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Parental mediation and rules for children's digital technology use during spring 2020 lockdown in Croatia

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Abstract

The pandemic of the COVID-19 virus brought out many changes in family routines across the world. This research aims to investigate changes in rules for children's digital technology (DT) use and parental mediation during the first lockdown due to the COVID-19 pandemic in Croatia. Participants are 281 parents of children aged 3 to 14 years who completed an online survey containing questions about possible changes in the application of different rules regarding DT use and possible changes in different mediation behaviors regarding DT use during the lockdown in March 2020 due to the COVID-19 pandemic in Croatia. Results are analyzed separately for kindergarten children and children attending primary school. Results show a trend implying that during the first lockdown in 2020 most families didn't introduce new rules or abandon them compared to the time before lockdown, but those that did point to parents allowing their children a little more freedom regarding DT, especially for school-aged children. Additionally, small changes compared to the time before lockdown are observed in parental mediation behavior, and these are most evident concerning activities aiming to enable more independent use of DT and safe (probably also more independent) use of DT among school-aged children.

Keywords: Lockdown; Parental mediation; Digital technology; Children

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Introduction

Today's children in western societies are born into a world highly saturated with digital devices. They start to use these devices from an early age and at the same time, their parents are often using DT to a greater extent than ever before. When trying to mediate their children's

use of DT, parents use different strategies. These strategies are often referred to as parental mediation of children's digital media use and can range from not being involved in children's use of digital media to applying restrictions or active mediation [1]. The research identified five mediation strategies: active, restrictive, co-using, monitoring, and technical mediation [2-4]. Furthermore, Livingstone & Hesper showed

that parental mediation can be an important factor for taking advantage of the opportunities and at the same time avoiding risks related to children's use of digital media [4]. In some studies [5-7] it is found that, as children grow older, parents become less likely to engage in practices such as parental mediation. This was found, for example, concerning monitoring and setting limits on children's online behavior [7] as well as the use of blocking software and applications [6]. The decline in parental mediation during adolescence can be understood as the adolescent's refusal of parental mediation as well as changes in the dynamics of the parent-child relationship during adolescence [8]. With the rise of the pandemic of COVID-19 in March 2020, life circumstances in families across the globe changed rapidly and significantly, and all these effects of the COVID-19 pandemic on various areas of life will be investigated in the long term [9,10]. The lockdown in Croatia started on March 16th when schools and kindergartens closed. During the following month and a half, most families in Croatia were restricted to their homes. Parents often worked from home and school children participated in various forms of online classes. This was accompanied by a considerable increase of time spent using DT, for both parents and children [11,12]. Besides doing their work from home, parents often replaced the role of a teacher to their children, and while doing so they often needed to help their children with the use of digital devices and platforms as well as with their studies. Kindergarten children also experienced changes in digital media use. Before the lockdown, they would spend a considerable amount of time socializing with their peers in kindergarten, and now they were at home with their parents and sibling. Most of those parents and siblings had their obligations to fill during the day, so the younger children were often left to entertain themselves, and this would on occasions include digital media [13]. Given these changes in everyday life circumstances, we are interested in investigating the parental mediation of children's digital media use during lockdown due to the COVID-19 pandemic.

With a considerable shift in family routines caused by the lockdown, it is reasonable to expect some changes regarding rules of digital media use. The first aim of this study was to describe possible changes in the application of different rules regarding DT use in children during the first lockdown due to the COVID-19 pandemic, which happened in the spring of 2020, compared to the time before the pandemic. We analyze the possible changes concerning two age groups of children - those attending kindergarten and those attending primary school. We hypothesize that there will be changes in the application of different rules allowing children more freedom regarding their use of DT, especially for older children. Additionally, the second aim was to describe possible changes in different parental mediation behaviors regarding DT use during the pandemic, again concerning the two age groups. We hypothesize that parental mediation strategies would change in the direction of allowing more independence, especially for older children.

