









Families' digital media use: Intentions, rules and activities

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Abstract

Since digital media such as smartphones, tablets or laptops are available in almost every household in industrialised countries, parents are challenged to integrate them into their everyday family life. To gain more information on parents' mediation of digital media, the relationships between their educational intentions, objectives and their children's use of digital media were investigated in consideration of the children's age. Overall, 150 Austrian parents with children aged one year and a half to six years participated in the study (two groups were formed based on the age of the children: toddlers and preschool children). They filled in a questionnaire on their intentions and rules for their children's use of media. Moreover, the parents provided information concerning their objectives for digital media use and the kind of activities for which their children use interactive digital toys or passive digital media. Results show that parents' intentions of their children's media use is mainly to gain time for household chores or work. Whereas the age of the children does not seem to be

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of great importance to parents concerning the media regulation, the results for the objectives and activities parents want their children to do with digital media do indeed differ between the two age-groups.

KEYWORDS

digital activities, digital media, objectives, parental mediation, preschool children, toddlers, young children

Practitioner notes

What is already known about this topic

- Average households in industrialised countries are well equipped with digital media technologies.
- Digital media increasingly become a part of young children's living environment.
- Parents find it necessary to prevent their children from potential negative effects of digital media use and try to implement rules eg, concerning the time spent with media or content restrictions.

What this paper adds

- Parents' intentions for their children's digital media use as well as the rules they apply for the use of digital media do not differ between toddlers and preschool children.
- Parents' objectives for their children's use of digital media as well as why and for which purpose their children should use interactive digital toys and passive digital media differs between toddlers and preschool children.

Implications for practice and/or policy

- Support is needed for parents on digital media use with toddlers together.
- Awareness for digital media use in connection to the rules and objectives needs to be created.

INTRODUCTION

In the last 10 years, children's use of digital media has not only increased, but they are also starting to use media at a younger age (Livingstone et al., 2014; Marsh et al., 2015; Ofcom, 2014). Screen media, and especially television, are already used intensively in the first years of life and most children at the age of two have already established routines such as daily screen time (Kabali et al., 2015; Kucirkova & Zuckermann, 2017; Rideout, 2017). Studies in the UK and the US report of children who started using smartphones and/or tablets at the age of six months only (eg, Cheung et al., 2017). The widespread availability of various digital media devices for children may be explained by the increasing interest in digital technologies in the industrial world (Danby et al., 2018). For parents, this rapid dissemination of digital media and the development of new media devices poses challenges that do not only concern the type of media their children may use, or the length and frequency of media use but also possible harmful consequence of the media use itself (Clark, 2011).

Parental mediation as a theory describes parent's interpersonal communication strategies that parents find necessary to implement for media usage restrictions (time spent with

media, eg, duration and/or frequency, as well as content restriction) and to prevent their children from potential negative effects of the media (Clark, 2011). The theory distinguishes four different kinds of parental mediation: active mediation (communicating about the content), restrictive mediation (setting rules and consequences/punishments), co-viewing (non-verbal communication and simply being present) and participatory learning. Whereas the three first mentioned strategies go back to Valkenburg et al. (1999), Clark (2011) added the fourth strategy of participatory learning (interaction between parents and their children with as well as through digital media).

Throughout the last couple of years a variety of studies contributed further types of mediation strategies that varied according to, eg, children's age, media device or content (Chen & Shi, 2019; Rodideal, 2020). Rodideal (2020) include strategies like: permissive mediation (children have uncontrolled access to digital media), reverse mediation (children explain media use to parents), modelling (children copy behaviour of parents), inconsequential mediation (rules are not stringent) and mixed digital mediation (when mediation strategies are mixed and adapted according to daily life needs). To date, however, research has mostly been concerned with restrictive mediation (Rodideal, 2020) and less is known about active mediation with toddlers.

