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Perceived Media Usage among Parents and Adolescent Mental Health: A Regression and Structural Equation Modeling Study

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ABSTRACT

The present study examined the relationship between perceived media usage among parents and adolescent mental health within the cultural context of Vadodara, Gujarat. Students between 13-17 years recruited from English-medium schools were used for a cross-sectional survey design (n = 300). Methods : Data were collected using a self-developed Perceived Media Usage Scale and the Mental Health Inventory (MHI-38). SPSS version 23 and AMOS 20 were then used for Pearson product-moment correlation and Structural Equation Modeling (SEM) respectively. Using SPSS version 23 and AMOS version 20, we applied Pearson correlation and Structural Equation Modeling. The analysis revealed that heavy media use by parents often connects to signs of stress in teenagers. This includes anxiety, depression, and difficulties managing emotions and behavior. Researchers found significant negative links with overall positive feelings, emotional connections, and life satisfaction. Structural equation modeling showed that how much parents think they use media significantly predicted higher levels of depression and a loss of emotional and behavioral control. It also negatively impacted overall positive feelings and emotional connections. These findings add to the growing evidence that parental media habits are an important factor in how teenagers adjust psychologically.

Keywords: Perceived Media Usage, Parental Technoference, Adolescent, Mental Health, Structural Equation Modeling, Family Media Ecology

INTRODUCTION

The proliferation of digital technologies has fundamentally restructured family interaction patterns in contemporary society. With over 700 million internet users and 600 million smartphones in circulation across India, digital devices are now a big part of everyday family life (Times of India, 2025) **[8]**. While much research has looked into how screen time affects adolescents' mental health, new studies show that how parents use media can also significantly impact child development outcomes (Wong et al., 2025) **[11]**. The term "technoference" refers to how technology disrupts personal interactions. This idea has become important as it influences parent-child attachment and communication (Eirich et al., 2025) **[1]**. When parents focus too much on digital devices, they divide their attention, which lowers the responsive caregiving that is vital for healthy development. This issue is especially important during adolescence, a time when

young people are more sensitive to social acceptance, are seeking more independence, and are still developing their emotional regulation skills. Several theoretical perspectives help us understand how parental media use impacts adolescent mental health. Displacement theory suggests that time spent on media activities takes away from time that could be used for face-to-face interaction between parents and children (Vasconcellos et al., 2025) **[9]**.

When parents are frequently on their devices, it limits opportunities for conversation, emotional support, and shared activities. This displacement can be particularly harmful during adolescence, when parental monitoring and emotional support are crucial protective factors. The attention fragmentation perspective claims that even if parents are physically present, their cognitive and emotional availability might suffer due to simultaneous media use. Parents who juggle device use and child interaction are less responsive to their children's calls for attention and provide lower quality interaction (Radesky et al., 2014) **[6]**. This "absent presence," being there physically but mentally distracted, can be just as harmful to a child's well-being as not being there at all. The social learning framework points out that children pick up behavioral patterns by watching their parents. When parents consistently prioritize media over family interactions, adolescents may see this as normal behavior. This leads them to adopt similar patterns of distracted media use, which can pose their own mental health risks (Vasconcellos et al., 2025) **[9]**.

LITERATURE REVIEW

Parental Media Use and Adolescent Mental Health

There have been some reports of parents using digital means to help their child cope with mental health issues. Nagata and colleagues (2025) **[4]**, in a nationally representative study of 3,974 children aged 6 to 17 years, found that mothers were more likely than their children to exceed the recommended hours of screen time (43%) and were more likely to be anxious about their child(ren). This suggests that parental distress may make it harder for them to monitor and regulate their children's digital usage. Eirich and colleagues (2025) **[1]**, in a prospective cohort study of 1,140 children, found that maternal technoference was associated with higher levels of depression (= 0.19) and lower levels of anxiety (= 0.14). More specifically, child-reported technoference was correlated with child depression symptoms (= 0.19) and more strongly with symptom scores than the mother's data, highlighting the importance of considering the child's perceptions of parent's social media use of media. Wong and colleagues (2025) **[11]** reported that parental digital behaviors were important predictors of adolescent mental health struggles. Adolescents suffering from depression or anxiety were significantly more likely to report that their parents posted too many pictures of them online, ignored them too much for screens, shared intimate information via social media, or gave them their first phone at very young ages.