Method

Procedure

Data used in this paper are a part of a larger online research "Challenges of digital technology use in the family" during the Covid-19 pandemic in May 2020 in Croatia conducted by the research team of the project "Digital technology in the family: patterns of behavior and effects on children's development" (D.E.C.I.D.E.; UIP-2019-04-7547) funded by the Croatian Science Foundation. After the Catholic University of Croatia's Ethics committee approved the research, participants were recruited through various invitations on the project's official web page, as well as Instagram and Facebook pages. Additionally, invitations were posted in different parent support groups on Facebook as well as the Catholic University of Croatia website and official Facebook page. Finally, invitations were sent to kindergartens and primary schools in Croatia with a request to post them on their

web page or send them to parents by e-mail. The questionnaire was set online using Google Forms with integrated informed consent for participation. Participants were parents of children aged 3 to 14 years, who agreed to participate in the research. Each parent completed the questionnaire for the oldest child in the family that is between 3 and 14 years of age. The period for data collection was from May 5th until May 25th, 2020. During this time the restrictive measures due to the COVID-19 pandemic were still active and the participants were instructed to think of this period without reference to specific dates.

Participants

Participants were 281 parents of children aged 3 to 14 years. There were 255 mothers (90.7%) and 26 fathers (9.3%). The age range for parents was from 22 to 56 ($M=38.48$, $SD=5.758$). Around two-thirds of parents have a higher degree in education (176, 62.7%), with the remaining third of participants having high school ($N=80$, 28.4%) or college education ($N=24$, 8.5%). Regarding working circumstances, almost one-half of the parents reported working from home during the pandemic (129, 45.9%), 18.9% ($N=48$) were combining work from home and working from the office, and an additional 17.1% ($N=48$) were going to work as before the pandemic. Only 12.5% ($N=35$) of parents in the study were unemployed. The children were aged from 3 to 14 years ($M=9.78$, $SD=3.372$). There were 94 (33.5%) of children attending kindergarten (aged from 3 to 7), 187 (66.5%) attending primary school (aged 7 to 14). There were 158 boys (56.2%) and 123 girls (43.8%), and the distribution of participants according to gender was even in both age groups.

Measures

Apart from providing data on their age, gender, education level, and employment status, the parents gave their answers about rules and mediation behavior for children's DT use.

Rules regarding children's DT use during the pandemic

To investigate if and how different rules regarding children's DT use during the pandemic have changed compared to the time before the pandemic, we created a list of 12 rules (e.g., "There is no DT use at home at specific situations, e.g., during meals"), based on the study by Henniker et al. [14]. For each rule, the parents had to answer if they had this rule before the pandemic, introduced this rule since the pandemic, abandoned this rule since the pandemic, or do not have this rule at all.

Parental mediation behaviors regarding children's DT use during the pandemic

To investigate possible changes in different parental mediation behaviors regarding DT use during the pandemic compared to the time before the pandemic, we created a list of 5 mediation behavior's descriptions (e.g., "I talk to the child about how and what for he/she can use DT for"). Parents reported if they apply this rule less often than before the pandemic, as often as before the pandemic, more often than before the pandemic or not at all.

Statistics (Statistical Analysis)

For analyzing data, we used IBM SPSS Statistics for Windows version 26 (IBM Corp., Armonk, N.Y., USA). The descriptive statistics were calculated, meaning percentages and frequencies of parents' answers to questions about parental mediation behaviors and rules for children's DT use.

Table 1: Number and percentages of parents reporting possible changes in the application of different rules about DT use during the COVID-19 pandemic.

