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## **Guiding young children's internet use at home: Problems that parents experience in their parental mediation and the need for parenting support**

Peter Nikken<sup>1</sup>, Jos de Haan<sup>2</sup>

<sup>1,2</sup> Erasmus School of History, Culture and Communication of Erasmus University Rotterdam, The Netherlands

### **Abstract**

*Using an online questionnaire among 785 parents (children 0-7 years) in the Netherlands we investigated a) whether parents experience problems when guiding children's digital media usage, b) whether they feel competent in dealing with these problems, c) whether they need parenting support, and d) how these problems, competences and need for support are related to the characteristics of the parents, the family and the child. The analyses reveal that the parents' experiences of problems is associated with negative views on media effects, the presence of older siblings living at home and occur especially when their child is active on social media. Parents' feelings of competence are enhanced by positive views on media effects, older children being present in the home, and the involvement of the young child in educational games and media skill level. Parents feel less confident if their child is active on social media. Support is primarily dependent on the level of problems at hand. Moreover, professionals are consulted especially when parents feel less competent, their child is active on social media and no older siblings are present at home. Parents ask family or friends for advice when they have a negative view on media effects.*

Keywords: parental mediation, parenting support, media diffusion

### **Introduction**

New media technologies are found in family households at an ever-faster rate, fundamentally transforming how parents and children live, work, play and communicate (Livingstone, Haddon, Görzig, & Ólafsson, 2011; Takeuchi, 2011). Even very young children under 8 years can be avid users of electronic gadgets (Gutnick, Robb, Takeuchi, & Kotler, 2011; Ofcom, 2014; Plowman, McPake, & Stephens, 2010). The ubiquitous presence of media at home may, however, pose a strain on parents with young children. Almost a decade ago, Abelman (2007) already noted that as more television sets and VCRs became available, channel number and cable access grew, and as broadcast network options increased over the years, parental control over television and family co-viewing decreased dramatically. With the expansion of handheld, mobile devices and the recent introduction of easy to use devices such as tablets, parental control over children's media use at home has probably become further complicated.

As far as we know, there are no studies that examine whether parents of young children experience any problems in controlling their children's media use, whether they can cope with the guidance about their children's media use, and whether they are in need of information sources to find solutions for their mediation concerns. In order to fill this void we used a survey conducted in the Netherlands in 2014 to explore to what extent parents of children aged 0 to 7 years perceive problems in regulating their children's use of digital media. We also investigated whether they feel competent to cope with these problems during their mediation practices, and whether they use sources of information and advice when they are in need of support for their mediation activities. In order to achieve a deeper understanding of which parents find mediation most troubling or are more in need of support, we related the mediation

problems, competences and search for advice to the parent's and child's demographics, contextual factors of the family situation, the parent's views on media for children, and the child's use of media. Based on former parental mediation studies we expect relationships between these characteristics and trying to cope with any problems in parental mediation. In the next section we will discuss these expectations in more detail. We seek to advance the knowledge on effective mediation through exploring the mechanisms at work behind differences in parents' mediation problems. This leads to the following research questions:

1. What types of problems do parents perceive as regards the way they mediate young children's digital media use and how serious are these problems for the parents?
2. To what extent do parents perceive themselves competent in their mediation practices?
3. Which sources of information regarding the mediation of children's media use do parents of young children consult and to what extent do parents use these sources?
4. Which characteristics of the parent, the family context, and the child predict the seriousness of the problems in mediating young children's media use, the parent's competence, and the parent's use of information?

## **Theoretical Background**

Parents are important for guiding their children's media practices. Numerous studies show that this guidance determines the child's media induced learning, play, and social development. Parents, for example, craft specific domestic media spaces for children (Ito et al., 2010), such as providing children with their own constellations of media in their bedrooms either for relaxation or other practical benefits (Haines et al., 2013; Nikken & Schols, 2015; Takeuchi, 2011; Vaala & Hornik, 2014; Vandewater et al., 2007). In addition, parents also develop various routines for guiding children's media use, largely described as 'parental mediation', which Warren (2001) defined as 'any strategy parents use to control, supervise or interpret media content for children' (p. 212). Several studies on parental mediation have shown that these routines or strategies can be divided into restrictive mediation, active mediation, co-use, supervision, monitoring, and the use of technical restrictions or parental controls (see for example: Böcking & Böcking, 2009; Livingstone & Helsper, 2008; Nikken & Jansz, 2006, 2013; Sonck, Nikken, & de Haan, 2013; Valkenburg, Krmar, Peeters, & Marseille, 1999).

