



The relation between child raising attitudes of parents and their mediation role for the digital technology use of children

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Abstract

The current study was carried out to investigate the relation between the child-raising attitudes of parents and the mediating role for children’s digital technology use. The study’s working group was made up of 236 parents having a child at the age of 48–72 months and staying in the city centre of Kars. The sampling was formed by using simple random sampling method to determine the working group of the study. Personal information form, parent view scale for child raising attitudes and early childhood parent mediation scale for media scale were used in the study. As a result of the research, a positive, significant relation at a medium level was found between parent view scale for child raising attitudes and early childhood parent mediation scale for media. it was also found that there was a significant relation between the dimensions of “Active Supporter” ($r=0.232$), “Restrictive Supporter” ($r=0.237$), “Restrictive-Limiter” ($r=0.394$), “Active Interpreter” ($r=0.279$) and “Democratic Attitude” variable and “Over-tolerant Attitude”, and it was predictive.

Keywords Digital technology · Parental mediation · Parental attitudes · Preschool

1 Introduction

With the information and communication technologies spreading around and its increase among children, digital devices have become an indispensable part of their daily lives (Haddon, 2017; Blackwell et al., 2016). Children get acquainted

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with technological devices at a very early age. Parents, on the other hand, are in a constant struggle with their children while trying to balance the negative effects of some negative contents upon the attitudes, behaviours or security of their children besides the educational and social advantages of digital technology use (Livingstone & Helpster, 2008). At this point, the attitudes and supervisions of parents are of importance in terms of the fact that children benefit from the opportunities supplied by digital technology and that they are protected from the potential dangers they are likely to be exposed in the internet media (Lauricella et al., 2015; Shin & Li, 2017). Parents try hard to increase the possible benefits of their children's technology use and decrease its risks and harms (Livingstone et al., 2017; Kirwil, 2009). These efforts of parents are defined as "parental mediation". Warren (2003) and Mendoza (2009) define parental mediation as a strategy used by parents to decrease the negative effects of digital technologies upon the physical, psychological and emotional health of children. Livingstone and Helpster (2008) describe parental mediation as a communication process comprising parental supervision, arrangements, rules and limitations regarding the time children spend in front of the screen. It is known that giving a suitable mediation by parents to the digital device uses of children could lead to such results as understanding the content better and becoming less exposed to unsuitable content (Buijzen & Valkenburg, 2005; Lee & Chae, 2007, Durak & Kaygın, 2019). Few studies have examined the mediating effects of parental attitudes (Juby, 2009). The studies carried out into parental mediation highlighted that some types of mediation could be useful for the cognitive and social development of children and be successful in reducing the negative effects of media (Blum Ross & Livingstone, 2016; Coyne et al., 2017).

2 Theoretical framework

2.1 Parental mediation

In general, parental mediation is considered in three dimensions as active mediation, restrictive mediation and co-use. Active mediation deals with the communication between parents and child while expressing the parents discussing and explaining what media with their children (Clark, 2011) is. Restrictive mediation dimension is realized when parent allows their children to use digital media, when they assign some rules regarding duration and content and when they restrict them (Nikken & Jansz, 2013). This kind of mediation might restrict the autonomy of the child from time to time while it sometimes can give more autonomy to the child. It is believed that digital technology use is one of the restrictive methods where it is given as a reward for the positive behaviours or as a reaction to the negative behaviours (Coyne et al., 2017). Finally, co-use is the sharing of digital technology between parents and children without the instruction or discussion of parents. Co-use is the case where the experiences of parents regarding media content with the children are passively (Shin & Li, 2017; Şen et al., 2020). Parent mediation for media refers to a certain series of behaviours with regard to media use by children while parenthood styles generally refer to parenthood applications (Hwang et al., 2017).

2.2 Parental attitudes

Parents have a great role in influencing the habits and behaviours of their children directly or indirectly in their lives (Xu et al., 2015; Konok et al., 2019). Considered as a significant determiner in the behaviours of children and the development of their various sides, parental attitudes (Gadeyne et al., 2004) are also the determinants of the effect of digital technology use on children (Eastin et al., 2006; Wu et al., 2014; Ross & Livingstone, 2016). Mediation behaviours of parents vary depending on the child-raising attitudes of parents. When it comes to parental attitudes, it was found that demanding parents, compared to authoritative and permissive parents, exhibited active mediation and co-use behaviours most (Şen et al., 2020). Child raising attitude exhibited by parents is an important factor affecting child development. Parental behaviour is a structure representing standard strategies that are used by parents to raise their children and it is also one of the variables investigated in child development intensively (Baldwin et al., 2007).

