

The Effect of Household Screen Media Experience on Young Children's Emotion Regulation: The Mediating Role of Parenting Stress

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Abstract

In the current digital era, it has become a prevalent phenomenon for young children to engage with new media, while parenting stress has emerged as an increasingly prominent issue. However, there remains a dearth of research examining the interplay between household screen media experience, emotion regulation abilities, and parenting stress. Thus this study aimed to investigate the relationships among them to address this research gap. Specifically, we explored the mediating role of family parenting stress between young children's household screen media experience and emotion regulation skills. Three hundred and seventy 4-year-old children finished the household screen media experience questionnaire, the choice of emotional regulation strategies, and their parents' parenting stress. Data analysis was conducted using SPSS 23.0 and Amos 24.0 software. The results show that: 1) household screen media experience is significantly positively correlated with the three dimensions of parenting stress and negatively correlated with the three dimensions of emotion regulation strategies. 2) Parenting stress plays a partial mediating role in the relationship between household screen media experience and negative emotion regulation strategies. 3) Childcare stress and difficult children have a significant partial mediating effect on the relationship between household screen media experience and passive coping. Difficult children have a significant partial mediating effect on the relationship between household screen media experience and emotional outbursts. Dysfunctional parent-child interaction has a significant partial mediating effect on the relationship between household screen media experience and aggressive behavior.

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Keywords

Household Screen Media Experience, Emotion Regulation, Parenting Stress, Dysfunctional Parent-Child Interaction, Emotional Outbursts

1. Introduction

1.1. The Young Children's Household Screen Media Experience

Young children are increasingly exposed to a variety of screen media, including traditional fixed screens, such as televisions and desktop computers, as well as newer mobile screen media devices like smartphones and electronic tablets (Connell et al., 2015). Specifically, in recent years, there has been a rapid uptake of mobile screen media devices among young children (Holloway et al., 2013). This is largely facilitated by the characteristics of handheld devices, their portability, screen size, decreasing cost, multiple applications, and interactive ability (Kabali et al., 2015). Because of the increasing uptake and use of mobile screen media devices, the daily screen time of traditional media such as television has decreased while the time spent on the former has increased, especially in many developed countries (Kabali et al., 2015). Though television remains the dominant media for family time, children predominantly engage in solitary viewing through mobile screen media devices. This increasing experience and accessibility to mobile screen media devices create a conundrum. On the one hand, mobile screen devices may increase children's sedentary behavior, and they also have the potential to increase gaming opportunities, creating tension in public health and parent-child relationships (Downing et al., 2015). On the other hand, the enjoyment experienced by children when engaging with touch screens may contribute to heightened and habitual usage patterns (Christakis, 2014). In this study, the household screen media experience refers to the combined interactions of children with screen-based media in a household. It includes engagement, content consumption, social dynamics, and technological interfaces that shape and influence overall media experiences within the home.

1.2. Emotion Regulation of Young Children

Emotion regulation consists of all the processes, intrinsic and extrinsic, through which individuals manage their emotions to accomplish their goals (Thompson & Christakis, 2007). Emotional regulation processes may be conscious or unconscious, automatic or controlled (Cole et al., 1994), and include skills and strategies for monitoring, evaluating, and modifying emotional responses. Emotion regulation involves not only reducing the intensity or frequency of emotional states but also developing the capacity to generate and sustain emotions (Stifter & Augustine, 2019; Cole et al., 1994). Emotion regulation, an important skill with developmental roots in infancy, has long-term implications on coping and resilience (Shin & Kemps, 2020), attachment and regulation strategies (Girme et al.,

2021), and later substance use (Liu & Ma, 2019). The study of emotion regulation development has shown the preschool years to be of critical importance because during this period, children gain an understanding of emotions, acquire an appreciation of emotion regulation strategies and learn to use them to manage their emotions (Zinsser et al., 2021). Although the ability to regulate emotions and the use of emotion regulation strategies are regarded as two distinct processes, they are still interrelated. On the one hand, emotion regulation ability can be considered a higher-level process that may influence the types of emotion regulation strategies used by individuals in any given situation, as well as the outcomes of using these strategies. On the other hand, the use of adaptive emotion regulation strategies may foster an acceptance and understanding of negative emotions, or increase self-efficacy for regulating emotions. In this study, we employ three emotion regulation strategies to reflect on young children's emotion regulation ability, namely emotional outbursts, passive coping, and aggressive behavior.