Parental mediation studies have demonstrated that the extent to which parents guide their children's media use and which strategies they apply are related to the characteristics of parents and children (such as educational level, age, gender, media skills) (e.g., Böcking & Böcking, 2009; Nikken & Jansz, 2006, 2013; Nikken & Schols, 2015; Valkenburg et al., 1999). Mothers are usually more involved than fathers, lower educated parents tend to be more restrictive, whereas higher educated parents usually apply more active mediation, and girls and younger children are more often subjected to mediating attention than boys and older children. Parental mediation research has also convincingly shown that parents vary their mediation strategies in accordance with their views on both the positive and negative effects of the media on children. On the one hand, parents may regard media as providing an important opportunity for relaxation or learning (Takeuchi, 2011; Vaala & Hornik, 2014). At the same time, however, parents may also be concerned, perceiving media as a barrier to shared family time or as a threat to the child's health and development (Duimel & Meijering, 2013). Parents who are concerned about risks and harm deliberately limit the amount of electronic screens in the house in favor of free play and creative activities (Ito et al., 2010). Moreover, they may also try to protect their children by critically supervising the child, talking to the child about media content, monitoring the child's digital whereabouts, or applying restrictions to the content accessed or the length of time of media use, whereas parents who feel that the media offer educational or entertainment opportunities more often co-use the media with their child or actively discuss the content (e.g., Nikken & Jansz, 2006, 2013; Sonck et al., 2013; Valkenburg et al., 1999; Warren 2003). Both negative and positive expectations may trigger a greater involvement of parents and thus increase their awareness of potential and actual problems.

Although most parents have the intention to invest effort in their children's media use, sometimes they may find it difficult to do so. All parents at various moments in their parenting career experience some level of stress which is determined by different factors relating to the parent, the family context and the child (Belsky, 1984). These factors, such as family size, marital status or income level, may hamper the parent's involvement in child raising in general, including the allocation of time and effort given to the guidance of their children's media use (e.g., Böcking & Böcking, 2009; Nikken & Jansz, 2006, 2013; Valkenburg et al., 1999; Warren, 2001, 2003). For single parents or parents with more children living at

home, for example, it is less easy to devote enough time and effort to all children or to give the same attention to firstborns, middle children or the youngest children (Blake, 1981; Caceres-Delpiano, 2006). In addition, not all parents are tech-savvy in a progressively digital environment. From previous research we know that parents experience more problems in raising their children when they are less confident about their parenting skills, when they are less capable of reflecting on their parenting situation, and when they do not have an adequate social network to turn to for support or advice (Notten & Kraaykamp, 2009; Sanders, Markie-Dadds, & Turner, 2003). It is very likely that this also holds true for problems with children's media use. We, therefore, expect that parent, family context and child characteristics will be related to experiencing problems in the mediation of children's media use, levels of competence and the parent's need for support.

Finally, the number of media screens at home is also a significant factor affecting the extent and types of mediation that parents can apply on the child's media use. With more screens in the house and more media content on offer for children mediation may become more difficult. Parents, indeed, decrease their control, discuss media content less often with children, and co-use the media less often with their children when there are more screens in the home (Abelman, 2007, Nikken & Jansz, 2013). On the other hand, some parents deliberately favor certain media platforms over others because of their educational value or else they specifically acquire the latest high-tech devices for their children educational benefit or because these devices offer them opportunities to engage more deeply in shared play and learning with their children (Chiong & Shuler, 2010; Takeuchi, 2011). More screens at home also suggests a longer history of use by the owners, more familiarity with the equipment and therefore more digital skills to handle media related problems (Huysmans & De Haan, 2010). We expect that the associated higher level of skills induces greater feelings of confidence with media devices and less need for support if problems occurring. This may hold true especially for equipment that is used primarily by parents, such as laptops or desktop computers, to a lesser degree for equipment that is used by parents and children together, such as tablets, and hardly at all for digital toys designed for and primarily used by children, such as game consoles. Since certain types of media, such as handheld or console based game devices, are specifically introduced into the home in line with the age of the child (Ofcom, 2014), we will explore whether the distribution of parent media devices, family media devices and child media devices is causing problems with the mediation of children's media use, levels of competence and need for support.

By and large, parental mediation studies measure the mediation strategies of parents by their frequency. There is little in depth research into the concerns that parents may have regarding the mediation of their children's use of connected technology and their related information seeking activities. As far as we know, only Davis (2012) presented parents who had children aged 8 years and older with 12 types of media threats and 3 a priori defined approaches for information seeking: protective (before mediation problems had occurred), problem-solving (after a problem had occurred), or attentive (not deliberately seeking for information). The media threats were seen on average as being moderately problematic, with accidental exposure to pornography and sexual content in internet-based entertainment being the two most problematic issues for a parent to deal with. Parents who perceived media threats as being more problematic to mediate, more often used a problem-solving approach, i.e. they looked for support after they had experienced that their child was at risk. Furthermore, concerned parents mostly turned to friends and family or to presentations at parent-school meetings for advice, whereas website sources with information on digital safety were hardly visited. A recent Dutch study of professionals in the field of parenting-support corroborates the finding that parents regularly experience difficulties in mediating their children's media use (Duimel & Meijering, 2013, p.8). According to the professionals, parents are often concerned about the content of media productions that their children use, wondering if they are suitable or harmful and how they should mediate their child of this material. In addition, another distinctive concern relates to the vast amount of media production that children can now acquire. Parents, in particular, pose questions such as: 'How can I regulate the time that children spend using media?', 'From which age is it OK to do something with digital media?' or 'What counts as being normal media use for children?' In the present study we will explore the concerns that exist among parents with very young children and we will test which sources of information the parents use for addressing their mediation concerns.