Consistent, sensitive, and responsive caregiving are essential for the quality of the parent-child attachment. The following issues will undermine many of the major components necessary for a child to develop a secure attachment to their parents when parents become too involved with digital devices. Parents lose the ability to maintain eye contact with their child, a critical means of expressing emotional connection, as their gaze is always directed downward at their screen. Active listening is critical to show children that what they are saying is important to us; they will probably lack enthusiasm when responding to their child because they are distracted by their phone (Radesky et al., 2014) **[6]**. Observational studies have identified many implications of the adult's inability to connect; Radeskyet al.(2014) **[6]** conducted an observational study with 55 families having a meal together, revealing clear patterns of distraction, irritability, and disregard to the

parent being interrupted while using their phone. Children notice when their parents are distracted by their smartphones and report feeling isolated and emotionally dissatisfied when their parents do not give their full attention to them. As children enter adolescence, they will have developed the ability to recognize when they feel ignored, and trying to gain their parent's attention away from their own devices could lead to children experiencing feelings of inadequacy or insecurity (Radesky et al., 2014) **[6]**.

With over 700 million internet users and 600 million smartphone users in India, the country has been through immense digital transformation (Times of India, 2025) **[8]**. However, regional studies have shown that there are disturbing rates of screen overuse among children, with 22% of children between 9 and 17 in Maharashtra using screens for more than six hours per day. National surveys show that more than 60% of adolescents use mobile games or social media for three or more hours each day (New Indian Express, 2025) **[5]**. Children aged four and younger are averaging 2.2 hours of screen exposure daily, which is more than twice the amount recommended by pediatricians. The impact of screens on young people's mental health is becoming increasingly clear, as evidenced by a 2024 study of 1,392 adolescents and young adults in India that found 37.9% of participants had signs of depression and 33.3% exhibited signs of anxiety; these mental health issues were positively correlated with high amounts of screen time (Times of India, 2025) **[8]**. In addition, a study conducted by the Centre for Internet & Society between 2020 and 2023 indicates that 27% of young adults demonstrate Problematic Internet Use and that Instagram, WhatsApp, and YouTube are the most significant contributors to this problem. Unfortunately, India does not have any national framework to promote digital wellbeing among minors (Times of India, 2025) **[8]**.

Children who use mobile devices have a higher risk of developing several types of mental health disorders. A meta-analysis of studies of children aged 12 years or younger found that an increase in the number of hours children spend on their mobile devices is positively associated with increased rates of emotional problems (8.52%), behavioural problems (8%), hyperactivity/inattention problems (10.23%), and peer relationship problems (11.64%). The majority of mental health disorders manifest before the age of 14; many remain undetected and untreated during this critical period of development. For this reason, gathering evidence of modifiable risk factors present in the family environment is an important step toward preventing and treating mental health disorders in children. A meta-analysis of 132 longitudinal studies found weak, yet statistically significant, bidirectional relationships between screen time use and socioemotional issues in children. Specifically, screen time led to increased levels of socioemotional issues in children (e.g., negative behaviours, lower levels of trust), and vice versa; children with pre-existing socioemotional issues were more likely to use screens for longer periods of time. The evidence of this bidirectionality is stronger for gaming than for other screen-based activities. Moderation analyses indicated that the associations between screen time use and socioemotional issues were moderated by child characteristics (age, total screen time) as well as by the type of socioemotional problem.Previous research has demonstrated that media usage significantly influences adolescents' psychological outcomes, including self-esteem, behavior, and social adjustment (Rajput, 2014; Rajput & Jain, 2017; Rajput, 2026) **[12,13,14]**. Parents' perceptions of media exposure play a crucial role in shaping adolescents' developmental experiences and psychological well-being. Therefore, the present study examines the relationship between perceived media usage among parents and adolescent mental health through Regression and Structural Equation Modeling (SEM) techniques.