Parents are nowadays faced with different challenges when it comes to the mediation of their children's media use. Among other challenges, they are faced with a variety of media for which they may allow or deny access for their children. Yet, our review of the literature found hardly any studies, which take this complexity into consideration. Instead, most studies focus on specific media and mostly only on one medium (eg, TV or internet). Also, few studies consider families with young children (Gözüm & Kandır, 2020; Zaman et al., 2016) and those who include young children mostly do not differentiate between the age groups of toddlers and preschool children (eg, Chen & Shi, 2019; Ferreira et al., 2017; Friedman, 2016; Kumpulainen et al., 2020; Nikken & Oprea, 2018). Yet, at this age, children differ widely in their cognitive, social and emotional development.

Facing the research limitations mentioned above, this paper takes up the aspect of parental mediation and investigates how parents of toddlers (between 17 and 47 months old) and preschool children (between 48 and 81 months old) manage the challenges of digital media use by their children. Parents use different types of mediation strategies (eg, Chen & Shi, 2019; Clark, 2011; Rodideal, 2020) and thus might have own *intensions* (objectives for own purpose) and may set different *rules* for their children's media use. Moreover, they may have certain *objectives* concerning their children's benefit from digital media as well as their own ideas of which *activities* their children should use the media for. For this, it is investigated whether certain digital media devices (eg, smartphone, tablet, interactive toys, TV or various audio media) are used with different intentions, objectives for both age groups and what activities the children do.

Parents intentions

Digital media are an undeniable attraction for children of all ages (Grau, 2008) and the stimulating character of touchscreen devices attract already the attention of the youngest (Cristia & Seidl, 2015). When it comes to deciding what kind of digital media children are allowed to consume, parents are faced with various questions and decisions: What digital media should I allow my children to use? What are my intentions, eg, to keep my children occupied, while doing household chores or to keep them quiet? What do I want my children to do when using digital media, eg, to learn? Parents' intentions can be understood as personal aims that underlie parents' decisions (Clark, 2011). The focus is on aspects such as organising everyday family life.

In most cases, television is seen as a marker for transitional times, eg, coming home from kindergarten or before going to bed (Johansen, 2007). These results are similar to those in the MoFam study, which report that digital media use differs from family to family (Wagner et al., 2016); 67.2% of Estonian parents (Nevski & Siibak, 2016) and also German and Austrian parents said they let children use digital media while they are doing household chores (Feil, 2016; Institut für empirische Sozialforschung [IFES], 2020).

In the USA, the use of mobile digital media to engage children during everyday routines such as car rides and eating has become such a habit that they are already being dubbed “shut-up toys” by the industry (Radesky et al., 2015). The German MoFam study lines out a babysitting function of digital media (Wagner et al., 2016).

Rules

Looking closer at the strategy of restrictive mediation: This is a form of mediation that is widely used by parents as it aims on limiting children’s time, content and place spent with digital media or if rules are adhered to (Clark, 2011; Coyne et al., 2017; Jiow et al., 2017; Rodideal, 2020). With the growing number of available digital devices result in a changed digital media landscape the forms of restrictive mediations varies with it (Jiow et al., 2017).

Active mediation is more common for younger children and restrictive mediation more for older children (Coyne et al., 2017). Results showed that 56.6% of parent used restrictive mediation strategy. They limited the time and content children spent engaged in digital play, but also 44% used an active mediation strategy to explain or talk about the content, and the use of the device (Nevski & Siibak, 2016).

Furthermore, Zaman et al. (2016) found out that parents applied five types of restrictive mediation: time, device, content, location and purchase restrictions. In an online-survey study from Beyens and Beullens (2017) with 364 parents from Belgium with children aged 2–10 years results showed that restrictive parental mediation for the tablet use led to more conflicts, the co-use decreased the conflicts. Families with more children show more restrictive media use (Beyens & Beullens, 2017). These and further studies do not differentiate between age-groups.

Objectives

Young children use media for a variety of purposes, not only for educational purposes like learning but also for entertainment. In fact, the proportion of educational or learning related contents in relation to entertainment contents has decreased in the last 10 years. The consumption of educational and learning-related media content is still highest among children between two and four years of age, but decreases with age. As a corollary, older children spend more time with digital media just for entertainment (Rideout, 2014). The objectives for digital media use for children can be differentiated into the two purposes: learning and entertainment.