## **Method**

### **Participants**

In the spring of 2014 an online survey was presented to 3,262 parents in the Netherlands who had at least one child aged 0 to 7 years old living at home, to which 1,156 parents reacted. The parents were recruited via the *Direct Research EUpanel* consisting of more than 30,000 members. After inspection of the data the records of 371 parents were deleted. These respondents did not differ from the parents in

the final sample with respect to their educational level or gender. The deleted parents, however, had primarily infants or toddlers living at home, and it was probably for this reason that they had indicated that the answering options on questions about mediation problems, media effects, and sources of information were not applicable to their situation. The final sample ( $N = 785$ ) contained somewhat more mothers than fathers (see Table 1). In addition, parents with older children were overrepresented: 11% of the parents had children 0 or 1 years old, 21% 2 or 3 years, 33% 4 or 5 years, and 35% 6 or 7 years. As compared to the general Dutch population (CBS, 2013), our sample also contained somewhat less lower educated (22% versus 30%) and somewhat more middle educated parents (49% versus 42%).

*Table 1. Descriptives for Dependent and Independent Variables ( $N = 785$ ).*

	Range	Mean	SD	Reliability
Parental mediation problems	0-4	2.51	0.74	$\alpha = .96$
Parental mediation competence	1-5	3.84	0.67	$\alpha = .89$
Consultation of professional sources	0-5	1.59	0.81	$\alpha = .92$
Consultation of friends and family	0-5	2.44	1.00	$r = .71$
Parent characteristics				
Educational level	1-3	2.07	0.71	
Gender (1 = mother)	0-1	0.55	0.50	
Positive views on media	1-5	3.47	0.53	$\alpha = .89$
Negative views on media	1-5	3.46	0.51	$\alpha = .70$
Family characteristics				
Other younger children at home (1 = yes)	0-1	0.42	0.49	
Other older children at home (1 = yes)	0-1	0.35	0.48	
# Parent media devices at home	0-10	2.91	1.57	
# Child media devices at home	0-9	2.17	1.89	
# Family media devices at home	0-8	2.93	1.51	
Child characteristics				
Age	0-7	4.38	2.02	
Media skills	1-4	2.43	0.71	$\alpha = .78$
Time spent on media (minutes per day)	0-225	75.18	71.94	
Media-activities				
Action games	1-5	1.90	0.77	$\alpha = .73$
Educational games	1-5	2.62	0.72	$\alpha = .78$
Watching/listening to films	1-5	2.40	0.78	$r = .23$
(Video) communication	1-5	1.74	0.67	$r = .28$
Social media	1-5	1.30	0.60	$\alpha = .85$

## Procedure

In the online questionnaire, one of the parents was asked to answer all questions, keeping in mind the oldest child within the age range of 0 to 7 years living at home. Answering all questions took on average about 15 minutes.

## Measures

**Dependent variables.** The extent to which parents encounter problems in their daily parental mediation activities was measured with 11 examples of potentially troubling situations or concerns, e.g., 'How old should my child be before he/she can go online by him/herself', 'How can I decide whether websites, apps, or games are suitable', 'How much time can my child spend on media per day', 'How can I best control my child's media use'. Answering options varied on a 5-point scale from 'This concern is not at stake at all' to 'This concern is very much at stake' in the upbringing of my child. The troubling situations were derived from the explorative study by Duimel and Meijering (2013) and the Dutch website

*mediaopvoeding.nl* where parents can consult experts if they have concerns, worries or questions about parental mediation and the use of media by their children.

To measure the parent's competence in mediation parents indicated how difficult or easy they felt 5 activities were in their parenting situation, i.e., 'Making rules about the internet use of your child', 'Starting a conversation about the risks on the internet', 'Talking about reality and fantasy in digital media', 'Helping your child when he/she is frightened by scary digital media' and 'Preventing nagging behavior after seeing advertisements for chocolate or toys'. Answering options varied on a 5-point scale from 'Very difficult' to 'Very easy'.

To determine the extent to which parents look for advice when they are concerned about the mediation of their child's media use 10 sources of information were presented, such as teachers or professionals in child care, relatives, friends, neighbors, professionals in parenting support centers, librarians, magazines on parenting, several specialized websites on parenting, contacts by means of social media, and search engine Google. Parents indicated how often they consulted these sources if they were concerned about their child's media use on a 6-point scale varying from 'Never' to 'Very often'.