Attitudes are divided into different groups according to the features characterizing the child raising attitudes of parents. Democratic parent attitude is the parent attitude allowing the child and supplying suitable settings to support the skills of the child. In such a kind of attitude, parents respect to child (Shevlin et al., 2017). Repressive-authoritative parents, on the other hand, cannot explain the reason for the rules or limits determined for their children. They exhibit high behaviours in controlling their children but weak behaviours in responding to their demands of them. They emphasized their strict behaviour standards, they appreciate obedience and they remain unapproachable and unresponsive (Simons & Conger, 2007). Parents exhibiting over-protective attitudes try to protect their children from dangers in a way to limits the development of their children and they try to keep them under control (Uygun & Kozikoğlu, 2020). Inattentive-indifferent (over-tolerant) parents avoid claiming authority or control and restrictive behaviours (Simons & Conger, 2007).

Given the ever-increasing presence of digital technologies in the lives of parents and children and so its potential to affect child development, it is of importance to determine the relation between parental attitudes and parental mediation for media and to understand it better. In addition, the current study combining parental style and parental mediation variables for media is important in determining the factors affecting mediation strategies. For that reason, this study is of critical importance in revealing the current situation. Parents have significant tasks in guiding their children to use digital media tools securely. However, it is likely to find such studies in the literature mostly investigating the mediation of parents in the video games and internet use of their children. There is a lack of studies investigating whether there is an effect of parental attitudes on mediation strategies (Eastin et al., 2006; Shin & Huh, 2011; Nikken & Haan, 2015; Coyne et al., 2017; Warren, 2003). In this sense, the current study gives a determination regarding “the relation between child raising attitudes of parents and their mediating role for the digital technology use of children”. The results of the research are expected to make significant contributions to the literature. The study was carried out to investigate the relation between child raising attitudes of parents and their

mediating role for the digital technology use of children. The following questions were tried to be answered in the sense of this general purpose:

1. “Is there a relation between child raising attitudes of parents and the mediating role for the digital technology use of children?”
2. “Does child raising attitudes of children predict the parental mediation for media in early childhood?”

3 Method

3.1 Research model

In the study, correlational survey model, a quantitative research method, was used. Correlational survey model is a research model aiming at determining the presence and/or level of covariance of two or more variables (Karasar, 2014: 80). In the current study, since the relation between child raising attitudes of parents and their mediating role for the digital technology use of children was investigated, a correlational survey model was chosen. Child raising attitudes of parents comprise the independent variable of the study while the dependent variable was comprised of mediation of parents for their children in the use of digital technology.

3.2 Participants

A relational survey model, one of the quantitative research methods, was used in the research. Relational screening models are research models that aim to determine the presence or degree of change between two or more variables. Relational screening can be done by comparison or correlation type. Correlational research was used in this study. Correlational research is research in which the relationship between two or more variables is examined without any intervention. In this direction, as a result of the lists taken from the Provincial Directorate of National Education, it was determined that the population of the study consisted of a total of 635 children aged 48–72 months attending kindergarten. It was decided to make sampling to calculate the sample size to be reached. In this context, the sample was calculated according to the limited universe formula used for the mean, since the size of the study population was less than 10,000 ($N: 634$). The calculated sample size was determined as 240. A sample was created by using a simple random sampling method to determine the study group in the research. In this direction, the study group of the research consists of 236 parents with 48–72 months old children residing in Kars city centre and attending an independent kindergarten affiliated to Kars Provincial Directorate of National Education in the 2019–2020 academic year.

3.3 Data collection tools

Personal Information Form, Parent Views Scale on Child Rearing Attitudes, and Early Childhood Parent Media Mediation Scale, developed by the researcher, were used to determine the demographic characteristics of children in the study, which was conducted using a relational screening model. Parents' Views on Child-rearing Attitudes Scale (ÇOYGÖ); To collect the data, the Parent Views Scale on Child-rearing Attitudes developed by Özyürek (2017) was used. The 40-item scale has three sub-dimensions: Democratic Attitude, Repressive and Authoritarian Attitude, and Overly Tolerant Attitude. Considering the items, it is found that the Democratic Attitude sub-dimension consists of 14 items, the Repressive and Authoritarian Attitude consists of 13 items, and the Extremely Tolerant Attitude sub-dimension consists of 13 items. Early Childhood Parent Media Mediation Scale; Data on media mediation by parents towards their children; was collected with the Early Childhood Parent Media Mediation Scale developed by Şen et al. (2020).

