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## EDITED BY

Peter David Tolmie,  
University of Siegen, Germany

## REVIEWED BY

Mariángeles Castro-Sánchez,  
Universidad Austral, Argentina

## \*CORRESPONDENCE

Jia Yuin Fam  
✉ jiauyinf@sunway.edu.my

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# Reconsidering parental mediation with new media technology

Jia Yuin Fam<sup>1\*</sup>, Rumaya Juhari<sup>2</sup>, Maria Kääriäinen<sup>3,4</sup> and  
Niko Männikkö<sup>5</sup>

<sup>1</sup>School of Psychology, Faculty of Medical and Life Sciences, Sunway University, Selangor Darul Ehsan, Malaysia, <sup>2</sup>Faculty of Human Ecology, Universiti Putra Malaysia, Selangor Darul Ehsan, Malaysia, <sup>3</sup>Research Unit of Health Sciences and Technology, University of Oulu, Oulu, Finland, <sup>4</sup>MRC Oulu, Oulu University Hospital and University of Oulu, Oulu, Finland, <sup>5</sup>Centre for Research and Innovation, Oulu University of Applied Sciences, Oulu, Finland

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## Introduction

Research on parental mediation—the parenting strategies used to regulate children's media use—is historically focused on television viewing among children (e.g., Austin, 1993). In recent years, the concept has expanded to encompass a wide range of digital media platforms, including internet use (Livingstone and Helsper, 2008; Stoilova et al., 2023), video game playing (Nikken and Jansz, 2006; Çalhan and Göksu, 2024), social media use (Fardouly et al., 2018), and smartphone use (Lee and Kim, 2018; Mannell et al., 2024). These newer platforms present both new opportunities and intricate risks, highlighting the need for a thorough re-evaluation of how parental mediation is conceptualized and operationalized (Mannell et al., 2024; Rodríguez-de-Dios et al., 2018; Zosh et al., 2023).

Nonetheless, the interactive and immersive nature of digital media challenges the applicability of traditional mediation models. Inconsistencies in terminology, overlapping concepts, and outdated measurement tools obstruct theoretical clarity and empirical advancement (Chen and Shi, 2018). Recent research highlights the significance of contextual and cultural factors in shaping mediation strategies. For example, Purboningsih et al. (2024) revealed that Indonesian parents and adolescents have differing perceptions of mediation, reflecting broader socio-cultural dynamics. Similarly, Rodríguez-de-Dios et al. (2018) demonstrated that effective parental mediation is associated with improved digital skills and a reduction in online risks among adolescents.

In this opinion, we (1) propose a revised Parental Mediation Model to guide future research directions and (2) address the need to update and validate measures of parental mediation in the age of interactive digital media.

## Traditional parental mediation model

The traditional Parental Mediation Model (PMM) distinguishes three types of parental mediation: restrictive mediation, active mediation, and co-using (Nikken and Jansz, 2006, 2014). By definition, restrictive mediation refers to parental limits on the amount of media and/or media content that children can access; active mediation relates to parents' comments and instructions on children's media use; co-use mediation refers to parents' engagement in media use alongside their children.

Two primary concerns signal the need to restructure the PMM. First, the inconsistent and interchangeable use of these terms across studies creates significant conceptual ambiguity, complicating the interpretation of findings and the development of targeted interventions. This lack of standardization can lead to divergent conclusions regarding the effectiveness of these strategies (Chen and Shi, 2018). For example, Len-Ríos et al. (2016) conceptualized media-related family rules—typically associated with restrictive mediation—as indicators of parental monitoring, often categorized as active mediation. Shin and Kang (2016) interpreted parental behaviors, such as monitoring children's email or social media accounts, which is usually viewed as active mediation, as indicative of restrictive mediation. These varying interpretations highlight the persistent ambiguities in the terminology and conceptual boundaries surrounding parental mediation, underscoring the need for greater clarity in defining parental roles within the realm of children's media use.

Second, while attempts have been made to expand the PMM, they often lack conceptual coherence. For example, researchers have used “technical mediation” as an add-on to PMM to account for the incorporation of technology into parental regulation of children's media use (Chang et al., 2019; Lee and Kim, 2018). Technical mediation involves the use of monitoring applications to regulate children's media use, such as filtering software that limits children's web access (Benrazavi et al., 2015), as well as other methods to restrict children's media use through technology applications. Although technical mediation has been suggested as a separate category, it might be better viewed as a contemporary extension of restrictive mediation. Nonetheless, its growing presence in the context of digital parenting merits a more thorough examination (Rodríguez-de-Dios et al., 2018; Theopilus et al., 2024).