Rule	Educational stage	We don't have this rule	We've had this rule from when the child began to use DT	We've introduced this rule since the pandemic	We've abandoned this rule since the pandemic
There is no use of DT at home at specific situations (e. g. during meals).	Kindergarten	25 (26.6)	65 (69.1)	2 (2.1)	2 (2.1)
	School	30 (16)	144 (77)	8 (4.3)	5 (2.7)
Rule about identity protection (e. g. no giving away personal information).	Kindergarten	20 (21.3)	74 (78.7)	0 (0)	0 (0)
	School	15 (8)	169 (90.4)	2 (1.1)	1(.5)
No DT use after bed time and during the night (e. g. the child cannot have a smartphone in his room during the night).	Kindergarten	10 (10.6)	84 (89.4)	0 (0)	0 (0)
	School	34 (18.2)	148 (79.1)	0 (0)	5 (2.7)
Direct surveillance of DT use in any situation (e. g. the parent can check what the child is doing in the moment).	Kindergarten	5 (5.3)	88 (93.6)	1 (1.1)	0 (0)
	School	17 (9.1)	168 (89.9)	2 (1.1)	0 (0)
A restriction regarding specific games, activities, devices or web pages.	Kindergarten	6 (6.4)	88 (93.6)	0 (0)	0 (0)
	School	15 (8)	170 (90.9)	2 (1.1)	0 (0)
The child doesn't use DT until other tasks are completed (e. g. homework).	Kindergarten	10 (10.6)	81 (86.2)	0 (0)	3 (3.2)
	School	18 (9.6)	161 (86.1)	2 (1.1)	6 (3.2)
No sharing, watching or creating of sexually explicit content.	Kindergarten	10 (10.6)	84 (89.4)	0 (0)	0 (0)
	School	9 (4.8)	176 (94.1)	2 (1.1)	0 (0)
Time restrictions for the use of DT.	Kindergarten	14 (14.9)	77 (81.9)	0 (0)	3 (3.2)
	School	21 (11.2)	134 (71.7)	9 (4.8)	23 (12.3)
Use of DT in moderation and in balance with other activities (e. g. restricted time for DT use so that the child can engage in other activities).	Kindergarten	7 (7.4)	86 (91.5)	0 (0)	1 (1.1)
	School	10 (5.3)	156 (83.4)	8 (4.3)	13 (7)
No inappropriate language and insulting others through DT.	Kindergarten	10 (10.6)	84 (89.4)	0 (0)	0 (0)
	School	5 (2.7)	178 (95.2)	4 (2.1)	0 (0)
Specific limitations in order to save money (e. g. only Wii-fi is used).	Kindergarten	43 (45.7)	51 (54.3)	0 (0)	0 (0)
	School	69 (36.9)	114 (61)	3 (1.6)	1 (.5)
No cursing and using sexually explicit language.	Kindergarten	7 (7.4)	87 (92.6)	0 (0)	0 (0)
	School	7 (3.7)	178 (95.2)	2 (1.1)	0 (0)

Results

Our first aim was to investigate if the families experienced any changes regarding the application of specific rules for children's DT use. We were interested to find out if the family had a specific rule before the pandemic, if this rule was introduced or abandoned during the pandemic, or the rule is still not applied in the family. Results are presented in table 1.

The last two columns in table 1 refer to changes during the pandemic - either the family introduced or abandoned a specific rule. Our results show that only a minor number of families experienced changes when compared to the time before the pandemic, with most of the families already applying these rules before the pandemic. We can also see from the results that there is a similar trend about applying most rules or changing them in both age groups. The most evident disparities are regarding three rules - the one regarding no use of DT after bedtime and during the night, the one regarding time restrictions for the use of DT, and finally the rule about the use of DT in moderation and balance with other activities. For these rules parents of the older children reported more often being abandoned during the lockdown. Although the percentages of these cases are still quite low, this can still point in the direction of older children being given a little more freedom regarding DT use during this period. Other rules that were abandoned by at least a part of parents of younger and older children include the rule regarding no use of DT in a home in specific situations (e. g. during meals) and the rule stating that the child doesn't use DT until other tasks are completed (e. g. homework). This also points to some parents allowing their children a little more freedom regarding DT use.

Furthermore, we were interested to explore possible changes regarding the display of different parental mediation behaviors during the pandemic compared to the time before the pandemic. Results are presented in figure 1.