3.4 Data collection

For this research, after applying to the ethics committee of Kafkas University and obtaining the necessary ethical permissions, all the participants were reached with the scale form created online in Google Forms, and data were collected. Before responding to the data collection tool in Google Forms, the participants were informed with the “informed voluntary consent form” prepared by the researcher and were asked to fill in the consent form stating that they voluntarily participated in the research. In addition, it was stated in the form that their personal information would not be shared and the research data would be used for scientific purposes. The e-mail addresses of the researchers were shared in the form applied on the Google Form so that the participants could reach them when they wanted to get information about the research conducted or the data collection tools used.

3.5 Data analysis

In the study, correlational survey model, one of the quantitative research designs, was used. The significance value used in the analyses was accepted as a minimum 0.5 level. To investigate the relation between child raising attitudes of parents and their mediating role for the digital technology use of children, Pearson correlation coefficient and Spearman's Rank Correlation Coefficient were calculated. In the following stage, it was decided to carry out Simple Linear Regression and Multiple Linear Regression analyses to determine the predictive relation of the variables having a significant relation. Before the regression analysis, Pearson's Product-Moment Correlation Analysis was made to see the relation between independent and dependent variables and to include the variables just having a relation with the dependent variable in the regression analysis.

4 Findings and discussion

In this part of the research, the findings obtained as a result of the analyses carried out to determine the relation between child raising attitudes of parents and their mediating role for the digital technology use of children were given.

The findings regarding the correlation coefficients obtained in the scores of “The Relation Between Child Raising Attitudes of Parents and Their Mediating Role for The Digital Technology Use of Children” were given in Table 1.

As given in Table 1, total mean score obtained in “The Scale of Early Childhood Parent Mediation for Media” was 161.75 while that of “The Scale of Parent Views Regarding Child Raising Attitudes Scale” was 135.16. The correlation coefficient between the scores obtained in the scales was found statistically significant in a positive way with a low-level relation. This case indicates that as the scores obtained in the scale of parent views regarding child raising attitudes increased, the scores obtained in the scale of early childhood parent mediation for media became high. This finding was parallel to what was found in the related literature where different studies were investigated regarding parenthood styles and attitudes of parent mediation for media. The results of a study carried out by Hwang et al. (2017) support the findings of the current study. In a study carried out into internet parenthood by Eastin et al. (2006), it was indicated that parenthood styles and attitudes of parent mediation for media were all in a positive way with a low-level relation in all dimensions. In the review of the related literature, in the study by Warren and Aloia (2019) carried out into the relation between parenthood style, parent stress and their mediation role for media use of children, similar results were expressed and a positive relation was found between the parents’ child raising attitudes and their mediation role for the media use of children.

In the separate investigation of sub-dimensions, the findings related to correlation analysis between “Active Supporter” sub-dimension and “Parents’ Views Scale Regarding Child Raising Attitudes” were firstly given in Table 2.

As is given in Table 2, the relation between “active supporter” sub-dimension and “democratic attitude” sub-dimension was significant and positively ($r=0.25$; $p < 0.05$); the relation between “over-tolerant attitude” sub-dimension was

Table 1 Correlation analysis results between the scale of parent views regarding child raising attitudes and the scale of early childhood parent mediation for media

	\bar{x}	sd		The scale of early childhood parent mediation for media
The scale of early childhood parent mediation for media	161,75	25,19	1	
The scale of parent views regarding child raising attitudes	135,16	11,70	,128*	

* $p < 0,05$

Table 2 Correlation analysis results between “the Scale of Parent Views Regarding Child Raising Attitudes” and “the Scale of Early Childhood Parent Mediation for Media” sub-dimensions

	1	2	3	Active supporter
1. Democratic attitude	1			
2. Repressive and authoritative attitude	0,004	1		
3. Over-tolerant attitude	-0,28*	0,39*	1	
Active supporter	0,25*	-0,01	-0,14*	1
	1	2	3	Restrictive Supporter
1. Democratic Attitude	1			
2. Repressive and Authoritative Attitude	0,004	1		
3. Over-tolerant Attitude	-0,28*	0,39*	1	
Restrictive Supporter	0,19*	0,08	-0,16*	1
	1	2	3	Restrictive Limiter
1. Democratic Attitude	1			
2. Repressive and Authoritative Attitude	0,004	1		
3. Over-tolerant Attitude	-0,28*	0,39*	1	
Restrictive Limiter	0,34*	0,12	-0,20*	1
	1	2	3	Active Interpreter
1. Democratic Attitude	1			
2. Repressive and Authoritative Attitude	0,004	1		
3. Over-tolerant Attitude	-0,28*	0,39*	1	
Active Interpreter	0,25*	-0,01	-0,10	1
	1	2	3	Restrictive Preventive
1. Democratic Attitude	1			
2. Repressive and Authoritative Attitude	0,004	1		
3. Over-tolerant Attitude	-0,28*	0,39*	1	
Restrictive Preventive	0,06	0,06	-0,15*	1
	1	2	3	Active Limiter
1. Democratic Attitude	1			
2. Repressive and Authoritative Attitude	0,004	1		
3. Over-tolerant Attitude	-0,28*	0,39*	1	
Active Limiter	0,08	0,11	-0,07	1