Another line of research proposes the functional role of media as a disciplinary tool, whereby parents permit children's access to media as a reward for good behavior; while barring children from media as a punishment (Lloyd et al., 2014; Pearson et al., 2011). It is plausible that disciplinary acts can be a dimension of active mediation, whereby parents will actively evaluate and provide feedback on children's media behaviors. Therefore, discipline could be a sub-category of active mediation.

In addition to conceptual ambiguities, it is essential to recognize that both contextual and developmental factors impact parental mediation practices. As a result, mediation strategies are not universally applicable; they can vary significantly across different developmental stages and cultural contexts. For example, Purboningsih et al. (2024) found that Indonesian parents tend to rely more on relational and moral reasoning than on technical controls, demonstrating the influence of culturally ingrained parenting norms.

## Discussion on proposed revised parental mediation model

To address conceptual ambiguities and adapt to the evolving media landscape, the revised Parental Mediation Model (PMM) illustrates the intricate dynamics between parent-child interactions

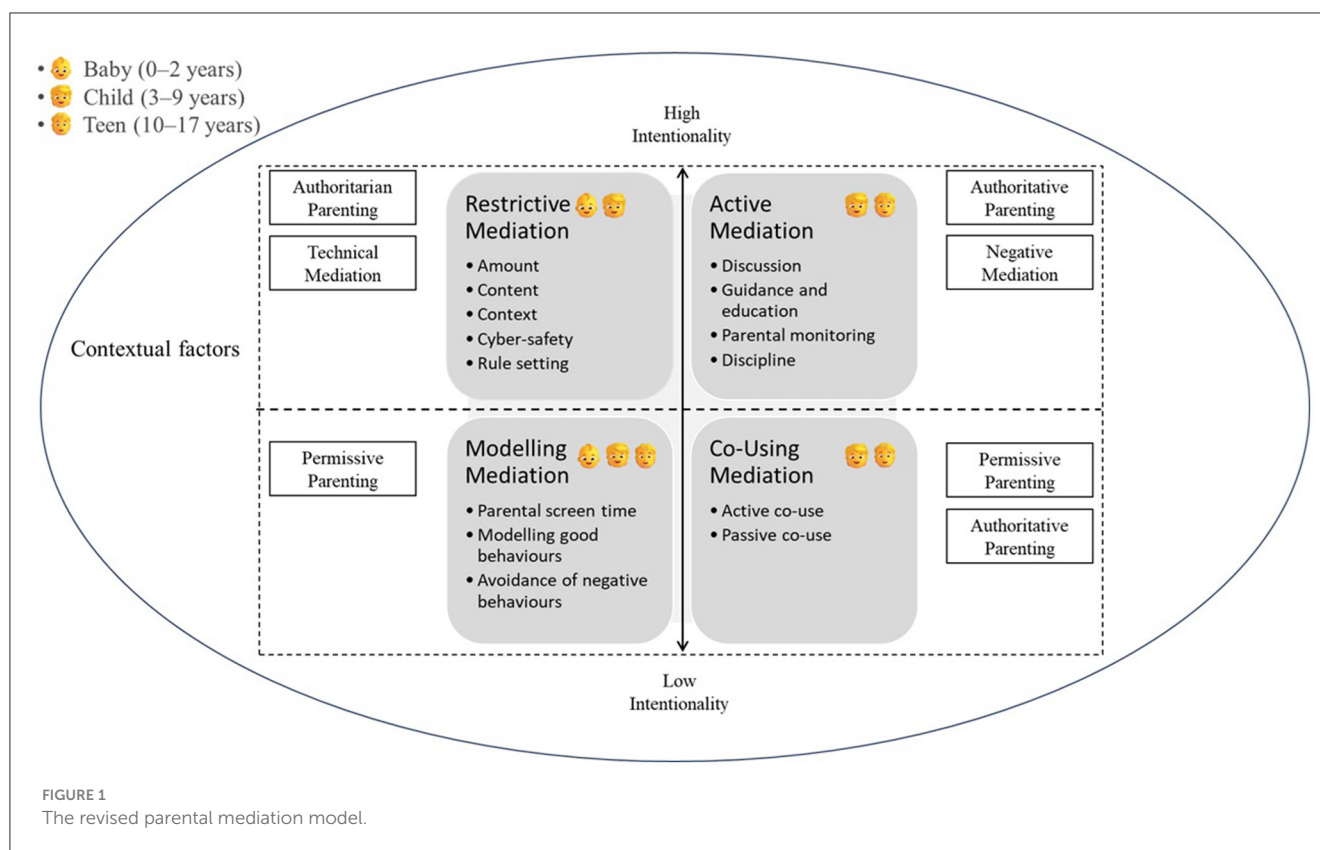
and the intentionality behind different mediation strategies (see Figure 1). This model classifies four types of mediation based on the degree of intentionality in parental influence: restrictive mediation and active mediation both represent high intentionality, while modeling mediation and co-using mediation represent low intentionality. By encompassing both deliberate and incidental (or unintentional) forms of influence, the model offers a more nuanced understanding of the diverse practices of parental mediation.