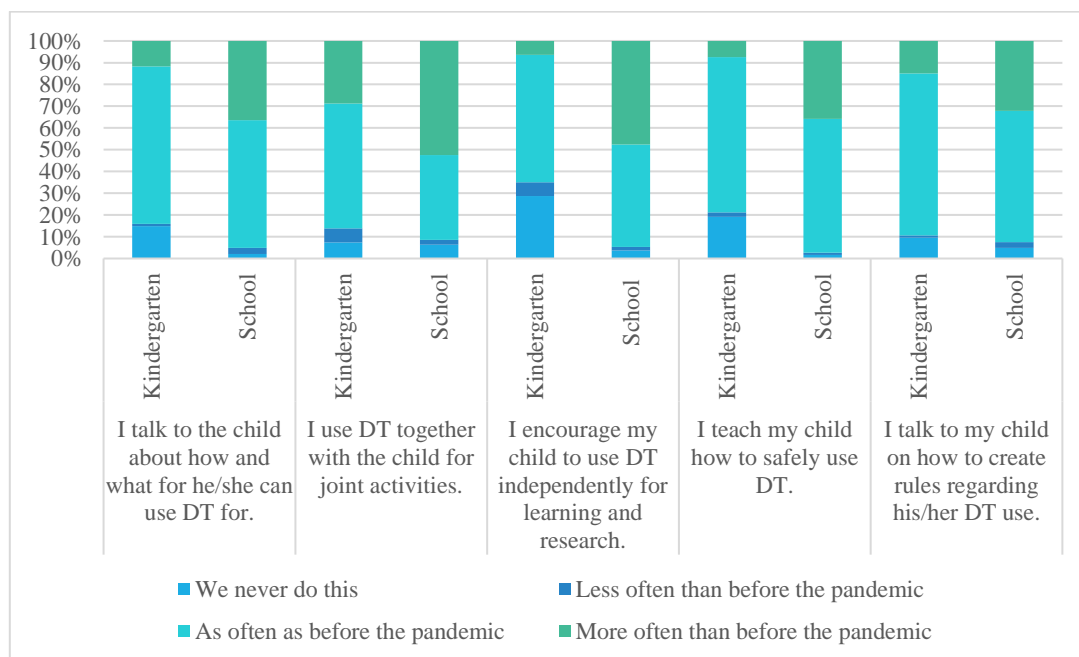


Figure 1: Percentages of parents reporting possible changes in different mediation behaviors regarding DT use during the COVID-19 pandemic.

The results (Figure 1) point to a trend that parents of school children more often show the examined parental mediation behaviors than before the pandemic when compared to the parents of kindergarten children. The age disparities are most evident regarding activities aiming to enable more independent use of DT and safe (probably also more independent) use of DT. There is a trend (Figure 1) that parents of school-aged children compared to parents of kindergarten children teach children how to safely use DT and encourage independent DT use among children more often than before the COVID-19 pandemic. Around half of parents of school-aged children report encouraging children to use DT independently and use DT together with children more frequently during the period of lockdown than the period before the lockdown. The mediating strategy for which data show an increase in both age groups is regarding joint use of DT. 14.9% and 32.1% of parents of kindergarten and school children respectively, talked to their children about creating rules regarding their DT use more often than before the pandemic.

Discussion

The impact of the COVID-19 pandemic and lockdown was so far investigated from different perspectives - mental health, quality of life, etc. [15,16]. One of these perspectives is focusing on DT use in families with children. Research shows that the time children and parents spent using DT during lockdown had significantly increased [11,17]. For kindergarten children, the lockdown brought an increase in unstructured time, and since their older siblings and parents often had different obligations to complete during the day, we can assume that at least a part of this time was spent using DT. In fact, research in Croatia points in this direction [13]. For older children, online classes also raised the amount of screen time, and once they were finished with their school obligations these children would probably also welcome the use of DT for relaxation and communication with their friends. For children in both age groups, home restriction due to the pandemic

