

## Parenting in Digital Era: a Systematic Literature Review

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### Abstract

Parental care has a significant influence on children's digital technology use (Ozgür, 2016 ; Valcke, Bonte, De Wever & Rots, 2010). The purpose of this literature review is to know the characteristics of the participants of the articles, the type of measurement, the type of digital parenting and the digital parenting determinant factors. The method used is a systematic literature review. The article search was done online by using the keywords "digital parenting" and/or "parental mediation of internet use". A total of 20 articles in the period of 2011-2020 were used to carry out this literature review taken from Sagehub, Science Direct, Ebscohost and Proquest Dissertation. The results of the literature review show that most of the participants in these articles are parents who have children from childhood to adolescence and come from Caucasian races. The measuring instrument used in the quantitative approach is a questionnaire on parental mediation of internet use from previous studies or a questionnaire that has been modified according to the research setting. Meanwhile, the interview method and focus group discussion were used for the qualitative approach. The types of parental mediation of internet use that appear are active parental mediation, restrictive parental mediation, monitoring parental mediation, supportive parental mediation, and co-use/co-viewing parental mediation. While the role of parental mediation of internet use is mostly a dependent variable, in several articles it acts as a predictor variable. This shows the existence of internal factors and external factors that affect parental mediation in parents. The results of this literature review can be a foothold for other researchers who are interested in conducting research on digital parenting of parents in children's digital technology use.

**Keywords:** digital parenting, parental mediation of internet use, parents, adolescence

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### Introduction

The development of digital technology triggers a change in the process of parental mediation of children's media use (Zaman, Nouwen, Vanattenhoven & Ferrerre, 2016). However, a survey conducted by E-safety research showed the low (36%) awareness of parents to seek

information on how to maintain child safety when children are doing online activities (Adelman & Adelman, 2018). This was followed by low parental reports (28%) on children's negative experiences during online activities.

Nowadays, parents are required to not only supervise the actions of children and adolescents in the real world, but they must also provide supervision on the use of digital technology (Afiatin, 2018). Harrison and McTavish (2018) stated that younger children are using digital technology for the first time, this is shown by Common Sense Media that in 2014 in America there were 72% of children under 8 years and 38% of children under 2 years had used a digital device. While in Indonesia, according to a survey conducted by APJII (2019) in 2018, as many as 41.4% of children who were sitting in elementary school had accessed the internet. In terms of age, survey results show that 66.2% of children aged 10-14 years and 25.2% of children aged 5 - 9 years have used the internet.

Digital parenting is a parenting strategy related to the rules of using digital devices both online and offline to protect children's safety from the threat of its use (Rode, 2009), as well as forms of parent-child interaction, parental discipline techniques, socialization, and parental mediation strategies (Chou, Chou & Chen, 2016). A further definition is given by Mascheroni, Ponte & Jorge (2018) who describes that digital parenting is how parents are involved in the use of digital technology by children (parental mediation), and how parents use digital technology in their daily activities and parenting practices and developing parenting concepts.

There is a paradox in the use of digital technology (Afiatin, 2018; Mutlu-Bayraktar, Yilmaz & nan-Kaya (2018). The positive benefits of using digital technology are the increase of academic achievement (Judi et al., 2013), self-efficacy growth, providing and supporting information (Wohn, Ellison, Khan, & Gray, 2013), means of communication (Coetzee & Eksteen, 2011; Wohn, Ellison, Khan, & Gray (2013), looking for new friends (Mutlu-Bayraktar, Yilmaz, & nan-Kaya, 2018), developing emotional social abilities (Antheunis, Schouten & Kraemer, 2014), distance education (Joshi et al., 2011), remote treatment facilities (Mahadevan et al., 2012) and memory storage, and as information media (Hsieh, Li & Yang, 2013). Meanwhile the various negative risks of digital technology use are the feeling

of frustration when unable to be online, ignoring friends, family and school work because of the considerable amount of time spent in browsing the internet without any purpose or with any purpose (Mutlu-Bayraktar, Yılmaz, & nan-Kaya, 2018), academic failure (Yang & Tung, 2007), social isolation, anxiety, depression, and loneliness (Chen & Lin, 2015), cyberbullying (Arıcak & Ozbay, 2016; Peluchette et al., 2015), tendency to commit criminal behavior (Oktan, 2015).