From the results presented so far, it is not clear if the objectives of using digital media and activities are directed either towards learning or entertainment. Some studies, however, show that learning can be supported with digital media. Walter-Laager et al. (2017), for example, were able to show that the accompanied use of interactive, digital media can have an extremely motivating effect on young children and that they can even learn more through it than with a conventional picture book. This co-use of digital media with parents and children (Zaman et al., 2016) involves talking about the content, explaining and answering occurring questions (Livingstone et al., 2011) and parent's use of instructions,

comments and explanations on the content (Mendoza, 2009). In this paper, digital media is divided into interactive toys and passive digital media. That means to listen to a book with interactive toys, the children have to be active and eg, use a digital pencil (eg, TipToi). To listen to a book with passive digital media eg, the children use a smartphone as an audio player.

However, especially for the German-speaking countries, it is unknown which objectives (educational or entertainment) parents pursue and whether these are independent of age.

Activities

After all, parents mediate children's digital media use because they want them use the media for certain activities. Dong (2018) conducted a qualitative study with 13 Korean parents about the purpose of digital media use for their children aged three to six years and results showed that parents stated they let their children use digital media as a reward, to learn English, to keep them busy or to work against the social competitiveness.

In a survey by Nevski and Siibak (2016) with 198 Estonian parents with children aged zero to three years, parents would allow their children to use digital media for educational, entertainment purpose or to regulate children's behaviour (keep them quiet or to calm down). Children would use digital media to watch videos, cartoons and other programs. Together with a parent, children would use digital devices to look at photos or to Skype or Facetime. According to Baek et al. (2013), the reason why parents let children (aged zero to six years) use digital media is mostly the educational aspect, but children use it mainly for entertainment purpose.

Sivrikova et al. (2020) found out that touchscreen devices are used by children aged between zero and eight years to play video games, self-developing programmes and to be popular. Older children spent less time with watching videos but more time with playing games.

In a survey in the UK, 90 parents with children aged between three and six years were asked how they mediate their children's media use and what positive and negative beliefs they hold about contemporary media use (Kostyrka-Allchorne et al., 2017). Results showed that parents are worried about violent and inappropriate content, but they also think that children benefit from educational digital media content.

Research questions and research aims

Even though various studies have been conducted on parental mediation of media and their children's media use, there are still open research questions. With the rapid development of new digital media devices, a special need lies in the investigation of interactive media.

The study results foremost provide an insight into the passive digital media use of children, most of all the TV, but less is known on the use of interactive digital toys. Only a few studies focus on the meaningful use of digital media. Furthermore, there is a lack of research especially for toddlers, eg, do parents have different rules or objectives for toddlers and preschool children. In addition, as mentioned above, mediation strategies vary between countries (Clark, 2011; Livingstone et al., 2017). Also, the country origin (divided by low-, middle- and high-income countries) brings light to different parental mediation strategies (Gözüm & Kandır, 2020; Livingstone & Byrne, 2018). This points out the need of research in different cultures and countries such as in Austria.

It seems science lags behind daily social life and the initial findings urgently need to be supplemented and differentiated. This article presents data from a questionnaire study conducted in Austria on the digital media use in families with children aged one year and a half to six years. The study aims to advance the discussion on the impact of digital media on family life and parenting. In detail, the following research questions will be addressed:

- Which intentions and rules do parents in Austria have for providing access to digital media for their children and allowing them to use digital media?
- Which rules and intentions for the use of media do depend on the children's age?
- Which relationships can be found between objectives or activities of interactive toys and passive digital media according to the children's age?

More information on parents' intentions or objectives concerning their children's engagement with mobile technology may shed light on their handing of media education. Furthermore, age-related differentiations in the findings would support developmental frameworks stating that parents change their rules or limitations for their children's use of technology as it grows up (Dalope & Woods, 2018).