**Independent variables.** Parental perceptions about media for children were measured on 5-point scales ranging from 'Fully disagree' to 'Fully agree'. We presented 13 items on *positive* views (e.g., 'Media use is good for my child's school career', 'Media are good for my child's development', 'Media can teach my child many things', 'My child becomes quiet when he/she uses media) and 6 items on *negative* views (e.g., 'Media can confront my child with inappropriate types of content', 'Media can lead to my child being in contact with the wrong kind of persons', 'Digital media are too complicated for my child', 'Normal toys are better for my child than digital media'). The scales were constructed after a principal component analysis confirmed the division into two types of perceptions.

For 13 types of media devices we asked how many of them were available at home, with answering options varying from 0 to 4 or more. Within this broad pallet of devices we decided to select three types which both theoretically, and based on surveys on media in the house (e.g., Ofcom, 2014), were used by mainly adults, both adults and children and mainly children within the family context. As such, three devices were selected as typical devices for grown-ups: laptops (1.37 per house), personal computers (0.81), and cell phones (0.73). As typical children's devices we choose game consoles (0.92), handheld game consoles (0.76), and children's laptops such as Vtech's (0.49). The digital media that are generally used by both parents and young children were tablets (1.18) and smartphones (1.74). Scales were constructed for each type of device by summing the number of the defining devices that were available at home.

The average number of hours and minutes spend on media per day, according to the parents, was used as an indication of how long children would use media devices at home. Because some children had very high average scores, *outliers* were recalculated to a maximum of 3 times the SD (cf. Kline 2011). In addition, using 5-point scales ranging from 'Never' to 'Always', we also asked how often children used digital media for various types of content: *action games* (e.g., adventure games, shooting/fighting games); *educational games* (e.g., drawing games/coloring, memory games, puzzles); *social media* (SMS, WhatsApp, chat activities); *video-communication* (contact via Skype/Facetime, calling others on the phone); and *watching/making movies* (photo's, movies/clips on YouTube).

Following Nikken and Schols (2015), the child's skills in using digital media were measured with 8 statements about handling a device or an application, e.g., 'Can find certain websites on the internet by him/herself', 'Knows how to start a game or application by him/herself', and 'Is capable of closing pop-ups or other unwanted screens by him/herself'. Answering options varied on a 4-point scale from 'Not applicable at all for my child' to 'Fully applicable'.

Finally, the key demographics of the parents are their gender and educational level, which was categorized as *low*, *average*, or *high*. Other background characteristics were the age of the child, the presence of other children older than 7 years living at home, and the presence in the home of other children younger than the child under investigation.

## Results

### Perceived Problems in Parental Mediation

The mediation problems that are relatively often perceived by parents include concerns about the normal amount of time for a child to spend on media per day, the way to recognize appropriate websites, apps or games, the best way to control the daily use of media by a child, the best ways to help a child when he/she is engaged in media, and how to guarantee online safety (see Figure 1). For each of these items at least 2 out of 3 parents said this concern is (very much) an issue in their daily mediation practice. Moreover, 78.4% of the parents mentioned that at least one of the 11 problems was (very much) an issue in their situation, whereas parents on average recognized 6.8 concerns as a problematic in their parenting situation.