Rationale and Objectives

Existing literature has predominantly examined adolescent screen time effects, with less attention to how parental media use patterns shape adolescent mental health. Most research has been conducted in Western contexts, leaving questions about generalizability to Indian family systems unanswered. The present study addresses these gaps by examining perceived parental media usage and its associations with adolescent mental health in Vadodara, Gujarat. The primary objectives were: (a) to study the correlation between perceived media usage by parents and adolescent mental health, and (b) to examine the effect of perceived media usage on adolescent mental health using SEM.

MATERIALS & METHODS

Participants

A total of 300 students from classes 8 to 11, aged 13 to 17 years, were recruited from English-medium schools in Vadodara, Gujarat. The sample comprised 133 males (44.3%) and 167 females (55.7%). Regarding educational standard, 170 participants (56.7%) were from secondary school and 130 (43.3%) from higher secondary school. Demographic characteristics indicated 63% of parents used more than six different media resources.

Measures

Perceived Media Usage among Parents Scale. A scale consisting of twenty items was designed through a literature review and validated through input from professionals. The twenty items have been rated as being one through five (never to always) using a five-point Likert scale, and there were six items that were reverse scored. It is a measure of how often the parents used various forms of media such as newspapers, magazines, TV, soap operas and television serials, and social media, during the past month. The pilot test of thirty-three students demonstrated a Cronbach's $\alpha = .79$ for reliability.

Mental Health Inventory (MHI-38). The MHI-38 measured general psychological distress and well-being (Veit & Ware, 1983). This 38-item self-rated questionnaire assesses six dimensions: Anxiety (8 items), Depression (5 items), Loss of Behavioral and Emotional Control (9 items), General Positive Affect (11 items), Emotional Ties (3 items), and Life Satisfaction (1 item). Dimension-specific reliabilities ranged from $\alpha = .645$ to .840, with total scale reliability $\alpha = .680$.

Procedure and Statistical Analysis

After obtaining institutional permission, students were briefed about the study purpose. Questionnaires were distributed to students meeting inclusion criteria. Data were analyzed using SPSS version 23 and AMOS version 20. Pearson product-moment correlations examined bivariate relationships among variables. SEM evaluated effects of perceived media usage on mental health dimensions. Model fit was assessed using χ^2, CFI, GFI, NFI, TLI, IFI, and RMSEA. Content analysis was used for open-ended responses.

RESULT

Correlation Analysis

Pearson correlation coefficients among study variables are presented in Table 1. Significant positive correlations emerged between perceived parental media usage and adolescent psychological distress indicators. Higher perceived parental media usage was associated with increased anxiety ($r = .375$, $p < .01$), depression ($r = .526$, $p < .01$), and loss of behavioral and emotional control ($r = .464$, $p < .01$). Significant negative correlations were observed with general positive affect ($r = -.408$, $p < .01$), emotional ties ($r = -.125$, $p < .05$), and life satisfaction ($r = -.309$, $p < .01$).

Table 1: Correlations Between Perceived Media Usage and Mental Health Dimensions (N = 300)

Variable	1	2	3	4	5	6	7
1. Media Usage Among Parents	—						
2. Anxiety	.375**	—					
3. Depression	.526**	.570**	—				
4. Loss of Behavioral & Emotional Control	.464**	.585**	.699**	—			
5. General Positive Affect	-.408**	-.284**	-.536**	-.318**	—		
6. Emotional Ties	-.125*	-.013	-.123*	.006	.422**	—	
7. Life Satisfaction	-.309**	-.230**	-.478**	-.491**	.522**	.136*	—

Note. **p < .01 (two-tailed); *p < .05 (two-tailed). *

Structural Equation Modeling

SEM was conducted to test hypothesized relationships between perceived parental media usage and mental health dimensions. Model fit indices indicated good fit: $\chi^2(7) = 16.407$, $p = .22$; $\chi^2/df = 2.344$; CFI = .990; GFI = .987; AGFI = .934; NFI = .984; TLI = .961; IFI = .991; RMSEA = .067.

