely to show improved emotional regulation and self-control.

Problematic digital dependency has been linked to lower subjective well-being, increased anxiety, social isolation, and diminished mental health. Parent-led mitigation strategies serve as protective buffers against these adverse outcomes. Furthermore, longitudinal evidence indicates that strong parental efficacy established during early developmental stages may have enduring effects on adolescents' ability to regulate digital use in later years (Coyne et al., 2023).

Theme 4: Influencing Factors: Why Some Parents Feel More Efficacious

Multiple socioeconomic and demographic variables influence parental efficacy. Socioeconomic status is a significant factor, as single motherhood and lack of home internet access in disadvantaged communities are strong predictors of low digital parenting self-efficacy (Huang et al., 2018). Parenting Styles like Authoritative parenting characterized by high warmth and high control, is positively associated with both perceived severity of digital risks and elevated self-efficacy, whereas permissive parenting demonstrates a negative association. Parents who experience difficulty setting boundaries in offline contexts often encounter similar challenges in digital environments. Mothers' digital literacy is a notable predictor of digital parenting awareness (Turen & Kshraman, 2024). In a study of 400 mothers in Turkey, maternal age, education, and digital literacy proficiency emerged as significant predictors of mothers' awareness and confidence in their digital parenting roles. Additionally, increased screen time for both mothers and children is negatively associated with parental media mediation; parents who spend more time on digital devices themselves tend to mediate less (Calhan & Goksu, 2024).

However, parental engagement in the child's school activities has been found to strongly and positively affect digital parental self-efficacy, suggesting that social support and educational involvement can compensate for economic disadvantages.

Theme 5: Barriers and Challenges to Effective Digital Parenting

Although parental self-efficacy has protective value, several barriers undermine its effectiveness. These barriers suggest that parental self-efficacy is shaped not only by an individual psychological trait but also influenced by emotional, developmental, and structural contexts. Consequently, effective interventions should address both competence-building and contextual inequalities. Milford et al. (2024) identified shame and self-stigma as emotional obstacles that reduce parental confidence. Parents may experience feelings of judgment, technologically inadequacy, or social pressure, which can limit their willingness to intervene effectively.

Developmental changes further complicate parental self-efficacy. As children enter adolescence, their growing autonomy and technological proficiency may diminish parents' perceived influence (Benedetto & Ingrassia, 2020). Furthermore, socioeconomic disadvantage, limited home internet access, and reduced educational resources contribute to an "efficacy divide" (Huang et al., 2018), resulting in disproportionate barriers to digital parenting competence for some families.

4. Implications, Practice, and Intervention

Collectively, the review demonstrates that parental self-efficacy functions as a psychological, behavioral, and developmental linchpin in managing adolescent digital dependency. However, emotional barriers, developmental transitions, and socioeconomic disparities may weaken efficacy, highlighting the importance of culturally responsive, intervention-oriented frameworks.

Theoretical Implications

The review highlights that digital-specific parental self-efficacy is distinct from general parenting confidence and serves as a specialized developmental resource essential for regulating adolescent digital behavior. By integrating Social Cognitive Theory, Parental Self-Efficacy Theory, Ecological Systems Theory, and Parental Mediation Theory, the study advances a multidimensional framework for understanding the interactions among parental beliefs, digital competence, and family environments in shaping adolescent digital outcomes.

Practical Recommendations for Parents:

1. *Build Media Competency*: Parents are encouraged to prioritize their own digital literacy. Gaining familiarity with the applications their children use enhances parental confidence in effective mediation (Benedetto & Ingrassia, 2020; Shin, 2018).
2. *Start Early*: Establishing rules and discussing digital content during the preschool years fosters a culture of guidance rather than merecontrol (Coyne et al., 2023).
3. *Model Healthy Habits*: Parents should recognize that their own smart phone use serves as a primary behavioral model for children. Elevated parental screen time is associated with increased risk of digital addiction among children (Calhan & Goksu, 2024).

Recommendations for Policy and Program Design:

Febrieta and Gina (2024) emphasize the importance of family-centered digital wellness models, while Benedetto and Ingrassia (2018) underscore the need for practical parenting resources. Effective strategies include digital literacy training, E-Parenting programs, school-family partnerships, and community-based support systems. Furthermore, interventions are encouraged to move beyond

restrictive technology control and adopt empowerment-based models that enhance parental agency, digital literacy, and confidence.

5. Conclusion

Digital dependency represents a complex and evolving challenge that necessitates both psychological and technological solutions. This review demonstrates that Parental Self-Efficacy serves as the psychological foundation of effective digital parenting. Parents who possess confidence in their ability to guide and protect their children in digital environments are more likely to employ strategies such as monitoring, active discussion, and restrictive limit-setting, all of which are established factors in reducing digital dependency.

Although socioeconomic barriers and the rapid pace of technological change present significant obstacles, the development of specialized tools and targeted intervention programs provides a viable path forward. Future research and public health policy should aim to empower parents, enabling them to become confident and effective “Gatekeeper” (Coyne et al., 2023). Strengthening parental self-efficacy is essential to ensuring that the digital age remains a safe and productive environment for the future generations.

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