1.3. The Effect of Household Screen Media Experience on Young Children's Emotion Regulation

There are growing concerns regarding the effect of digital technologies on children's emotional well-being, particularly regarding fear, anxiety, and depression. Initially, research primarily examined the impact of conventional media, such as television and movies, on children's immediate fear responses, which in turn could result in anxiety and disrupt their sleep patterns. Recent studies deal with the interactive aspects of newer media and their effects on anxiety and depression. Specifically, they examine how substituting digital media use reduces social anxiety from face-to-face interaction, revealing that individuals with Internet overuse or addiction may rely on it as a means to avoid negative emotions like anxiety and depression (Hoge et al., 2017). Although no causal relationship has been demonstrated, household screen media experience has become a hot topic concerning greater difficulties in emotion regulation.

Many parents use touchscreen devices as electronic babysitters to soothe and comfort their children, especially when they feel bored, cry, or need company (Reid Chassiakos et al., 2016). When parents provide screens, such as a video or a phone, to a distressed infant or toddler, it can hinder the child's ability to learn positive emotion regulation strategies (Gordon-Hacker & Gueron-Sela, 2020). In turn, this may lead to the emergence of problematic media use, including relying on media as a coping mechanism. While touchscreen devices offer children a wealth of information, opportunities for the expression of their thoughts are often limited (Zimmerman et al., 2007). Increased exposure to touchscreen devices may mean that children spend less time on important social activities such as social interaction and communication, which are crucial for emotional and behavioral development. If the time spent on social interaction and communication is reduced, children may have fewer opportunities to learn to express their

feelings or discover appropriate behavior in different environments, which may lead to emotional and behavioral problems in adulthood (Lin et al., 2020). Research indicates that even after controlling for important confounding variables, early childhood self-regulation problems are associated with mildly increased screen media exposure (Radesky et al., 2014).

1.4. One Possible Mediating Variable: Parenting Stress

Parenting stress refers to the emotional, psychological, and physiological strain experienced by parents or caregivers in response to the demands, challenges, and responsibilities associated with raising and caring for children (Vaughan et al., 2013). During early childhood, high levels of parenting stress may hurt the quality of child care, which may interfere with parent-child attachment. Similarly, a child's sense of security can also be affected by parental stress, especially when parents have difficulty regulating their emotions or maintaining familiar routines for the child (Figner et al., 2009). Parent-child reactions can act in synchrony such that young children with a diminished sense of security display anger or distress, consequently eliciting higher levels of parenting stress. From toddlerhood to adolescence, increased parenting stress can create a chaotic family environment that contributes to children's behavioral problems (Ríos et al., 2022).

Parenting stress has a significant impact on the physical and mental development of their children. Researchers have discovered when parents have a high level of parenting stress, their children are more likely to exhibit negative behaviors such as depression, anxiety, social withdrawal, and aggression (Tan et al., 2012). Research has shown that when parents experience high levels of parenting stress, they may lose control of their own emotions, leading to inappropriate parenting practices when dealing with their children's problem behavior. How parents manage and express their emotions can directly impact their children's ability to regulate and manage their own emotions (Zeman et al., 2013). The lack of effective emotional communication between parents and children is likely due to high levels of parenting stress, which harms resolving conflicts between them. When children exhibit symptoms of depression and anxiety, problem behaviors are more likely to arise, further increasing parenting stress (Rodriguez & Green, 1997). According to Fite et al.'s (2008) research based on Sameroff's transactional model, they found that parenting stress may not be a direct factor that has negative effects on the physical and mental development of young children, but rather, it may serve as a mediating role. Parenting stress may impact the physical and mental development of young children through its influence on parental self-efficacy and parenting styles.

Therefore, parents who have more difficulties in dealing with children's dependence on new media products may be more likely to experience parenting stress. Parents who face greater stress may find it more challenging to actively participate in their children's daily activities and to comprehend their emotional

changes. The low-quality function of parenting stress may exacerbate the negative effects of young children's dependence on new media product use, leading to an increased likelihood that young children will adopt negative strategies to regulate their negative emotions. Furthermore, the possibility of using effective emotion regulation strategies is reduced, thereby leading to more frequent utilization of negative emotion regulation strategies. Therefore, we hypothesize that:

1) There is a significant positive correlation between young children's household screen media experience and parenting stress, and a significant negative correlation between household screen media experience and emotion regulation strategies in young children.