Table 2: *Standardized Regression Weights from Structural Equation Model*

Criterion Variable	Explanatory Variable	β	SE	CR	p
Anxiety	Perceived Media Usage	.066	.038	1.730	.084
Depression	Perceived Media Usage	.231	.021	10.821	.01
Loss of Behavioral & Emotional Control	Perceived Media Usage	.259	.029	9.058	.01
General Positive Affect	Perceived Media Usage	-.341	.044	-7.718	.01
Emotional Ties	Perceived Media Usage	-.024	.011	-2.182	.029

*Note.*β = Standardized Regression Weight; SE = Standard Error; CR = Critical Ratio.

As shown in Table 2, perceived media usage among parents significantly predicted increased depression ($\beta = .231$, $p < .01$) and increased loss of behavioral and emotional control ($\beta = .259$, $p < .01$). Perceived media usage significantly and negatively predicted general positive affect ($\beta = -.341$, $p < .01$) and emotional ties ($\beta = -.024$, $p < .05$). The direct path to anxiety was not significant ($p = .084$), suggesting possible mediation by other factors.

Qualitative Findings

Qualitative data from the open-ended surveys revealed 4 major themes regarding adolescents' experiences with media usage by their parents. Approximately 42% of adolescents reported feeling ignored by their parents when the parents were engaged in media use, especially when requesting help with their questions or problems. Parents were perceived to respond slowly or with indications of lack of interest when preoccupied with watching TV shows, reading books or magazines, or using social media. Approximately 31% of adolescents reported that their parents seemed irritated when they tried to interrupt the parents while the parents were using media. Approximately 37% of adolescents described how they coped through various methods, including writing in a journal, spending time with friends, crying alone, or spending more time using media themselves. Approximately 30% of adolescents reported exhibiting some behaviours to redirect their parents' attention to themselves, including crying, screaming and exhibiting behaviours that would draw attention to them.

DISCUSSION

The present study examined relationships between perceived parental media usage and adolescent mental health among 300 adolescents in Vadodara, Gujarat. The findings provide evidence to and expand upon the developing body of literature documenting how parental patterns of digital engagement have psychological consequence for adolescents and extend this evidence into the Indian cultural context.

Significant positive correlations throughout the present study between adolescents'

perceptions of parental media consumption and adolescent psychological distress closely parallel international literature. There was a high strength of association between perceived parental media consumption and adolescent depression (r = .526), which is consistent with the findings of Eirich et al. (2025) **[1]**, who found a positive association (β = .19) between maternal technoference, as reported by children, and the presence of depressive symptoms among children. The larger effect size noted in the present sample may be due to cultural differences in the meaning and impact of parental presence in the Indian context, wherein family relationships are generally characterized by a greater degree of daily interactive and emotional interdependence as compared to most Western cultures.In addition, the present study's finding that adolescents' perceptions of parental media consumption significantly predicted (β = .231) increased levels of depressive symptoms is consistent with displacement theory (Vasconcellos et al., 2025) **[9]**. When parents continually engage with digital media, they provide less opportunity for face-to-face communication, emotional support, and engaging in shared recreational activities. Adolescents' levels of depressive symptoms may be more acutely impacted by decreased emotional availability of parents, as two of the main behaviours associated with depression (social withdrawal and anhedonia) can be exacerbated by diminished opportunities for positive social interaction.