The paradox of digital technology use is not known by many children. Most children have the ability to use digital technology at medium to high levels, but they lack knowledge about the negative risks it inflicts (Chang et al., 2019). Parents have an important role in children's use of digital technology (Valcke, Bonte, De-Wever, & Rots, 2010; Triastuti, Dimas & Akmal, 2017). Various studies have shown that parenting has a significant influence on children's use of the internet (Ozgür, 2016; Valcke, Bonte, De-Wever, & Rots, 2010). Therefore, parents implement several parenting strategies so that children are able to gain the benefits of digital media (Mutlu-Bayraktar, Yılmaz, & nan-Kaya, 2018), are knowledgeable, productive, sociable, and trustworthy (Davis, Gibbs, Arnold & Nansen, 2008), reduce negative risk (Mutlu-Bayraktar, Yılmaz, & nan-Kaya, 2018; Leung & Lee, 2012), even though overly strict rules and controls are considered dangerous as well (Çankaya & Ferhan, 2009). The processes are done differently through communication, processing together, encouraging children to explore, sharing experiences, answering possible doubts or problems faced, being actively involved in discussions, and carefully monitoring the use of technology on children (Chou, Chou & Chen, 2016 ; Duerager & Livingstone, 2012 ; Eastin & LaRose, 2006; Valcke, Bonte, De Wever & Rots, 2010), emphasizing the need to monitor the use of social media (Triastuti, Dimas & Akmal, 2017).

There was a change in the attitude of parents who used to view digital technology negatively into an effort to obtain optimal benefits from it (Çankaya & Ferhan, 2009). However, there is a gap between parent and child competencies in the use of digital technology. Parents are

included in the digital immigrant group, while children are included in the digital native group (Prensky, 2001). Sometimes parents also do not know how to use their authority in managing digital technology (Brooks, 2011).

Some literature reviews have discussed the use of the internet in children, as a systematic review of internet gaming addiction (Kuss & Griffiths, 2012), a review of the literature between internet addiction and psychiatric disorder (Ko, Yen, Yen, Chen & Chen, 2012). Meanwhile some studies have discussed of parental mediation of internet use. Collier et al., (2016) examined how parental mediation of media (restrictive mediation, active mediation, and covieing) influenced child outcomes. Each analysis assessed the effectiveness of parental mediation on 4 pertinent child outcomes: media use, aggression, substance use, and sexual behavior and negative health outcomes. Li et al. (2018) performed a meta-analysis to explore the relationship between positive and negative indicators of parenting style and internet addiction among Chinese teenagers. While, Elsaesser et al. (2017) reviewed the existing literature on parents' influence (i.e., parental warmth and parental monitoring) on adolescent cyberbullying, both as victims and perpetrators. Chen & Shi (2019) performed a meta-analysis to investigated the effectiveness of parental mediation on reducing harm from media. This meta-analysis only addressed the effects of parental mediation on harm reduction and focused on the effects of parental mediation strategies; however, it did not examine the antecedents of these mediation strategies. In this regard, this study aims to conduct a literature review of the determinants on parental mediation of internet use.

The purpose of the literature study on parental mediation of internet use is to 1) Determine the characteristics of participants in the research on parental mediation of internet use 2). Know the type of measuring instrument on parental mediation of internet use 3). Know the type of parental mediation of internet use 4) know the variable role of the parental mediation of internet use, 5). Know what determinants contributed to the parental mediation of internet use, 6). Know the descriptive process of parental mediation of internet use.

## **Method**

### *Procedure*

The method used is a systematic literature review (SLR), which is a literature review method that identifies, evaluates, and interprets all findings on a research topic to answer

previously determined research questions (Kitchenham & Charters, 2007).

The literature search was limited to articles published from 2011-2020, on May 19-20 2020. The search for articles was done online by using the search words “digital parenting” & “parental mediation of internet use” in the title and keywords in research databases at Sagepub, Ebscohost, Science Direct, and Proquest Dissertation.

### *Analysis*

The method used is the Preferred Reporting Item for Systematic Reviews and Meta-Analytic (PRISMA) method. All articles that have passed the selection process were then reviewed and summarized based on the objectives, author’s name, year of publication, number of respondents, instruments used, research results and suggestions for further research.

The inclusion criteria include 1) research on parental mediation of internet use, 2) published in the form of research articles. The exclusion criteria include 1) research conducted on parents who have children with needs 2) literature review articles or meta-analysis. The search process begins by reviewing the titles and abstracts of the entire search results and comparing them with established criteria.