* $p < 0,05$

significant and negatively ($r = -0.14$; $p < 0.05$). The relation between “active supporter” sub-dimension and “repressive and authoritative attitude” sub-dimension was not statistically significant ($r = -0.01$; $p > 0.05$). Depending on the analysis results obtained, it is likely to say that as the democratic attitude exhibited by parents regarding digital technology use of children increased, active supporter attitude sub-dimension increased, however, as over-tolerant attitude increased, active supporter attitude sub-dimension scores decreased. In a study carried out by Hwang et al. (2017), it was found that there was a relation between parenthood attitudes and active supporter mediation sub-dimensions and that over-tolerant attitude predicted active supporter attitude negatively. It is likely to think in the formation of these

findings that the over-tolerant attitude of parents results from their attitude allowing their children to realize their desires as they wish and that active supporter attitude results from the attitude of parents unlikely to that of over-tolerant one informing their children as to the use of digital media tools together and about the content.

Secondly, the relation between “restrictive supporter” sub-dimension and “democratic attitude” sub-dimension was significant and positively ($r=0.19$; $p < 0.05$); the relation between “over-tolerant attitude” sub-dimension was significant and in negative way ($r=-0.16$; $p < 0.05$). The relation between “restrictive supporter” sub-dimension and “repressive and authoritative attitude” sub-dimension was not found statistically significant ($r=-0.08$; $p > 0.05$). In other words, is likely to say that as the democratic sub-dimension scores which is one of sub-dimensions of the Scale of Parents’ Views, the scores of restrictive supporter attitude which is one of the sub-dimensions of parental mediation for media increased and as the scores of restrictive supporter sub-dimension increased, the scores of over-tolerant attitude sub-dimension decreased. As a result of a study by Warren and Aloia (2019) carried out to investigate the relation between parenthood style, parent stress and their mediation role for the media use of their children, it was indicated that there was a negative relation between over-tolerant parent attitudes and restrictive supporter sub-dimensions. While parents confirm the effective use of digital technologies, they also apply for the restrictive supporter mediation strategy by setting some rules to protect them from the risks of digital technologies, whereas, the parents expressing an over-tolerant attitude let their children free in every subject and they do not limit their children. In this sense, it is likely to express that it is an expected result that a negative relation was found in the findings of the research.

Thirdly, the relation between “restrictive supporter” sub-dimension and “democratic attitude” sub-dimension was found significant and positively ($r=0.34$; $p < 0.05$); the relation between “over-tolerant attitude” sub-dimension was significant and in negative way ($r=-0.20$; $p < 0.05$). The relation between “restrictive supporter” sub-dimension and “repressive and authoritative attitude” sub-dimension was not found statistically significant ($r=-0.12$; $p > 0.05$). In other words, is likely to say that as the restrictive limiter sub-dimension scores increased, the scores of over-tolerant attitude sub-dimension which is one of sub-dimensions of the scale of parents’ views decreased. In similar studies carried out by Eastin et al. (2006), and Warren and Aloia (2019) it was found that there was a negative relation between the restrictive limiter attitude and over-tolerant parent attitudes and that parents exhibiting an over-tolerant attitude used restrictive limiter mediation strategies more. These findings support the results of the current study. Studies in the literature are consistent with this finding of the study. It is likely to think that this negative relation results from such characteristics that restrictive limiter parent exhibits some restricting efforts for time when the child spends through digital media tools and the content itself, the fact that the parents exhibiting an over-tolerant attitude give much more freedom to the child and also from feeling no necessity to obey the rules.

Regarding another sub-dimension, the relation between “active interpreter” sub-dimension and “democratic attitude” sub-dimension was found significant and in positive way ($r=0.25$; $p < 0.05$). The relation between “active interpreter” and “repressive and authoritative attitude” sub-dimension and “over-tolerant attitude was

found statistically significant ($r=-0.10$; $p>0.05$). According to Şen et al. (2020), active interpreter mediation aims at providing the child with developing autonomy by trying to make him attain critical thinking skills. In this sense, it is a usual fact to have a positive relation between “active interpreter” sub-scale and “democratic attitude sub-dimension. Active interpreter parent behaviour is a behaviour telling the content of digital technology to children, interpreting it together and mediating for it. Parents exhibiting a democratic parent attitude supports his development by allowing the child to express himself. It is likely to say that this positive relation results from the fact that both attitudes contain parent attitudes supporting their children and open to communication with them.