2) Parenting stress plays a significant mediating role between household screen media experience and emotion regulation strategies.

2. Methods

2.1. Participants

A questionnaire was conducted on 370 parents of preschoolers (197 boys and 173 girls) aged between 3 and 7 years old ($M = 4.62$, $SD = .986$) from a public kindergarten. Only children without any known or reported psychological abnormalities were included in the study. This criterion ensured that the sample consisted entirely of typically developing children, minimizing the potential confounding effects of pre-existing psychological conditions on the research outcomes. The human material or human data were performed in accordance with the Declaration of Helsinki. The study was approved by the ethical committee of Jiangsu Normal University. 370 valid responses were collected.

2.2. Tools and Scoring

2.2.1. Household Screen Media Experience Scale

Household screen media experience was assessed through any form of digital screens, such as smartphones, iPads, televisions, and computers, measured using the survey instrument developed by Xie, Wang, Zhou, and Frankie (2022). The scale includes four subscales with a total of 11 items. The first subscale consists of two items, inquiring about the frequency per week (ranging from "0 - 5 times" to "more than 16 times") and the duration of each screen media use (ranging from "within half an hour" to "one and a half hours to more than two hours"). Participants can choose the most accurate description from four options, scored from 1 to 4. The second subscale consists of three items, assessing the impact of screen experience on children's behavior. The impact includes questions such as "Does your child use screen media while eating?" The third subscale evaluated children's emotional expression related to screen media, including three items such as "If your child's screen experience is interrupted, will he or she get angry or conflict with others?" The final subscale assessed parents' behavior, including three items such as "Would you use smartphones or iPads to soothe your child's emotions?" The last three subscales were measured based on frequency, using a

4-point Likert scale ranging from 1 (always) to 4 (never). The sum of all responses constituted the total score for this measurement, with a potential range of 9 to 36. The total score is 11 to 44; a higher score indicates a higher degree of family screen media experience for children. The internal consistency coefficient (Cronbach's $\alpha = .73$) for this scale indicates satisfactory reliability.

2.2.2. Parenting Stress Questionnaire

The Abidin Parenting Stress Index (short form) was utilized in this study (Abidin et al., 2006). The questionnaire consists of 36 items, which are grouped into three dimensions: dysfunctional parent-child interaction, childcare stress, and difficult children. Each dimension contains 12 items. Childcare stress is directly related to child-rearing. In this situation, parents may feel a decrease in their ability to raise their children or a lack thereof, leading to an increase in conflicts between spouses. Additionally, their other roles in life may be limited, and they may lack social support and experience depressive symptoms. Dysfunctional parent-child interaction refers to the interaction between parents and children, in which parents perceive that their children have not met their expectations. They are unlikely to perceive their children's progress and feedback, thereby leading to disappointment and dysfunction in the parent-child relationship. Difficult children refer to children who cause parents stress due to certain troubling and concerning characteristics, such as the children's emotions, adaptability, activity level, problem behavior, as well as learning resistance, disobedience, and dissatisfaction, which makes child rearing difficult. This questionnaire adopts a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), and the higher the score, the greater the parenting stress. The internal consistency coefficients (Cronbach's α) of each dimension range from .789 to .878, indicating satisfactory reliability.

2.2.3. Emotion Regulation Strategies Questionnaire

The study employed the "Preschool Children's Emotion Regulation Strategy Questionnaire" developed by Southwest University (Lu, 2011). This questionnaire consists of 48 items, divided into eight dimensions. Positive emotion regulation strategies include five dimensions, and negative emotion regulation strategies include three dimensions. Three dimensions of negative emotion regulation strategies are selected: passive coping (6 questions), emotional outbursts (7 questions), and aggressive behavior (4 questions). The scale is rated on a 5-point Likert scale ranging from 1 (never) to 5 (always), and the three dimensions are scored separately. The higher the score, the stronger the child's ability to use emotion regulation strategies, which is indicative of a lower occurrence of negative strategies utilized during emotion regulation. Before filling out the questionnaire, parents are requested to make an assessment based on the actual situation of the child, with a foundation of comprehensive understanding.