METHODS

Participants

For a sample of 150 children, data were collected before the Covid-19 pandemic in Austria started via third party information from their parents.

Parents

Parents' average age was 34 years ($M = 34.2$, $SD = 6.9$, $n = 146$, four missing); 135 questionnaires were filled in by mothers and eleven by a father (four missing).

Children

In the corresponding sample of 150 children (69 boys, 81 girls), 91 were grouped into toddlers (between 12 and 47 months old) and 59 into preschool children (between 48 and 83 months old). For more information on age distribution of toddlers and preschool children see Table 1 below. Child care in Austria is provided in day nurseries or crèches for children from zero up to the end of the third year of life. Starting from the age of four, children attend the Kindergarten.

TABLE 1 Gender and age profile of the survey sample

	Girls	Boys	Age			
			<i>M</i>	<i>SD</i>	min	max
Toddlers	51	40	30.8	7.3	17	47
Preschool children	30	29	61.9	9.0	48	81
Total	81	69	43.0	17.2	16	81

Measures

Parents filled in a survey with questions on the family media use. The following variables are in the focus of this study.

Intentions to use digital media

Parents were asked whether they allow their children to use media for five specific instances and objectives (eg, to keep the child quiet in public). The options to answer each question was either “yes” or “no” (see all items in Table 2).

Rules to use digital media

Furthermore, parents were asked concerning certain rules for their children's use of digital media (if they apply them “yes” or not “no”). The first four items concerned the use of specific rules [eg, We apply content-related rules (eg, only certain programs may be watched)]; the fifth item asked whether further rules are applied while the sixth item concerned the absence of rules (see all items in Table 3).

TABLE 2 Intentions to use digital media, percentage and amount of answers

I allow my child to use media...	Parents of					
	Toddlers		Preschool children		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
... to keep themselves busy while I am doing household chores						
No	25	27.5	19	32.2	44	29.3
Yes	65	71.4	40	67.8	105	70.0
Missing	1	1.1	0	0.0	1	0.7
... to keep themselves busy while I am working						
No	57	62.6	40	67.8	97	64.7
Yes	33	36.3	19	32.2	52	34.7
Missing	1	1.1	0	0.0	1	0.7
... to keep him/her quiet in public (eg, at the doctor's office, at the supermarket checkout)						
No	66	72.5	47	79.7	113	75.3
Yes	25	27.5	12	20.3	37	24.7
Missing	0	0.0	0	0.0	0	0.0
... while eating						
No	78	85.7	56	94.9	134	89.3
Yes	12	13.2	3	5.1	15	10.0
Missing	1	1.1	0	0.0	1	0.7
... as a reward or motivation						
No	44	48.4	26	44.1	70	46.7
Yes	46	50.5	33	55.9	79	52.7
Missing	1	1.1	0	0.0	1	0.7

TABLE 3 Rules to use digital media, percentage and amount of answers

Rules for using digital media at home	Parents of					
	Toddlers		Preschool children		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Content-related rules (eg, only certain programs may be watched)						
No	6	6.6	2	3.4	8	5.3
Yes	84	92.3	54	91.5	138	92.0
Missing	1	1.1	3	5.1	4	2.7
Temporal restrictions on how long the media may be used						
No	24	26.4	8	13.6	32	21.3
Yes	66	72.5	48	81.4	114	76.0
Missing	1	1.1	3	5.1	4	2.7
My child is allowed to use media only at a certain time						
No	46	50.5	27	45.8	73	48.7
Yes	43	47.3	26	44.1	69	46.0
Missing	2	2.2	6	10.2	8	5.3
My child always has to ask my permission when he/she wants to use the media						
No	9	9.9	6	10.2	15	10.0
Yes	79	86.8	50	84.7	129	86.0
Missing	3	3.3	3	5.1	6	4.0
There are other rules						
No	40	44.0	25	42.4	65	43.3
Yes	38	41.8	13	22.0	51	34.0
Missing	13	14.3	21	35.6	34	22.7
There are no rules						
No	80	87.9	45	76.3	125	83.3
Yes	2	2.2	0	0.0	2	1.3
Missing	9	9.9	14	23.7	23	15.3

Objectives to use digital media

Moreover, parents were asked about the objectives of their children's media use. Parents were given a list of digital devices (eg, television) and a list of objectives (eg, entertainment). They then had to mark for each device for which objective it is used. A device could be used for more than one objective. The media relevant for the analyses included interactive toys (eg, TipToi), television and audio media (eg, MP3-Player), with the latter two being combined for all analyses (ie, passive digital media).