The relation between “restrictive preventive” sub-dimension and “over-tolerant attitude” sub-dimension was found significant and in negative way ($r=-0.15$; $p<0.05$). The relation between “democratic attitude” sub-dimension and “Repressive and authoritative attitude” was found statistically significant ($r=0.06$; $p>0.05$). In a study carried out by Warren and Aloia (2019), it was found that there was a negative relation between the authoritative attitude and restrictive preventive attitude in a positive way. Studies showed that parents used restrictive mediation behaviours at a lower level compared to other parenthood types (Eastin et al., 2006; Hwang et al., 2017). In this respect, it is likely to say that the result obtained in the current study is an expected result and consistent with the related literature.

Finally, a statistically significant relation was found between “active limiter” sub-dimension and “democratic attitude” sub-dimension ($r=0.08$; $p>0.05$); and between “repressive and authoritative attitude” sub-dimension ($r=0.11$; $p>0.05$) and “over-tolerant attitude” sub-dimension ($r=-0.07$; $p>0.05$).

Following the relation determined between the sub-dimensions regarding the scales in the research, regression analysis was made. Variables examined within the content of regression analysis were determined depending on the significant ones as a result of sub-group analyses and correlation analysis. In the regression analyses, the sub-dimensions of the Scale of Parent Views Regarding Child Raising Attitudes were included in the analysis as an independent variable (predicting) and the sub-dimensions of the Scale of Early Childhood Parent Mediation for Media were included as a dependent (predicted) in the analysis.

A regression analysis was made for the general sampling in the prediction of “active supporter” sub-dimension of “democratic attitude” and “over-tolerant attitude” sub-dimensions and the results were given in Table 3.

As given in Table 3, “active supporter” sub-dimension was statistically predicted by “democratic attitude” and “over-tolerant attitude” sub-dimensions in a significant way ($F_{(2,233)}=7,40$; $p<0,05$). It means that the effect of at least one of the predictive/independent variables included in the regression equity on the variability in the scores obtained in the active supporter sub-dimension. According to the significant test (t-test) of the regression coefficients to determine which variable was significant, democratic attitude variable out of predictive/independent variables predicted the scores obtained in the active supporter sub-dimension ($p>0.05$). Predictive/independence variables in the analysis explained 6% of the scores obtained in the “active supporter” sub-dimension ($R^2=0,06$). This case could be thought as democratic attitude scores increased, the scores of active

Table 3 The results of multiple regression analysis regarding the prediction of “Active Supporter” sub-dimension of “Democratic Attitude” and “Over-Tolerant Attitude” sub-dimensions

Variables	Non-Standardized Coefficients		Standardized Coefficients β	<i>t</i> value	Significance level	
	B	s.h.				
Constant	29,99	9,08		3,30	,001	$F_{(2,233)} = 7,40; p = ,00;$ $R = ,24; R^2 = 0,06$
Democratic Attitude	,36	,12	,21	3,17	,002*	
Over-tolerant Attitude	-,14	,12	-,08	-1,20	,231	

* $p < 0,05$

supporter attitude increased. This case indicates that active supporter mediation strategy levels of the parents exhibiting a democratic attitude are high.

A regression analysis was made for the general sampling in the prediction of “restrictive supporter” sub-dimension of “democratic attitude” and “over-tolerant attitude” sub-dimensions and the results were given in Table 4.

As given in Table 3, “restrictive supporter” sub-dimension was statistically predicted by “over-tolerant attitude” sub-dimensions in a significant way ($F_{(1,234)} = 6,00; p < 0,05$). It means that the effect of at least one of the predictive/independent variables included in the regression equity on the variability in the scores obtained in the restrictive supporter sub-dimension. According to t-test results, over-tolerant attitude variable predicted the scores obtained in the restrictive supporter sub-dimension ($p < 0,05$). Predictive/independence variables in the analysis explained 3% of the scores obtained in the “restrictive supporter” sub-dimension ($R^2 = 0,03$). In addition, since Beta value is negative, it shows that the relation is reversed. It is likely to say that as restrictive supporter sub-dimension scores increased, the scores of restrictive supporter attitude were a significant predictor. It could be explained that while restrictive supporter parents confirm digital technology use of their children while they do not exhibit an over-tolerant.

A regression analysis was made for the general sampling in the prediction of “restrictive limiter” sub-dimension of “over-tolerant attitude” sub-dimensions and the results were given in Table 5.