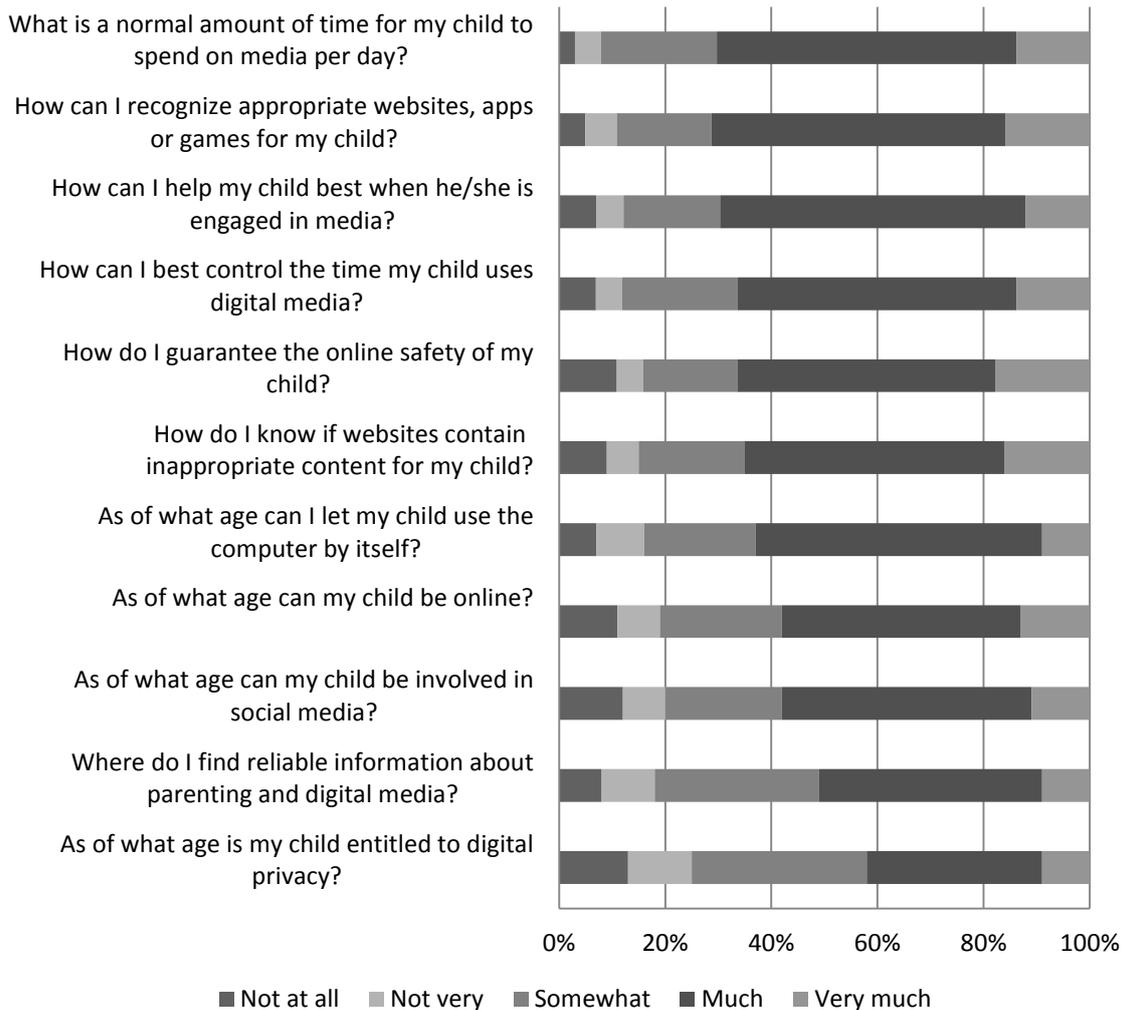


Figure 1. Extend to which several potentially troubling situations or concerns are at stake in parents' mediation practices.

In order to test whether parents perceived distinct types of problems; a principal component analysis was performed on the data regarding individual items. This analysis resulted in two factors, suggesting different types of problems. However, the items that defined each factor did not represent theoretically interpretable types. Both factors were defined, for example by items relating to concerns about inappropriate or unsafe content, or about a suitable age to start using media in some form. Since we could not distinguish two distinct types of problems, we decided to average all items into one scale, labelled *parental mediation problems*.

## Parental Mediation Competence

Parents on average felt rather competent in their mediation activities. This was true for each of the 5 situations presented to the respondents. It should be noted, however, that almost 1 out of 8 parents indicated that they perceived the mediation of their child to be 'somewhat' or 'very' difficult. Moreover, all items correlated highly (Pearson's  $r$  on average is .55, varying from .43 to .75), indicating that when parents could not perform one type of mediation easily, they also had difficulty in performing the other activities. Since a principal component analysis also indicated that all items loaded high on one single factor that explained 64.2% of the variance, we averaged the 5 items into one scale representing the parent's mediation competence ( $\alpha = .89$ ).

## Use of Information Sources

In order to see whether parents distinguish different types of sources of information a principal component analysis was used on the items that measured how often the sources of information were used by the parents when they had concerns about their parental mediation. According to this analysis parents perceive two types of information sources. The first factor which explained 60.3% of the variance, related to professional sources, i.e., knowledgeable individuals, organizations and media. The second factor which explained another 11.5% of the variance related to non-professional sources, i.e., family members and friends or acquaintances. Since neighbors had factor loadings higher than .45 on both factors, we deleted this item when constructing the scales 'Use of professional sources' and 'Use of family and friends'. Each scale was constructed by averaging the scores of the items that defined the factor.

According to a  $t$ -test parents turn significantly more often to family and friends when they are in doubt about their mediation practices as compared to consulting professional sources,  $t(784) = 27.84$ ;  $p < .001$ .

## Prediction of Parental Mediation Problems and Competences

Hierarchical regression analyses were used to test which characteristics of the parents, children and family context determined the perceived problems in the parent's mediation practices and the parent's mediation competences (see Table 2). Predictors were entered in three steps, but since there were no important differences between the three models, both for problems and for competences, we will discuss the final models only.

With regard to mediation problems the parents' views on the role of media for children appeared to be significant predictors. Parents, who perceive the media positively or even more so, negatively encounter more problems in their mediation practices compared to parents who have a more neutral view on the media's influence on their children. In addition, fathers tend to report somewhat more problems in their mediation practices than mothers. Regarding the family characteristics, parents in particular reported more problems when there also were older children living at home. Moreover, parents whose children are involved in social media more often say that they have problems in the mediation of their child's media use. Finally, parents experienced somewhat more problems in their mediation of older children and children who are more media skilled.