Activities to use digital media

Lastly, parents were asked for which activities their children use different media. Again, parents received a list of various media (eg, television, print media). For each medium, parents marked whether their children used it for activities such as playing educational games, listening to music, reading or listening to books and watching movies. All media could be used

for more than one activity. Media relevant for the analyses were the same as for the above introduced variable, that is, interactives toys (eg, TipToi) and passive (eg, television, radio, toniebox, CD-, MP3-player) digital media.

Procedure

Data were collected by paper-pencil questionnaires as well as online. To distribute the paper-version of the questionnaire, experimenters-in-charge made contact to day nurseries and met the parents there. The parents filled in the written informed consent during the meeting and handed back the questionnaire a few days later. The link for the online version of the questionnaire was distributed via social media platforms (eg, Facebook or Whatsapp groups). Parents received information on the study after opening the corresponding link. Overall, 68 parents filled in the paper-pencil questionnaire and 82 completed the online version.

RESULTS

Intentions to use digital media

Table 2 shows descriptive statistics for items on instances in which children are allowed to use digital media and parents' intentions for the media use. Descriptive statistics are shown for the whole sample and for the subsamples of parents with toddlers and preschool children.

To investigate whether parents educate toddlers differently than preschool children with regard to use of media, χ^2 tests were calculated for each item. None of the tests was significant (all $\chi^2 < 1.85$, all p -values were above 0.174).

Rules for the use of digital media

Table 3 describes the descriptive statistics for items on rules for the use of digital media. Descriptive statistics are shown for the whole sample and for the subsamples of parents of toddlers of preschool children.

For all variables, it was investigated whether parents' application of rules depends on their children's age. χ^2 tests were calculated for each item. None of the tests was significant (all $\chi^2 < 2.41$, all p -values were above 0.120).

Relationships between objectives and activities of interactive toys/ passive digital media and the children's age

For a more detailed analysis of the objectives for digital media use and activities with digital media, digital media devices were split by their use and summarised into two groups: interactive toys (eg, TipToi) and passive digital media (eg, television).

Descriptive statistics about the objectives for digital media use are shown for the whole sample and for the subsamples of parents of toddlers or preschool children in Table 4.

To investigate whether the objectives for digital media use depend on the children's age, χ^2 tests were calculated for interactive toys and passive digital media. There was a significant association between children's age and whether interactive toys were used for learning

TABLE 4 Objectives for digital media use, percentage and amount of answers

Objectives for digital media use	Parents of					
	Toddlers		Preschool children		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Interactive toys						
Learning						
No	62	68.1	22	37.3	84	56.0
Yes	29	31.9	37	62.7	66	44.0
Entertainment						
No	57	62.6	17	28.8	74	49.3
Yes	34	37.4	42	71.2	76	50.7
Passive digital media						
Learning						
No	71	78.0	34	57.6	105	70.0
Yes	20	22.0	25	42.4	45	30.0
Entertainment						
No	12	13.2	1	1.7	13	8.7
Yes	79	86.8	58	98.3	137	91.3

objectives [$\chi^2(1) = 13.82, p = 0.000, \phi = 0.304$] and for objectives of entertainment [$\chi^2(1) = 16.38, p = 0.000, \phi = 0.330$]. Parents of preschool children reported both objectives more often, than parents of toddlers. Similar results were found for passive digital media, with preschool children being more likely using them for learning objectives than toddlers, $\chi^2(1) = 7.09, p = 0.008, \phi = 0.217$. However, toddlers were more likely to use passive digital media for objectives of entertainment than preschool children, $\chi^2(1) = 5.97, p = 0.015, \phi = 0.200$.