The strong link between how a parent uses media and the way in which their child has problems controlling his or her behavior and emotions (r = .464, β = .259) indicates that a parent's media distraction may limit their child's ability to self-regulate. By failing to consistently regulate their own media usage, parents might create a pattern for their children to follow through social learning, resulting in children internalizing distracted media usage as a normal way of behaving. Children might eventually develop more general problems with self-control and with regulating emotions as a result of this modeling. The negative relationship between parental media usage and the development of general positive affect in children is particularly concerning. General positive affect includes being happy, being interested in life, and feeling emotionally alive, all of which provide psychological resources to protect against mental illnesses. When parental media usage displaces positive parent-child interactions, it takes away from children the happy, engaged interactions that promote general positive affect and resilience against emotional difficulties. Half of all mental illness begin before the age of 14 (Morata Sampaio et al., 2025) **[3]**. A loss of general positive affect during early adolescence might be one method through which family media dynamics contribute to early onset of mental illness. The present findings are supported by Rajput (2026), Rajput and Jain (2017), and Rajput (2014) **[12,13,14]**, who reported that media usage significantly influences adolescents' self-esteem, behavior, and psychological well-being. These studies suggest that parental perceptions and monitoring of media exposure play an important role in adolescent mental health outcomes.

The Specific Case of Anxiety

The non-significant direct path from perceived parental media usage to anxiety, despite significant bivariate correlation, suggests the relationship may be fully mediated by other variables not included in the model. Potential mediators include adolescent sleep quality, peer relationship quality, or adolescent screen use patterns. Alternatively, different dimensions of parental media use may affect anxiety through different mechanisms not captured by the present measurement approach. Vasconcellos and colleagues (2025) **[9]** found bidirectional relationships between screen use and socioemotional problems varied by problem type, with externalizing problems showing stronger effects. Present findings are consistent with this pattern,

showing stronger effects for depression and loss of behavioral control than for anxiety.

Parental Media Usage and Emotional Ties

The significant negative association between perceived parental media usage and emotional ties despite modest effect size, is noteworthy. Emotional ties represent sense of emotional closeness between parent and child, fundamentally influenced by parental availability and responsiveness. Higher perceived parental media usage associated with lower emotional ties suggests adolescents may experience parental media distraction as a threat to emotional relationship quality. This finding extends Radesky and colleagues' (2014) **[6]** observational research to adolescent populations in the Indian context.

Cultural Context and Implications

The finding that 63% of parents used more than six different media resources indicates substantial media engagement, consistent with national trends (Times of India, 2025) **[8]**. Qualitative responses indicate that 42% of adolescents experienced feelings relating to being avoided or neglected by their parents. 31% reported that their parents would be irritated with them for disrupting their parent's media use. Technoference experiences indicating how frequently technoference is due to media usage and how important technoference is to adolescents' well-being provide a good base for the development of effective interventions for parents. As such, parents need to understand how their media usage impacts their adolescent's view of their relationships with them and may need to modify their media usage through behavior change. Since there are few comprehensive family-level interventions available to families in India (Times of India, 2025) **[8]**, it may be important to target media use patterns of parents in conjunction with targeting screen time for adolescents.

Limitations

The limitations of this study must also be mentioned. The design precludes any causal inference about the direction of effects. All measures relied on self-reporting from adolescents, which carries with it the risk of shared method variance and social desirability bias. The sample was comprised solely of students from English-medium schools in Vadodara, which limits the generalizability of the study. The study did not measure different types of parental media activities or distinguish between different digital platforms. An overall reliability coefficient of 0.680 on the MHI-38 indicates only moderate reliability, a situation tending to result in the underreporting of some associations.

CONCLUSION

The present study provides empirical evidence that perceived media usage among parents is significantly associated with adolescent mental health difficulties in Vadodara, Gujarat. Adolescents who perceive their parents to engage significantly through the media are likely to suffer from anxiety, depression, diminished sense of control over their behaviour and emotions, diminished level of general positive affect, and decreased level of connection to their family and life satisfaction. This study provides further evidence to support the notion that a child's family media environment is an impactful determinant of their development during adolescence. Additionally, these findings demonstrate the urgency of raising public awareness, educating parents about media-related issues, and developing family-based programmes to address issues related to technoference in the rapidly changing digital landscape in India, where the rapid development of media technologies has occurred without sufficient public health guidelines.

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