The research database search resulted in all keywords search results obtained 122 research articles, from Sagepub as many as 22 articles, Ebsco as many as 55 articles, ScienceDirect as many as 23 articles and Proquest Dissertation as many as 21 articles. After scanning the title, there was the same article in two different databases. The results after deducting the duplicates are 120 articles. A total of 18 discoveries were excluded, because it was in the form of book chapter (3), submit paper (1), literature review (1), journal index (4), book review (1), article (6) and measuring instrument (2). Along with it 81 articles did not meet the criteria, namely in the form of digital parenting toolkit topics (7), parent training programs (13), safe internet use (6), problematic internet use (18), student digital learning (10), social media (13), adolescents internet use (12), and articles with parent participants who have children with special needs. Furthermore, there were 2 articles excluded because of parental meditations on the use of video games and television. There are 20 articles included in literature review. Literature search is described in more detail in Figure.1.

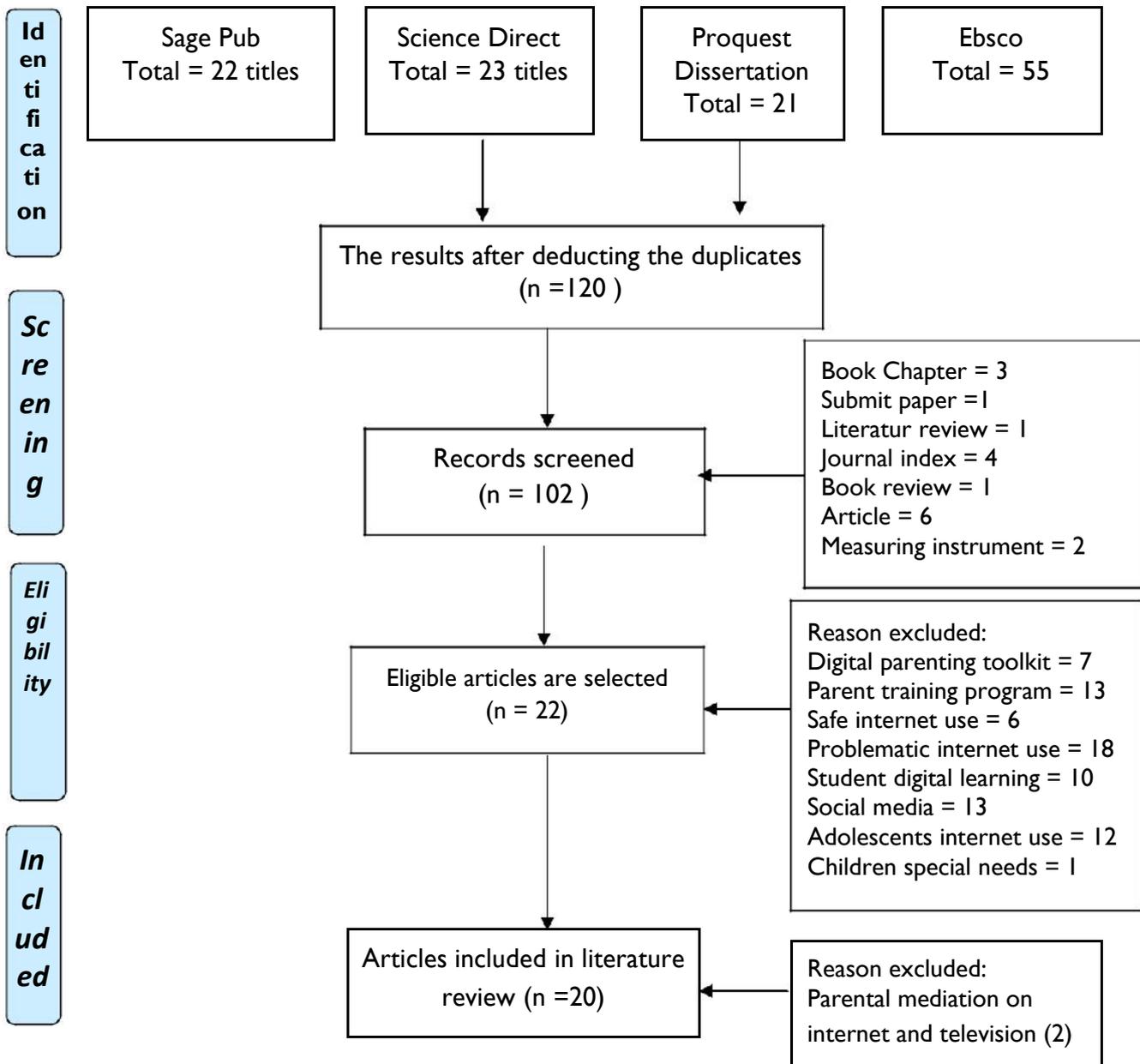


Figure 1. Literature Review Search Method

## RESULT

Table I  
Participant Characteristics, Types of Parental Mediation & Effect Size

Research	Participants			Measuring Instrument & PM Type	Predictor Variable	Var. Dependent (Effect Size)	
	(Total)	Age	Male				Female
(Fu, Liu, Liu, Ding, Hong, et al., 2020)	2.238 Adolescents in Chinese	12-19 (M=13.89)	1111 (49.6%)	1043 (46.6%)	The Chinese of the Parental Mediation of internet use scale (Wu, 2016)	Active (APM)  APM & Parent phubbing  APM & children's behavioral attitude  APM & children's behavioral attitude & children's behavioral intention	Children's behavioral intention ( =0.085, p<0.00) Children's behavioral attitude ( =0.137, p< 0.00) Children's behavioral attitude (F= 26.62, R <sub>2</sub> =0.25, p< 0.001) Behavioral intention (F = 222.51, R <sub>2</sub> =0.56,p<0.001) Children's mobile phone dependency (F = 174.83, R <sub>2</sub> = 0.558, p< 0.001)
(Jeffery, 2020)	40 Parents of teens aged 12-16 in Australia	M=46	10 (25%)	30 (75%)	FGD & Interview	-	