Table 4 The results of regression analysis regarding the prediction of “Restrictive Supporter” sub-dimension of “Democratic Attitude” and “Over-Tolerant Attitude” sub-dimensions

Variables	Non-standardized coefficients		Standardized coefficients β	<i>t</i> value	Significance level	
	B	s.h.				
Constant	45.39	2.42		18.79	0.000	$F_{(1,234)} = 5,00; p = 0,00;$ $R = 0,16; R^2 = 0,03$
Over-tolerant attitude	-0.18	0.08	-0.16	-2.45	0.015*	

Table 5 The results of regression analysis regarding the prediction of “Restrictive Limiter” sub-dimension of “Over-Tolerant Attitude” sub-dimensions

Variables	Standard-ized coef-ficients		Unstandard-ized coef-ficients	t value	Significance level	
	B	s.h.				
Constant	30,15	1,45		20,74	,000*	$F_{(1,234)}= 7,38; p= .00;$ $R= ,18; R^2=0,03$
Over-tolerant attitude	-,12	,05	-,18	-2,72	,007*	

Table 6 The results of regression analysis regarding the prediction of “Democratic Attitude” sub-dimension of “Active Interpreter” sub-dimensions

Variables	Standard-ized coef-ficients		Unstandard-ized coef-ficients	t value	Significance level	
	B	s.h.				
Constant	5,63	2,34		2,40	,017*	$F_{(1,234)}= 19,72; p= ,00;$ $R= ,28; R^2=0,08$
Democratic Attitude	,16	,04	,28	4,44	,000*	

As given in Table 5, “restrictive limiter” sub-dimension was statistically predicted by “over-tolerant attitude” sub-dimensions in a significant way ($F_{(1,234)}= 7.38; p < 0.00$). It means that the effect of at least one of the predictive/independent variables included in the regression equity on the variability in the scores obtained in the restrictive limiter sub-dimension. According to t test results, over-tolerant attitude variable predicted the scores obtained in the restrictive limiter sub-dimension significantly ($p < 0.05$). Predictive/independence variables in the analysis explained 3% of the scores obtained in the “restrictive limiter” sub-dimension ($R^2=0.03$). In addition, since Beta value is negative, it shows that the relation is reversed. It is likely to say that over-tolerant parenthood attitude has a bigger and negative effect upon restrictive limiter sub-dimension. It could be explained that parents adopting restrictive limiter mediating attitudes do not exhibit an over-tolerant parenthood attitude.

A regression analysis was made for the general sampling in the prediction of “democratic attitude” sub-dimension of “active interpreter attitude” sub-dimensions and the results were given in Table 6.

As given in Table 6, “active interpreter” sub-dimension was statistically predicted by “democratic attitude” sub-dimensions in a significant way ($F_{(1,234)}= 19.72; p < 0.00$). Predictive/independence variables in the analysis explained 8% of the scores obtained in the “active interpreter” sub-dimension ($R^2=0.08$). In this respect, as democratic attitude scores of the parents participating in the research increased, so did their active interpreter scores. It is likely to say that democratic attitude scores were a significant predictor upon the active interpreter mediating sub-dimension scores. This could be explained as parents exhibiting an active interpreter mediating strategy confirming the digital technology use of their children and they exhibit a democratic attitude in the same way.

Table 7 The results of regression analysis regarding the prediction of “Over-Tolerant Attitude” sub-dimension of “Restrictive Preventive” sub-dimensions

Variables	Standard-ized coef-ficients		Unstandard-ized coef-ficients	t value	Significance level	
	B	s.h.				
Constant	17.42	1.50		11.64	,000*	$F_{(1,234)}= 5.49; p= .00;$ $R=0.15; R^2=0,02$
Over-tolerant Attitude	-0.11	0.05	-0.15	2.34	,020*	

* $p < 0,05$

A regression analysis was made for the general sampling in the prediction of “restrictive preventive attitude” sub-dimension of “over-tolerant attitude” sub-dimensions and the results were given in Table 7.

As given in Table 7, “restrictive preventive” sub-dimension was statistically predicted by “over-tolerant attitude” sub-dimensions in a significant way ($F_{(1,234)}= 19.72; p < 0.00$). Predictive/independence variables in the analysis explained 2% of the scores obtained in the “restrictive preventive” sub-dimension ($R^2=0.02$). Since Beta value is negative, it shows that the relation is reversed. As the scores obtained from over-tolerant attitude sub-dimension increased, the scores obtained in the restrictive preventive sub-dimension decreased. Over-tolerant attitude scores predicted restrictive preventive sub-dimension scores This could be explained as parents exhibiting a predictive preventive mediation do not use an over-tolerant attitude.