With regard to the parent's competence in mediating their child's media use, it appeared that parents who perceive media as being positive for children, have more faith in their mediation practices, whereas parents with a negative view on digital media are somewhat less confident about their mediation practices. Furthermore, parents also reported more competence when they have both other younger and older children living at home, and when there are more media devices that are typically used by parents in the house. Furthermore, in families that had more family media available (i.e., tablets/smartphones), parents were somewhat more confident about their mediation. Finally, parents who reported that their child is more skilled in using digital media and more involved in educational gaming appear to be more confident about their mediation practices, whereas parents feel less competent when their children are engaged in social media.

Table 2. Hierarchical Prediction of Parental Mediation Problems and Parental Mediation Competences by Parent, Family, and Child Characteristics (Standardized Beta Coefficients).

	Parental mediation problems			Parental mediation competence		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<b>Parent characteristics</b>						
Educational level	-.08*	-.06	-.04	.00	.01	.01
Gender (2=mother)	-.06	-.07	-.07~	.01	.01	-.04
Positive media effects	.18***	.13***	.07~	.26***	.21***	.14***
Negative media effects	.14***	.11**	.11**	.06	.04	.07
<b>Family characteristics</b>						
Younger children at home		.05	-.01		.16***	.08*
Older children at home		.29***	.20***		.23***	.18***
# Parent media-devices at home		-.00	-.02		.06	.09
# Child media devices at home		.04	.00		.05	.05
# Family media devices at home		.03	.02		.06	.06~
<b>Child characteristics</b>						
Age			.08~			.05
Media skills			.09~			.17***
Time with media per day			.02			.01
Action games			.04			-.07
Educational games			.04			.18***
Social media			.09*			-.18***
(video) communicating			-.06			.01
Watching/making films			.01			.00
<b>R<sup>2</sup></b>	.04	.12	.15	.06	.12	.19
<b>F</b>	9.94***	12.78***	9.04***	12.91***	13.16***	12.12***
<b>df</b>	5,780	9,776	17,768	5,780	9,776	17,768

Note: ~ $p < 0.100$ , \* $p < 0.050$ , \*\* $p < 0.010$ , \*\*\* $p < 0.001$ .

### Prediction of Parent's Use of Information Sources

To determine to what extent the consultation of professional and unprofessional information sources varies within the group of parents with children of 0 to 7 years, hierarchical regression analyses were once again used. In order to establish the unique contribution of the characteristics of the parent, the family context and the child, in a first step we entered mediation problems and mediation competences as additional predictors. In the next step the characteristics were entered. As Table 3 shows (see models 1), parents use both types of information sources significantly more often when they experience problems in their mediation practices. Furthermore, parents who are less confident about their mediation competences also turn more often to professional information sources. The prevalence of problems and the lack of competence explain respectively 20% of the variance for professional sources and 15% for advice from family or friends.

Professional sources, according to the second model, are more often consulted by fathers than mothers and by parents who only have one or more children up to 7 years old. In addition, professional sources are more often consulted by parents whose children are engaged in social media and in video communicating. Non-professional sources, like family and friends, are more often consulted for advice by higher educated parents and parents with a negative perception on media for children. Parents, however, turn significantly less often to their family members or friends when their child can use family media (tablets/smartphones) at home. In addition, parents tend to talk somewhat more with family members or friends about their mediation practices when their children are engaged in video communication.

Table 3. Hierarchical Prediction of the Consultation of Two Types of Parenting Support by Parent, Family, and Child Characteristics (Standardized Beta Coefficients).

	Professional parenting support		Family and friends' support	
	Model 1	Model 2	Model 1	Model 2
Parental mediation problems	.45***	.42***	.39***	.37***
Parental mediation competence	-.13***	-.10**	-.01	-.02
<b>Parent characteristics</b>				
Educational level		-.03		.09*
Gender (1=mother)		-.10**		.01
Positive media effects		.04		.04
Negative media effects		.00		.10**
<b>Family characteristics</b>				
Younger children at home		-.03		.02
Older children at home		-.15***		-.05
# Parent media-devices at home		.00		-.01
# Child media devices at home		.02		.02
# Family media devices at home		.01		-.10**
<b>Child characteristics</b>				
Age		-.03		-.04
Media skills		.02		.01
Time with media per day		-.04		.01
Action games		.04		.02
Educational games		.03		.05
Social media		.24***		.06
(video) communicating		.07*		.07~
Watching/making films		-.04		.03
<b>R<sup>2</sup></b>	.20	.29	.15	0.18
<b>F</b>	100.35***	18.21***	70.60***	10.18***
<b>df</b>	2,783	19,766	2,783	19,766

Note: ~ $p < 0.100$ , \* $p < 0.050$ , \*\* $p < 0.010$ , \*\*\* $p < 0.001$ .