The operational definitions for each dimension are as follows: firstly, passive coping refers to the situation where the child does not know how to deal with

negative emotions, and may even exhibit a non-action state by avoiding or withdrawing from the situation; Secondly, emotional outburst refers to the child's expression of negative emotions through means such as yelling or crying; aggressive behavior refers to the child's attempt to relieve and release negative emotions by using verbal or behavioral means to attack others. The internal consistency coefficient (Cronbach's $\alpha = .75$) for this questionnaire indicates satisfactory reliability.

2.3. Statistical Methods

SPSS 23.0 was used for data management, descriptive statistics, independent sample *t*-tests, and correlation analysis. Amos 24.0 was used for testing the reliability and validity, mediating effects, and examining relationships among latent attributes with structural equation modeling (SEM).

3. Results

3.1. Parents' Socio-Demographic Information Data

Table 1 provides that 19.5% of the mothers and 23.2% of the fathers had an education level of junior high school or below, while 49.2% and 50% had completed high school or college, and 27.6% and 30.5% had a bachelor's degree or above. The majority of the parents held a high school diploma or above, and this also represented the median value for parents' level of education. The socio-demographic information of the parents was included as a control variable.

3.2. Common Method Biases

To reduce common method bias, this study employed several additional steps, including ensuring the anonymity of respondents' answers, adopting a uniform introduction, and incorporating reverse-coded items on questionnaires. To test common method bias, Harman's single-factor test was conducted, and 26 factors with eigenvalues greater than 1 were extracted from the exploratory factor analysis (EFA) results after rotation. The maximum variance explained was 16.17%. Based on the results, it can be concluded that there was no significant common method bias.

3.3. Reliability and Validity Test

Table 2 shows that SPSS23.0 and Amos24.0 were used to conduct reliability and validity tests on the measurement model. Standardizing factor loadings, Cronbach's α , composite reliability (CR), and average variance extracted (AVE). It can be seen that Cronbach's α of each variable is greater than .6, the composite reliability (CR) is greater than .8, and the average variance extracted (AVE) is greater than .5, indicating that the scale has good convergent validity and internal consistency.

3.4. Descriptive Statistics and Correlation Analyses

Firstly, descriptive statistics were conducted on the observation values of young

Table 1. Basic information on sample size.

Item	Option	Frequency	Percentage (%)	Cumulative Percentage (%)
Gender	Males	197	53.24	53.24
	Females	173	46.76	10.00
Age	4	53	14.32	14.32
	5	110	29.73	44.05
	6	129	34.86	78.92
	7	78	21.08	10.00
Role	Father	66	17.84	17.84
	Mother	304	82.16	10.00
Mother's educational background	No Education	3	.81	.81
	Primary School	10	2.70	3.51
	Junior High School	73	19.73	23.24
	High School or Technical School	104	28.11	51.35
	College	78	21.08	72.43
	Bachelor's Degree	90	24.32	96.76
	Master's Degree or above	12	3.24	10.00
Father's educational background	No Education	1	.27	.27
	Primary School	5	1.35	1.62
	Junior High School	66	17.84	19.46
	High School or Technical School	112	3.27	49.73
	College	73	19.73	69.46
	Bachelor's Degree	97	26.22	95.68
	Master's Degree or above	16	4.32	10.00

Table 2. Standardizing factor loadings, Cronbach's α , CR, AVE.

Latent Variable	Observed Variable	Factor Loading	Cronbach's α	CR	AVE
Emotion Regulation Strategies	Passive coping	.603	.656	.802	.579
	Aggressive behavior	.828			
	Emotional outbursts	.830			
Parenting Stress	Childcare stress	.809	.806	.869	.689
	Dysfunctional parent-child interaction	.836			
	Difficult children	.844			

children's household screen media experience, emotion regulation strategies, and parenting stress (i.e. total scores of corresponding items in each dimension). Subsequently, correlation analyses were performed on the latent factors of each dimension (see **Table 3**). According to the results, there is a significant positive correlation between household screen media experience and three dimensions of parenting stress. That is to say, the higher the experience of young children in using screen media, the higher the level of stress exhibited by their parents in these three dimensions. Furthermore, there is a significant negative correlation between household screen media experience and three dimensions of emotion regulation strategies. That is to say, the higher the experience of young children in using new media, the lower their ability to use emotion regulation strategies, as manifested in the higher frequency of passive coping, emotional outbursts, and aggressive behavior.