Activities to use digital media

Concerning children's activities set with digital media (divided into interactive toys and passive digital media) descriptive statistics are shown in Table 5 for the whole sample and for the subsamples of parents of toddlers and preschool children.

To investigate if parents of toddlers or preschool children let their children use digital media for different activities, χ^2 tests were calculated for interactive toys and passive digital media. With respect to interactive toys, children's age was significantly related to playing educational games [$\chi^2(1) = 28.78, p = 0.000, \phi = 0.438$] and listening to books [$\chi^2(1) = 10.56, p = 0.001, \phi = 0.265$]. Parents of preschool children reported a more frequent use of both these activities than parents of toddlers. Similar results were found with respect to passive digital media, with parents of preschool children reporting a more frequent use of passive digital media for listening to books, $\chi^2(1) = 12.32, p = 0.000, \phi = 0.287$. On the other hand, parents reported that toddlers were more likely to use passive digital media to listen to music [$\chi^2(1) = 9.58, p = 0.002, \phi = 0.253$] and to watch movies [$\chi^2(1) = 7.85, p = 0.005, \phi = 0.229$] than preschool children.

TABLE 5 Activities to use digital media, percentage and amount of answers

Activities to use digital media	Parents of					
	Toddlers		Preschool children		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Interactive toys						
Playing educational games						
No	72	79.1	21	35.6	93	62.0
Yes	19	20.9	38	64.4	57	38.0
Listening to books						
No	67	73.6	28	47.5	95	63.3
Yes	24	26.4	31	52.5	55	36.7
Passive digital media						
Listening to music						
No	27	29.7	5	8.5	32	21.3
Yes	64	70.3	54	91.5	118	78.7
Listening to books						
No	56	61.5	19	32.2	75	50.0
Yes	35	38.5	40	67.8	75	50.0
Watching movies						
No	29	31.9	7	11.9	36	24.0
Yes	62	68.1	52	88.1	114	76.0

DISCUSSION

The aim of the study was to gain information on parents' mediation, the family life, concerning the intentions, rules, objectives and activities of digital media use in families in Austria.

Intentions and rules to use digital media

Present results on the intentions and rules of digital media use in the family confirm results from previous studies and other countries (IFES, 2020; Nevski & Siibak, 2016), ie, a large proportion of parents say that they allow their children to use digital media so that they have time for household chores (70.0%).

From an educational point of view, this behaviour is questionable, especially as it suggests that parents are inattentive or not even present while the children use digital media. Parents miss a lot of information when allowing their children to use media unaccompanied, eg, how the children react to media content, how they process media content, or whether they are (cognitively or emotionally) over- or under-challenged. Such information, however, is important for parents to provide their children with adequate and stimulating media content. This lack of control could furthermore pose the risk of children encountering content that is not age-appropriate (Elias & Sulkin, 2017). However, a look at the rules for using digital media shows that a high percentage of participating parents control the use (86.0%), the content (92.0%) and the duration of use (76.0%). Thus, the parents' statement clearly points to the restrictive mediation by restricting time and content of the media use. Present results none the less go hand in hand with the results from Nikken and Jansz (2014) who state that: "Supervision was

the most common type of guidance for younger children.” The parents in the present study act contradictorily in some cases. On the one hand, their children are allowed to use digital media without supervision, but on the other hand, they emphasised here that supervision takes place. It seems, that parents focus on control of time and content, neglect the media contents and often do not know how their children perceive the media content.

Moreover, more than half of the parents agree that they use digital media as a reward or for motivational purpose (52.7%). Again, from an educational point of view, using digital media or screen time as a reward (or even punishment) is a rather controversial method. Whereas most parents would describe it as an effective tool, it is unlikely to contribute to a change in behaviour. According to self-determination theory of motivation (Ryan & Deci, 2000), screen time as an external reward for desirable behaviour (such as tidying up the children's room) does not increase the personal value (in this case of a clean bedroom). Rather a child's intrinsic interest decreases as a result of engaging in an activity due to an extrinsic reward (Ryan & Deci, 2000). In addition, using digital media as a reward, makes them even more desirable (Tang et al., 2018), which is counterproductive when parents actually aim for setting time restrictions. Such educational measures may have an effect that is opposite to the one intended.