## Discussion

The increasing complexity of the media landscape and the increasing younger age at which children start using new digital technologies potentially gives rise to a new set of educational problems for parents. Relatively little is yet known about how parents deal with concerns about their mediation of children's media use. In this article, based on a sample of 785 parents who have at least one child in the age of 0-7, we investigated whether parents experience problems when guiding the media use of their (young) children, whether they feel competent in dealing with these problems, and whether they make use of parenting support. In order to increase our understanding of differences between parents we also investigated how these mediation problems, competences and the need for support are related to characteristics of the parents, the family and the child. The results of these analyses may help professionals working in parenting support to target their programs towards specific parental groups in order to provide relevant information and improve the parent's mediation competences.

There are four main findings from our study. First, the media use of young children can put the parent in a potentially stressful situation on a daily basis. A very high proportion of the parents confirmed that at least one of the concerns we presented to them was an issue in the guidance of their children's media use. Second, the prevalence of problems in the parent's mediation practice was systematically associated with characteristics of the children, the family context, and the parent. Third, notwithstanding the concerns, most parents felt rather confident in their mediation capabilities. Yet 1 in 8 parents reported that they felt insecure when guiding their children's media use. Finally, parents did not make much use of parenting support, in particular the support provided by professionals.

With regard to the problems parents may encounter when guiding their children's media use, we found that the prevalence of perceived problems in mediating young children's media use was associated with predictors which actually may be interrelated, i.e. parental perceptions about the negative influences of the media on children, the presence of older siblings, the child's engagement in social media activities, and, to a lesser extent, the child's age and media skills. Since the presence of other younger children at home did not result in more mediation problems, these relationships indicate that parents in particular may encounter more problems when older siblings are interested in media that the parents find inappropriate for the younger child. Older siblings can provide an important role model for younger children (Barr & Hayne, 2003) and help to generate an interest in media content. However, even when children younger than 8 years are somewhat skilled in managing an electronic screen, they still lack the necessary cognitive and emotional skills. Therefore, they are more vulnerable to the risks associated with these media (Livingstone et al., 2011), creating a difficult situation for parents to handle. Concerns about the age at which younger children can be online or involved in social media too, are than very much prevalent. Future studies could focus more on the role of older siblings as a contributing factor to concerns in parental mediation.

With regard to the media behavior and media skills of the children, there may be a feedback mechanism at work in household interaction systems where parents and children learn from each other and parents build their own confidence and trust in their children's media behavior. The results indicated that the parent's confidence in their mediation practices is attenuated when the young child is engaged in social media, whereas it is enhanced when children are involved in educational gaming. This indicates the importance of the agency of the child for influencing the ease with which parents can guide their children's media use. The competence parents had in their mediation practices was also paralleled by the parent's perceptions about positive media effects, the presence of both older and younger children, and the presence of media devices aimed at adults only and at adults or children. As indicated above, parents may encounter more concerns with other older children at home, but former experiences in dealing with such problems may also support the parents in handling the problems with their younger children (e.g., During what times can they watch television or use the iPad? Can they use Instagram, like their older brother or sister used Facebook?). In addition, the variety of media equipment, in particular devices that are typically used by parents in the house (laptops, personal computers and cell phones) as well as devices used by parents and children (touchscreens), may contribute to feelings of confidence. Research on the diffusion of innovation suggests that forerunners, compared to late adopters, make an early start to develop necessary skills and capacities to deal with problems (Rogers, 2003). These differences in the timing of getting access to new technologies remain visible in the media use at later moments in time, even if wide groups of the population have access to the same technologies (Huysmans & De Haan, 2010).

On average parents did not make much use of the 2 types of information sources when they had concerns about their mediation practices. Family and friends were consulted more than professional sources, such as websites, books, magazines or TV shows on parenting, local institutions for parenting support, or teachers or other knowledgeable individuals. This pattern fits with results on the use of parent information regarding other problems that parents may encounter in raising their children (Davis, 2012). Family members or close friends are usually much easier to talk to when parents need advice as compared to official sources, for example, in parenting support centers. Furthermore, magazines or TV shows may not always be at hand or provide tailor-made support when parents are looking for answers. It is clear from the data that professional information sources are, however, used primarily by parents who encounter problems in their mediation as well as by parents who feel less competent in their mediation practices. In other words, when parents truly are concerned about the media use of their child and feel that they cannot handle that situation these parents are willing to turn to professionals. In addition, professional sources are mostly consulted by parents when the child between 0 and 7 years is the oldest child living at home and when the child, again, is more engaged in social media. Apparently, the media use of this child and having no earlier experience with older children prompts parents to find solutions for their mediation concerns in professional sources. This corroborates the finding that parental concerns mostly appear when children get engaged in new developmental activities that are also new for the parents (Prinsen et al., 2012). In particular, the use of social media by the young child, not only poses a problem for parents and is associated with less confidence in their mediation - it also leads parents to actively look for support for their parental mediation activities.