3.5. Mediation Analysis of Parenting Stress

According to the hypotheses, a model was established with young children's household screen media experience as the independent variable, parenting stress as the mediating variable, and emotion regulation strategies as the dependent variable (see **Figure 1**). As shown in **Table 4** ($X^2 = 20.887$, $X^2/df = 1.1741 < 3$, $GFI = .984 > .9$, $AGFI = .964 > .8$, $RMSEA = .045 < .08$, $NFI = .975 > .9$, $IFI = .989 > .9$, $CFI = .989 > .9$), the goodness-of-fit of the proposed model is reasonable. Furthermore, each observed variable and the latent variable's standardized regression coefficient are significantly positively correlated. The results

Table 3. Observation values and correlations.

	1	2	3	4	5	6	7	8	9
Household screen media experience									
Parenting stress	.343**								
Emotion regulation strategies	-.468**	-.541**							
Passive coping	-.198**	-.230**	.424**						
Emotional outbursts	-.443**	-.513**	.948**	.402**					
Aggressive behavior	-.292**	-.338**	.624**	.265**	.592**				
Difficult children	.293**	.856**	-.463**	-.196**	-.439**	-.289**			
Dysfunctional parent-child interaction	.276**	.805**	-.436**	-.185**	-.413**	-.272**	.689**		
Child stress	.225**	.655**	-.355**	-.150**	-.336**	-.221**	.561**	.528**	
M	2.987	82.324	73.109	23.665	31.235	18.208	28.314	23.173	3.838
SD	4.003	2.670	6.692	3.229	3.235	2.074	7.737	7.397	9.109

**p < .01.

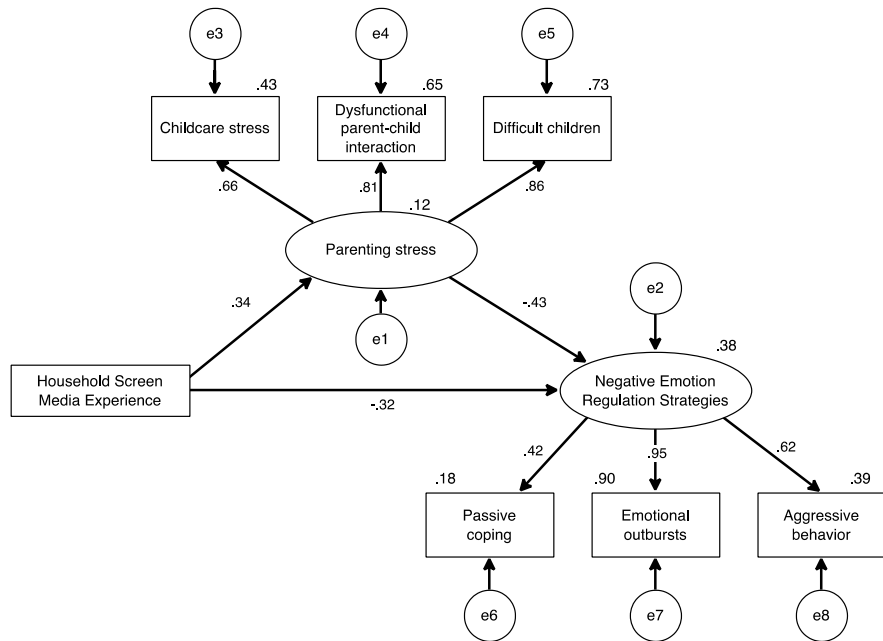


Figure 1. Latent variable model and path coefficients.

Table 4. Fit indices for SEM.

Fit Indices	Recommended Values	Fit Values
X^2	the smaller, the better	20.887
X^2/df	<3.0	1.1741
GFI	>.9	.984
AGFI	>.8	.964
RMSEA	<.08	.045
NFI	>.9	.975
IFI	>.9	.989
CFI	>.9	.989

indicate that household screen media experience has a significant negative predictive effect ($\beta = -.32, p < .01$) on the ability of young children to use emotion regulation strategies, while it has a significant positive predictive effect ($\beta = .34, p < .01$) on parenting stress. Parenting stress has a significant negative predictive effect ($\beta = -.43, p < .01$) on the ability of young children to use emotion regulation strategies. The mediating effect of parenting stress on the relationship between household screen media experience and the use of emotional regulation strategies in young children is significant. The Bootstrap method was used to further test the mediating effect. The results (see **Table 5**) show that the mediating effect value of parenting stress is $-.048$, with a 95% confidence interval of $[-.074, -.029]$, which does not include zero. Moreover, the confidence intervals for both direct and total effects do not include zero. Therefore, parenting stress partially mediates the effect, accounting for 31.6% of the total effect.