Restrictive mediation refers to the rules and limitations that parents enforce on their children's media use. Traditionally, this has involved setting boundaries around both screen time and content (Huang et al., 2011). However, contemporary applications of restrictive mediation also include contextual restrictions, such as banning media use during meals or until after homework is completed, as well as safety-oriented rules that limit the sharing of personal information online (Shin and Kang, 2016). Additionally, how these rules are established, particularly the extent of child involvement, has become an important aspect to consider (De Lepeleere et al., 2018; Verloigne et al., 2015). Recent research indicates that when restrictive mediation is applied collaboratively, it can enhance children's digital resilience and awareness (Rodríguez-de-Dios et al., 2018).

Active mediation involves the communication between parents and children regarding media content and its usage. This encompasses discussions about online risks, ethical behavior, and the critical evaluation of media messages (Padilla-Walker et al., 2018). It also includes parental monitoring practices, such as reviewing children's online profiles or messaging activity (Benrazavi et al., 2015). Importantly, active mediation may also consist of negative mediation strategies, which include expressing disapproval of certain media behaviors (Martins et al., 2017). As digital platforms become increasingly integrated into everyday life, active mediation not only serves as a protective measure but also plays a crucial role in promoting digital literacy (Rodríguez-de-Dios et al., 2018; Chen and Shi, 2018).

Modeling mediation refers to how parents' media behaviors influence their children. This encompasses both intentional actions, like avoiding screen use in front of children, and unintentional behaviors, such as engaging in excessive screen time during family interactions (Pearson et al., 2011; Verloigne et al., 2015). Based on Bandura Social Learning Theory 1977, which suggests that children learn by observing and imitating role models, the concept of modeling emphasizes how parental media habits influence children's digital behaviors. Recent studies indicate that parental modeling in digital environments often occurs passively through everyday device usage, significantly affecting children's media habits and attitudes (Mannell et al., 2024; Schneider et al., 2017; Zosh et al., 2023). These findings underscore the idea that modeling serves as a subtle yet pervasive form of mediation, reinforcing its classification as indirect and low interaction.

Co-using mediation refers to shared media experiences between parents and children, such as co-viewing television, co-playing video games, or engaging with digital platforms together. Although often viewed as a passive activity, co-using presents a valuable opportunity for active engagement, including discussions about content and guidance on online behavior (Schaan and Melzer, 2015; Padilla-Walker et al., 2018). However, the intensity of interaction



can vary across different types of mediation. Co-using often intertwines with broader family dynamics and may incorporate active elements, which can blur the lines between it and active mediation. Consequently, this mediation style encompasses both intentional and unintentional aspects of mediation. Addressing these overlaps remains a challenge for future operationalization. Nevertheless, most studies have focused primarily on the frequency of co-use rather than its quality or the depth of communication—an area that future research should further explore (Purboningsih et al., 2024).

The essence of distinguishing the four types of parental mediation lies in the role that parents assume. Restrictive mediation involves parents making efforts to limit their children's media usage. In contrast, active mediation is more proactive, encompassing discussions and the practical application of family rules regarding media consumption. Modeling mediation refers to both the intentional and unintentional demonstration of media behaviors by parents to their children. Unlike active mediation or co-use, modeling functions through indirect behavioral cues rather than explicit instruction or shared activities. This distinction is essential for comprehending how children internalize media norms in the absence of direct parental involvement. Co-using mediation highlights the importance of parental involvement in the media experiences shared with their children. Delineating these four types of mediation will facilitate more focused and meaningful discussions in the field.