With regard to family members, it seems that they are sought out by the parents more to just exchange ideas and concerns, not with the intention that they should help them to become more competent in raising their children. The exchange of ideas and concerns with family members and friends is more prevalent among higher educated parents and parents with a negative view of how media might influence children. Possibly, higher educated parents expect other parents in their social network to experience the same type of problems and therefore want to share their emotions about these concerns. Moreover,

higher educated parents probably are able to better articulate their mediation solutions as compared to lower educated parents, since they are more skilled in using media themselves (De Haan, 2010) and are more knowledgeable about media and media systems (Paus-Hasebrink, Sinner, & Prochazka, 2014). Higher educated parents, thus, seem more capable in their use of the intellectual capital in their direct social network than lower educated parents, including when it comes to the mediation of children's media use (cf. Notten & Kraaykamp, 2009; Sanders, Markie-Dadds, & Turner, 2003).

Our findings have implications for practitioners in parenting support. First, it might be preferable that parents make more use of these professionals, as they should be more capable of providing the right information to parents than can friends or family members. Nowadays, parents have a wide variety of professional information sources to turn to, such as professionals in local organizations next to books, magazines, TV shows, and the Internet. In particular, the Internet is an easily accessible resource with more information than what is available through traditional sources for parents to utilize (Afifi & Weiner 2004). Professionals could, therefore, put more emphasis on reaching out to parents with attractive and useful information that relates to parents' concerns about children's media use, both in person and by means of online support. Second, professional parenting support for the mediation of young children's media activities could above all take account of the role of social media. Parents consistently reported more problems in mediation, felt less confident about their mediation, and had more need of support when their young child had an interest in the use of social media, such as WhatsApp, Instagram, Skype, Facebook or other communication applications available in online games. It showed that social media use in particular gave rise to problems amongst parents in mediating their children's media use, which may be explained by the fact that most social media applications are not intended to be used by children younger than 8 years. These applications contain a risk of being confronted with unknown persons on the Internet, which in particular applies to younger and less media experienced children (Livingstone et al., 2011). In fact, Nikken and Jansz (2013) noticed that parents of young children increased their restrictive and active mediation when children become older than 5 years and especially when these children are engaged in social media activities. Apparently, an early interest in social media by children under 8 years stimulates parents to apply more mediation, which is also accompanied by more concerns and less confidence in their mediation abilities. Third, initiatives aiming at media literacy and parenting support by professionals should also take account of the parent's feelings of competence. Providing plain information about media use in relationship to children's development may be useful for some parents, but practical support on *how* they should help their young child to use digital media seems just as important. Well informed and well equipped, confident parents can make better judgements as to which media activities suit the development of their particular child.

## Limitations

Our study is based on survey data that were collected during a media-literacy campaign aimed at parents of young children in the spring of 2014. A limitation of our sample is that relatively many parents with infants or toddlers were excluded because of incomplete data. The results should be interpreted with this drawback in mind. The data were also gathered online, which could pose the risk that primarily tech-savvy parents participated. However, since almost all Dutch households with children are able to get online, the risk of excluding groups from participation was to some extent reduced (Schols, Duimel, & De Haan 2011). Another limitation is the fact that our questionnaire had to be concise and therefore did not contain all potentially relevant characteristics. The gender of the child and the media use and skills in using digital media of the parent, for example, were not incorporated. In particular, the list with examples of potential problematic mediation problems could have been extended, which could have resulted in more distinct types of mediation concerns. Moreover, because there is not much research yet on parental mediation and related concerns there are also no standardized measurements. The scales we used, however, did have sufficient internal validity. Therefore, we feel confident that our data provide an interesting starting point for further research on parental concerns about the mediation of young children's digital media use.

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#### **Correspondence to:**

Peter Nikken  
Netherlands Youth Institute  
P.O. Box 19221  
3501DE Utrecht  
The Netherlands

Email: [p.nikken\(at\)nji.nl](mailto:p.nikken@nji.nl)  
Phone: + 31 30 2306409

### **About author(s)**



**Peter Nikken**, PhD, is Professor at the Erasmus University Rotterdam, School of History, Culture and Communication, and affiliated to the Netherlands Youth Institute and to the Pedagogy department of Windesheim University for Applied Science. His research interests include media literacy and media education, the beneficial and negative effects of media on children and adolescents, and the mediating role of parents and other co-educators.



**Jos de Haan**, PhD, is head of the research Group Care, Emancipation and Time Use at the Netherlands Institute of Social Research (SCP) and professor of ICT, Culture and Knowledge Society at the Erasmus University, Rotterdam (EUR). He got his PhD in sociology from Utrecht University (thesis: Research groups in Dutch sociology) and has worked since 1994 with the SCP in the Hague, the Netherlands, where he carries out research dealing with culture, media and ICTs.