Table 5. Mediating effects of parenting stress.

Effect Parameter	Estimated Value	95% Confidence Interval		<i>P</i>
		Lower limit	Upper limit	
Indirect effect	-.048	-.074	-.029	.001
Direct effect	-.103	-.143	-.70	.001
Total effect	-.151	-.199	-.109	.001
Proportion of indirect effect	31.6%	.212	.460	.001

Significance indicated by bold p values.

This indicates that the emotion regulation ability of young children is significantly indirectly influenced by parenting stress about screen use. Therefore, young children with higher experience using screen media tend to have parents with higher levels of parenting stress, which in turn impacts the children's ability to regulate emotions. The direct impact of household screen media experience on the emotion regulation ability of young children is statistically significant. It indicates that even after controlling for parenting stress, young children with higher levels of screen usage are more likely to have weaker emotion regulation abilities. The higher levels of parenting stress in the household are associated with weaker emotion regulation ability, which further impacts parental decisions regarding their children's screen use, leading to more media experience for preschoolers.

To further explore the effect values of the latent variables of the mediator and dependent variables, the Bootstrap method (with a sampling frequency of 2000) was employed to further examine the mediating effects of each observed variable path (see **Table 6**).

The results indicate that there is a significant mediating effect in the relationships among household screen media experience, passive coping strategies for emotion regulation, as well as childcare stress and difficult children in parenting stress. Additionally, there is a significant mediating effect in the relationship among household screen media experience, emotional outbursts strategies for emotion regulation, as well as difficulty children in parenting stress. Finally, there is a significant mediating effect in the relationships among household screen media experience, aggressive behavior strategies for emotion regulation, as well as dysfunctional parent-child interaction in parenting stress. When household screen media experience affects passive coping strategies for emotion regulations, the mediating effect values of childcare stress and difficult children are $-.026$ and $-.039$, respectively, with confidence intervals that do not include zero and $p < .01$. The effect sizes are 15% and 22.4%, respectively. When household screen media experience affects emotional outbursts strategies for emotion regulations, the mediating effect value of difficult children is $-.066$, with a confidence interval that does not include zero and $p < .01$. The effect size is 18.2%.

Table 6. Specific indirect effect test (bootstrap method).

Path	Estimated Value	95% Confidence Interval		<i>p</i>	Effect Sizes
		Lower limit	Upper limit		
H - C - P	-.026	-.060	-.005	.01	15%
H - Dp - P	.007	-.027	.049	.638	-4.2%
H - Dc - P	-.039	-.082	-.010	.005	22.4%
H - C - E	-.006	-.031	.015	.503	1.8%
H - Dp - E	-.018	-.059	.014	.268	4.9%
H - Dc - E	-.066	-.114	-.033	.000	18.2%
H - C - A	-.003	-.020	.011	.692	2.1%
H - Dp - A	-.032	-.067	-.002	.032	24.2%
H - Dc - A	-.009	-.034	.012	.367	6.5%

H: Household screen media experience, C: Childcare stress, P: Passive coping, Dp: Dysfunctional parent-child interaction, Dc: Difficult children, E: Emotional outbursts, A: Aggressive behavior; Significance indicated by bold *p* values.

When household screen media experience affects aggressive behavior strategies for emotion regulations, the mediating effect value of dysfunctional parent-child interaction is $-.032$, with confidence intervals that do not include zero and $p < .01$. The effect size is 24.2%.