5 Conclusion

In line with the purpose of the research, correlations between the scales were firstly studied. As a result of the research, it was found that there was a positive and significant relation between the child raising attitudes of parents and their mediation role for the digital use of their children. Following inter-scales correlation study, at which level and in which direction the relation between the sub-dimensions was determined. Depending on the result of the research, it was found that as the sub-dimension scores of democratic attitudes, which is one of the sub-dimensions of the scale of parent views, increased, the scores of “active supporter attitude” sub-dimensions increased, but as over-tolerant attitude increased, active supporter attitude scores decreased. It was also found that the scores of democratic attitude sub-dimensions, one of the sub-dimensions of the scale of parent views, increased, the scores of “restrictive supporter” sub-dimensions, which is one the sub-dimensions of the scale of parent mediation for media, increased; as the scores of “restrictive supporter” sub-dimension increased, the scores of “over-tolerant attitude” sub-dimension decreased. Also, the scores of parents with a restrictive limiter attitude increased, the scores of over-tolerant attitudes, which is one of the sub-dimensions of the scale of parent views, decreased. Regarding another sub-dimension, the relation between “active interpreter” sub-dimension and “democratic attitude” sub-dimension was significant

and in a positive way. The relation between “restrictive preventive” sub-dimension and “over-tolerant attitude” sub-dimension was found significant and negatively.

The variables examined for the regression analysis within the content of the research question were determined according to the significant variable found as a result of sub-group analyses and correlation analyses. In this sense, it was found that “democratic attitude” variable predicted the scores obtained in the “active supporter” sub-dimension in a significant way. “Over-tolerant” attitude variable predicted the scores obtained in “restrictive supporter” sub-dimension in a significant and negative way. “Over-tolerant” attitude variable predicted the scores obtained in the “restrictive limiter” sub-dimension in a significant and negative way. “Active interpreter” sub-dimension was predicted by the scores obtained in “democratic attitude” sub-dimension in a statistically significant way. It was also found that “restrictive preventive” sub-dimension was predicted by the scores obtained in “over-tolerant attitude” sub-dimension in a statistically significant and negative way.

5.1 Recommendations

- The fact that parents exhibit a democratic attitude towards their children has an important role in the mediation for media. For that reason, some educational programs and conferences could be organized with regard to the importance of the issue.
- Some online training could be held as to the qualitative use of digital media tools by children and the importance of parent mediation.

Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest The authors have no conflicts of interest to declare.

References

- Baldwin, D. R., McIntyre, A., & Hardaway, E. (2007). Perceived parenting styles on college students' optimism. *College Student Journal*, *41*(3), 550–558.
- Blackwell, C. K., Lauricella, A. R., & Wartella, E. (2016). The influence of TPACK contextual factors on early childhood educators' tablet computer use. *Computers & Education*, *98*, 57–69. <https://doi.org/10.1016/j.compedu.2016.02.010>
- Blum-Ross, A., & Livingstone, S. (2016). *Families and screen time: Current advice and emerging research*. LSE Media Policy Project. <https://doi.org/10.1111/jcom.12277>
- Buijzen, M., & Valkenburg, P. M. (2005). Parental mediation of undesired advertising effects. *Journal of Broadcasting and Electronic Media*, *49*, 153–164.