The updated PMM highlights the unique roles that parents fulfill in different mediation approaches: setting boundaries (restrictive), facilitating discussions (active), demonstrating

behaviors (modeling), and engaging in joint activities (co-using). The revised PMM emphasizes the intentionality of parent-child mediation while also implicitly recognizing the importance of contextual adaptation, which involves tailoring mediation strategies to fit various situational, developmental, and cultural contexts. As noted by Mannell et al. (2024), digital parenting practices are intricately woven into family routines, values, and socio-cultural environments. Likewise, Zosh et al. (2023) advocate for a more nuanced understanding of media use that delves into the “how” and “why” of engagement. By acknowledging that each type of mediation may present itself differently based on context, the revised PMM provides a flexible framework that can be customized to accommodate diverse family dynamics and the evolving digital landscape.

To strengthen the theoretical foundation of the revised (PMM), we draw on two complementary perspectives. According to Wu et al. (2024), early digital experiences have a profound influence on neurodevelopment, thereby supporting the model's emphasis on interaction intensity, particularly the importance of high-interaction strategies, such as active and co-use mediation, during critical developmental phases. Additionally, Choy et al. (2024) and Guarderas et al. (2025) provide a framework for parenting styles that aligns with the model's dimensions: restrictive mediation corresponds to authoritarian parenting (characterized by high control and low warmth), while active and co-using mediation aligns with authoritative parenting (high control and high warmth). In contrast, modeling mediation may reflect permissive parenting (low control and high warmth). These theoretical connections enhance the model's conceptual clarity and contextual relevance.

Choy et al. (2024) offer empirical support for the revised PMM's structure by distinguishing parental mediation and modeling as separate strategies, each carrying unique developmental impacts. Their focus on developmental sensitivity—tailoring mediation strategies to align with children's cognitive, emotional, and social maturity—and contextual adaptability—modifying parenting approaches according to cultural norms, family dynamics, and digital environments—strengthens the model's theoretical underpinnings and practical significance.

## The need for updated measurement tools

Despite the growing complexity of parental mediation (Zosh et al., 2023), measurement tools remain outdated. The widely used Parental Mediation Scale (Nikken and Jansz, 2014) primarily reflects a traditional model and may not capture the full range of contemporary practices. Many studies adopt a fragmented approach, either combining items from different sources (e.g., Vaala and Bleakley, 2015) or utilizing single-item measures that risk oversimplifying nuanced behaviors (Cui et al., 2011; Gingold et al., 2014).

A recent review by Stoilova et al. (2023) highlighted that parental control tools often do not meet family expectations, partly due to a lack of alignment between available tools and the diverse mediation practices that families employ. There is a pressing need for updated, psychometrically robust instruments that align with a revised conceptual framework and take into account cultural and developmental variability (Rodríguez-de-Dios et al., 2018; Theopilus et al., 2024).

## Conclusion and future directions

As digital media technologies continue to advance, our understanding of how parents mediate their children's media usage must also evolve. This opinion paper presents a refined (PMM) that builds upon the traditional framework by introducing four distinct types of mediation—restrictive, active, modeling, and co-using—each characterized by their intentionality. This reconceptualization offers greater theoretical clarity and reflects the complexity of today's digital media environments.

Despite advancements in theoretical frameworks surrounding parental mediation, empirical research remains hindered by outdated and fragmented measurement tools. The ongoing reliance on traditional scales and single-item measures restricts the field's capacity to capture the nuanced, context-dependent, and culturally embedded nature of contemporary mediation practices. Recent

studies (e.g., Stoilova et al., 2023; Mannell et al., 2024; Rodríguez-de-Dios et al., 2018; Purboningsih et al., 2024) underscore the pressing need for the development of psychometrically robust, multidimensional instruments that accurately capture the diversity of parental strategies across various media platforms, age groups, and cultural contexts.

By enhancing both theoretical and methodological frameworks, future research can better assist families in cultivating safe, enriching, and developmentally appropriate digital environments for children.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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