also meant that they were not allowed to pursue their other activities outside of the home, such as sports, music school, foreign languages, etc., or even go out and socialize with friends in the park. It is important to investigate parental mediation of children's DT use in such specific life circumstances and to note the possible changes compared to the time before lockdown because parental mediation is an important factor for shaping children's interactions with DT [18,19]. The World Health Organization recommended keeping regular pre-lockdown routines, which means keeping the same frame of going to bed and waking up time, mealtime, learning and entertaining schedule, etc. [20]. But at the same time, they emphasize the importance of creating time for joint activities of parents and children, both with and without DT. Hamilton et al. also suggest keeping consistent schedules for most activities and advocate for parents to be flexible, but at the same time to have limits when it comes to children's and especially teen's DT use during the pandemic [21]. Our results show that in general parents report only minor changes in the rules regarding DT use and their mediation behaviors during the lockdown, which is in line with similar research from other countries [22], but they do sometimes report more often engaging in the joint use of DT with both younger and older children. Additionally, the minority of parents that report changes in fact report about allowing a little more freedom and independence for their DT use, especially to the school children. To be more precise, the age differences trend is most evident regarding activities aiming to enable more independent use of DT and safe (probably also more independent) use of DT. A possible interpretation is that since school children had to use DT for at least some time during the day to complete their school assignments or participate in online classes, at the beginning of lockdown they needed at least some parental support for these activities. Following, most parents in the study probably had only limited time in the day to allocate being with their children due to their work from home. Other studies also show that parents often had a

difficult time combining their work either from their home or their workplace, while taking care of the children and their needs during lockdown [22, 23]. Data from Croatia also show that 38.4% of parents report parenting for them was harder during the pandemic than before the pandemic [24]. This means that parents also had limited time to support their school children in completing their school tasks so it would not be surprising if they encouraged children to use the DT more independently. The parents could also face difficulties finding time to engage in different activities with younger children as well, but these children did not necessarily need their help using digital devices. Therefore, there was no need for parents to try and promote their independence in this regard. In fact, kindergarten children could probably entertain themselves while the parents worked in ways that did not include digital devices or if they did, we might assume those were familiar devices and activities, that didn't need that much parental support. This trend of applying a little less parental mediation behavior for older children in the sample is also interesting because previous research shows that in general as children get older parents apply less and less mediating behaviors [6,7] and for older children, parental mediation is often less organized, with parents creating rules when new circumstances occur [8, 25]. Our results imply that some changes regarding such parental mediation behavior are happening even in short periods under very different circumstances, such as the pandemic and lockdown. The data from this survey were collected as the lockdown was coming to its end, with signs of its ending being clearer. This means that at the point of data collection families already spent around one and a half months in lockdown, restricted to their homes. The specific rules depicted in this study would be described as restrictive mediation of children's DT use [4]. Warren and Alaia showed that restrictive mediation, but also discussions with children about DT and its content increase in periods of high-stress levels [26]. Our results show that parents in the sample generally applied many of the rules

even before the pandemic. Specific parental mediating behaviors that we focused on in the study can generally be described as active mediation. Our results again also show that parents in the study generally exhibit such mediation behavior even before the pandemic but with older children, at least some of them report an increase in such behavior during the pandemic. Nikken and Opera showed that co-use and active mediation behavior with young children are less often found in low-educated parents since they tend to have less competence and more insecurities which makes this kind of behavior more difficult for them to exhibit [27]. As mentioned before, almost two-thirds of parents in our study have a higher education so it is not surprising that they report a lot of active mediation strategies even before the pandemic. It would be interesting to know how low-educated parents handled the situation during the lockdown and if there were any differences compared to higher-educated parents.

Study limitations

This study is not without its limitations which are mostly related to the sample which was not representative in terms of socio-economic status and parental education. The results apply mainly to well-educated parents. Therefore, the conclusions cannot be generalized to the general public. Also, the study focused only on specific mediation behavior and not the whole range of mediation strategies. Additionally, there was no other way of data collection except online, which has its flaws.

Conclusion

Results from our study show a trend implying that during the first lockdown in 2020 because of the COVID-19 pandemic most families in Croatia did not introduce new rules or abandon them compared to the time before. The results show however that there are some changes in parental mediation behaviors. The most evident changes related to activities aiming to enable more independent use of DT and safe (probably

also more independent) use of DT, especially among parents of older children. The lockdown due to the COVID-19 pandemic changed the lives of families in Croatia and the findings from this study offer us valuable insight into the parental mediation of children's DT use during this challenging period.

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