- Clark, L. S. (2011). Parental mediation theory for the digital age. *Communication Theory*, 21(4), 323–343.
- Coyne, S. M., Radesky, J., Collier, K. M., Gentile, D. A., Linder, R., Nathanson, J., Rasmussen, A. I., Reich, E. E., & Rogers, J. (2017). Parenting and digital media. *Pediatrics*, 140, s112–s116. <https://doi.org/10.1542/peds.2016-1758N>
- Durak, A., & Kaygin, H. (2019). Parental mediation of young children's internet use: Adaptation of parental mediation scale and review of parental mediation based on the demographic variables and digital data security awareness. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-019-10079-1>
- Eastin, M. S., Greenberg, B. S., & Hofschire, L. (2006). Parenting the internet. *Journal of Communication*, 56, 486–504. <https://doi.org/10.1111/j.1460-2466.2006.00297.x>
- Gadayne, E., Ghesquiere, P., & Onghena, P. (2004). Psychosocial functioning of young children with learning problems. *Journal of Child Psychology and Psychiatry*, 45, 510–521. <https://doi.org/10.1111/j.1469-7610.2004.00241.x>
- Haddon, L. (2017). Domestication and mobile telephony. In J. E. Katz (Ed.), *Machines that become us: The social context of personal communication technology* (1st ed.). Routledge. <https://doi.org/10.4324/9780203786826>
- Hwang, Y., Choi, I., Yum, J. Y., & Jeong, S. H. (2017). Parental mediation regarding children's smartphone use: Role of protection motivation and parenting style. *Cyberpsychology Behavior and Social Networking*, 20(6), 362–368. <https://doi.org/10.1089/cyber.2016.0555>
- Juby, C. (2009). Parental attitude: A mediating role in disciplinary methods used by parents. *Child and Adolescent Social Work Journal*, 26(6), 519–531. <https://doi.org/10.1007/s10560-009-0183-z>
- Karasar, N. (2014). *Bilimsel araştırma yöntemi kavramlar ilkeler teknikler* (26. Basım). Nobel Akademik.
- Kirwil, L. (2009). Parental mediation of children's internet use in different European countries. *Journal of Children and Media*, 3, 394–409. <https://doi.org/10.1080/17482790903233440>
- Konok, V., Bunford, N., & Miklósi, A. (2019). Associations between child mobile use and digital parenting style in Hungarian families. *Journal of Children and Media*, 14(1), 91–109. <https://doi.org/10.1080/17482798.2019.1684332>
- Lauricella, R. A., Wartella, E., & Rideout, V. J. (2015). Young children's screen time: The complex role of parent and child factors. *Journal of Applied Developmental Psychology*, 36, 11–17. <https://doi.org/10.1016/j.appdev.2014.12.001>
- Lee, S. J., & Chae, Y. G. (2007). Children's internet use in a family context: Influence on family relationships and parental mediation. *CyberPsychology & Behavior*, 10, 640–644. <https://doi.org/10.1089/cpb.2007.9975>
- Li, B., & Shin, W. (2017). Parental mediation of children's digital technology use in Singapore. *Journal of Children and Media*, 11, 1–19. <https://doi.org/10.1080/17482798.2016.1203807>
- Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of Communication*, 67, 82–105.
- Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's internet use. *Journal of Broadcasting & Electronic Media*, 52(4), 581–599. <https://doi.org/10.1080/08838150802437396>
- Mendoza, K. (2009). Surveying parental mediation: Connections, challenges and questions for media literacy. *Journal of Media Literacy Education*, 1, 28–41.
- Nikken, P., & Jansz, J. (2013). Developing scales to measure parental mediation of young children's internet use. *Learning Media and Technology*, 39, 250–266.
- Nikken, P., & de Haan, J. (2015). Guiding young children's internet use at home: Problems that parents experience in their parental mediation and the need for parenting support. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 9(1), article 3.
- Özyürek, A. (2017). A study on developing “Parent views on raising children scale” and “Parent attitudes scale” for parents with preschool children. *Uluslararası Erken Çocukluk Eğitimi Çalışmaları Dergisi*, 2(1), 26–38.
- Shin, W., & Huh, J. (2011). Parental mediation of teenagers' video game playing: Antecedents and consequences. *New Media & Society*, 13, 945–962. <https://doi.org/10.1177/1461444810388025>
- Simons, L. G., & Conger, R. D. (2007). Linking mother-father differences in parenting to a typology of family parenting styles and adolescent outcomes. *Journal of Family Issues*, 28, 212–241.
- Shevlin, M., McElroy, E., & Murphy, J. (2017). Homotypic and heterotypic psychopathological continuity: A child cohort study. *Social Psychiatry and Psychiatric Epidemiology*, 52, 1135–1145. <https://doi.org/10.1007/s00127-017-1396-7>

- Şen, M., Demir, E., Teke, N., & Yılmaz, A. (2020). Erken çocukluk ebeveyn medya aracılık ölçeği geliştirme çalışması. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, (53), 228–265. <https://doi.org/10.21764/maeuefd.646852>
- Uygun, N., & Kozikoğlu, İ. (2020). Çocukları Okul Öncesi Eğitim Kurumlarına Devam Eden Ebeveynlerin Tutumlarının İncelenmesi. *MANAS Sosyal Araştırmalar Dergisi*, 9(3), 1494–1507. <https://doi.org/10.33206/mjss.639099>
- Warren, R. (2003). Parental mediation of preschool children's television viewing. *Journal of Broadcasting & Electronic Media*, 47, 394–417. https://doi.org/10.1207/s15506878jobem4703_5
- Warren, R., & Aloia, L. (2019). Parenting style, parental stress, and mediation of children's media use. *Western Journal of Communication*. <https://doi.org/10.1080/10570314.2019.158208>
- Wu, C. S. T., Fowler, C., Lam, W. Y. Y., Wong, H. T., Wong, C. H. M., & Loke, A. Y. (2014). Parenting approaches and digital technology use of preschool age children in a Chinese community. *Italian J Pediatr*, 40, 44.
- Xu, H., Wen, L. M., & Rissel, C. (2015). Associations of parental influences with physical activity and screen time among young children: A systematic review. *Journal of Obesity*, 2015. <https://www.hindawi.com/journals/job/2015/546925/>

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