Rather surprisingly, the results show no significant group difference between toddlers and preschool children, regarding the intentions or rules for using digital media. Research on media effects suggests that especially toddlers have difficulties transferring what they see on the screen to real everyday situations and need the supported guidance of adults (Strouse et al., 2013). From the viewpoint of education and optimal stimulation one would rather argue for differentiation of parents' media education according to age.

Relationships between objectives or activities of interactive toys/passive digital media and the children's age

In this study, digital media were differentiated into interactive toys, that require children to actively engage with the device, and passive digital media, where children merely consume the media content (watch or listen to information).

The significant results on the relationship of the parents' objectives in allowing children to use digital media show a difference in the parents' view depending on the age of the children, even though the type of device seems to be less decisive. In the present study, preschool children were more likely to use media, regardless whether they are interactive toys or passive digital media for learning. This does not contradict Rideout (2014), who states that digital media are mainly used for children's entertainment but could indicate that parents are aware of the possible learning function of digital media. It might be that parents are more aware of the necessity of learning and regard it more as an important objective for kindergarteners; it also might be that there is more media content for learning on the market for this age group.

The importance of age is also reflected in the relationship between the type of activities and the age of the children. Parents let preschool children use interactive toys for learning games or for listening to books, while toddlers use them rather for entertainment. It might be that parents feel more necessity to support their children's learning, the more they approach the school entrance age (six years in Austria; eg. Merkle & Wippermann, 2008).

Strengths and limitations of this research

A strength of the study certainly lies in the sample of parents of very young children (as a larger part of the children were younger than three years). Nowadays, children come into

contact with digital media at a very young age and to capture media use in childhood and parental mediation of media use makes it necessary to consider already the youngest ones; even though a young sample certainly increases the challenges in empirical research (eg, the third-party information, ethics). Thus, in this study, very fine grained differences, within the age range of approximately one and a half to six years, could be observed for parental mediation. Parents differentiate between their toddlers and preschoolers.

As known from previous research, parental mediation differs across countries (Brito et al., 2017; Dardanou et al., 2020; Kirwil, 2009). This makes it necessary to be careful about generalisations of results to different cultures and countries and advocates studies in various countries. Furthermore, results from one cultural background do not only allow to discover similarities and differences across cultures, but they also contribute to our overall understanding of parental mediation and subsequently to our knowledge of functions and duties in education.

A limitation of the study might be that it asked only for a handful of intentions or rules and did not measure how intentions are formed, what they are influenced by, or how the implementation of rules is influenced by objectives for media use. This indicates the need for further research on children's media use and parent's motives.

CONCLUSION

The present findings on young children's media use allow a first insight into the difference between toddlers and preschool children activities and their objectives to use digital media devices. Activities, digital media devices and objectives need to be compatible in regard to the children's age and developmental stage. In addition, parents' motives for their children's use of digital media might be different when their children are still in a caring institution (eg, day nursery or crèche) in comparison to a fostering institution such as the kindergarten or nursery school. While they want their preschool children to use the media more for educational purposes and not for entertainment, it is vice versa when the children are still at crèche.

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CONFLICT OF INTEREST

The authors declare that there is no potential conflict of interest in this research.

ETHICS STATEMENT

Each parent gave written (or in an online survey) informed consent to participate in the study and to provide data about themselves and their child. Moreover, the parents confirmed that their own data and the data of their child could be used in an empirical study. The study was performed in accordance with the 1964 Declaration of Helsinki and was approved by the authorised local ethics committee (ie, the ethics committee of the University of Graz).

DATA AVAILABILITY STATEMENT

The data from this study are not available for other researchers to investigate.

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