4. Discussion

The relationship between household screen media experience and children's social-emotional development is complex. Initially, research in this area primarily focused on investigating the relationship between television experience and behavioral outcomes during early childhood. Concerns were raised regarding violent content (Li et al., 2020), prolonged exposure (Verlinden et al., 2012), and replacement of other activities such as play (Lee et al., 2021) or sleep (Vijakkhana et al., 2015) harming children's behavioral regulation and social skills. However, recent research has also shown that children's social and emotional characteristics may affect their media experience habits. Previous cross-sectional and longitudinal observational studies have indicated that young children's emotional regulation problems (Radesky et al., 2014), excessive crying (Thompson et al., 2013), disruptive behavior (Nikken & Schols, 2015), energetic temperament (Nabi & Krcmar, 2016), and negative emotions (Domoff et al., 2017) are associated with a higher level of household screen media experience. In this study, we examined the correlations among the children's household screen media experience, their ability to regulate emotions, and parenting stress. Specifically, we investigate the potential mediating effect of parenting stress on the relationship between young children's exposure to screen media at home and their emotion regulation skills. In the current study, we found that the increased household screen media experience of young children is an indicator of greater difficulties

in emotion regulation, which is mediated by the higher level of parenting stress. A previous study has found that children with early behavioral regulation problems generally use more media, spend more time on mobile devices, and use media more frequently alone (Chen et al., 2020). Furthermore, multiple studies have attempted to explore the nature of the mediating pathways linking parenting stress to important child outcomes. It is indicated that the impact of parenting stress on negative child outcomes is mediated through its influence on parental behaviors. This describes a process in which the experience of parenting stress influences the nature of parental behavior, potentially resulting in greater negativity, more intrusiveness, less positivity, and less sensitivity. In turn, these less-than-ideal parental behaviors can lead to more developmental problems for children (Anthony et al., 2005). When the parenting stress increases, it is accompanied by a high-pressure nurturing environment for young children, which makes the children more difficult for them to regulate their own emotions, thereby increasing the parenting stress of parents. As a result, parents choose to provide their children with increased access to screen devices as a means of alleviating their anxiety stemming from perceived educational inadequacies (Kabali et al., 2015).

The study concludes that excessive household screen media use increases parenting stress and negatively affects young children's emotion regulation. Therefore, parents should pay significant attention to reasonable screen media use at home. Previous studies indicate that parents' smartphone usage patterns can influence their children's excessive smartphone use (Cho & Lee, 2017). Therefore, many countries and regions have established corresponding measures. For example, Taiwan revised its laws in 2015, suggesting that children aged 2 and above should not use electronic products for more than 30 minutes at a time. Parents are also advised to avoid electronic product use for children under two years old. Furthermore, the American Academy of Pediatrics (AAP) advises against new media use for children under 18 months, except for social chat. For children aged 2 - 5 years, screen time should be limited to less than one hour per day with high-quality programming.

This study has some limitations. Firstly, this study takes parenting stress as a mediating variable, which can only represent one aspect of family parenting research. Apart from parenting stress, the factors such as the quality of the parent-child relationship, and parental support for children's learning have not been included in the study. Secondly, no longitudinal comparisons could be made because this study took a cross-sectional design. Future studies can use longitudinal designs to follow up on the long-term effect of household media use on children's emotional regulation. Finally, though parents' educational level information was collected and controlled in the model, we did not collect information on the family's annual income and parents' occupation. In the future, researchers could collect this information and control them in the model to increase the validity of the conclusions.

Therefore, future research can continue to explore the relationship between family environment, young children's household screen media experience, and their emotion regulation abilities. This can be achieved through longitudinal designs and considering a more comprehensive range of variables, to provide a more thorough and accurate understanding. Additionally, investigating the influence of family socioeconomic status and parental occupation can also contribute to further understanding the impact of these factors on children's development.

5. Conclusion

The study concludes that excessive household screen media use increases parenting stress and negatively affects young children's emotion regulation. Therefore, parents should pay significant attention to reasonable screen media use at home. Previous studies indicate that parents' smartphone usage patterns can influence their children's excessive smartphone use (Cho & Lee, 2017). Therefore, it is necessary to establish appropriate measures to restrict children's screen media use. For example, Taiwan revised its laws in 2015, suggesting that children aged 2 and above should not use electronic products for more than 30 minutes at a time. Parents are also advised to avoid electronic product use for children under two years old. Furthermore, the American Academy of Pediatrics (AAP) advises against new media use for children under 18 months, except for social chat. For children aged 2 - 5 years, screen time should be limited to less than one hour per day with high-quality programming.

Conflicts of Interest

There are not any interests or disputes in this article.

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