(Chang et al., 2019)	2.468 Parents in Taiwan 2.621 5 <sup>th</sup> -grade	M=43	773 (31.4%) 1.367 (52.2%)	1.687 (68.6%) 1.254(4 7.8%)	Net Children Go mobile (Livingstone, et al., 2014; Mascheroni & Ólafsson, 2014)	Mother > Father  Mother > Father  Mother > Father Mobile device skills & parental mediation efficacy	APM (Cohen's d -0.2842 t- test=6.57, p<.0001) M/T PM (Cohen's d =0.1840 t-test= 4.18,p<.0001) RPM (Cohen's d =0.2322) APM (Adj. OR =0.89 p= 0.2619) MTPM (Adj. OR=1.03, p=0.6568)

(Clay, 2019)	592 Parents of teens aged 13- 18 in USA	-	153 (25.8%)	439 (74.2 %)	Active, Monitoring/ Technical Restrictive Parental mediation of mobile devices and the internet,  Type of PM: Active Restrictive Monitoring	Levels of risk perception and parental mediation efficacy, but lower levels of mobile device skill Demographic variables (child age parent gender, parent ethnicity) TPB (theory of planned behavior) variables Parenting connection Demographic variables (child age, parent age) TPB variable Demographic variables (child age, parent age) TPB variable Parenting connection Ability to help with online problems Internet skills Ability to help children with online problems Their partner's education Internet skills The partners' internet skills Internet skills Ability to help children with online problems Frequency of online activities Having a daughter All variance	RPM (Adj. OR = 0.71 p = 0.0381) APM (F(5, 509) = 11.21, p<.001, Durbin-Watson = 1.95) APM (F(13, 501) = 19.94, p<.001) APM (F(18, 496)=17.16, p<.001) RPM (F(2, 522) = 31.21, p < .001, Durbin-Watson = 1.93) RPM (F (10, 514)=22.73,p< .001) MPM (F(2, 534) = 4.13, p = .02, Durbin-Watson = 2.00.) MPM (F(10, 526) = 8.02,p< .001) MPM(F(15, 521) =5.94, p< .001) APM (r = -.29, p < .001) APM (r = .25, p < .001) APM (r = .27, p < .001) APM (r = - .14, p < .05) APM (r = - .26, p < .001) APM (b = -0.426.p<.000) MPM (r = .19, p < .01) MPM (r = .16, p < .05) MPM (r = .14, p < .05) MPM (r = .20, p < .01) APM (R <sub>2</sub> = 0.311, Adj R <sub>2</sub> = .271,
(Dedkova & Smahel, 2019)	238 Parents of children aged 5-17 In Czech	21-69 (M = 41.26)	110 (46,6%)	128 (53.4%)	Mediation strategies from the EU Kids Online II project (Livingstone et al., 2011)  Type of PM : Active Monitoring		

						All variance	F(13)= 7.774, p < .001) MPM (R <sub>2</sub> = 0.158, Adj. R <sub>2</sub> = 0.109, F(13) = 3.191, p < .001)
(Cabello-Hutt, Cabello & Claro, 2018)	1694 parents in Brazillia 1694 teens	11-17	744(43.9 %)	950 (56.1%)	The European Union (EU) Kids Online framework	RPM RPM C&APM RPM	Online opportunities (b = -0.24 p < .01) Online risk (b = -0.11, p < .01.) Digital skills (b = 0.17, p < .01) Digital skills (b = -0.11, p < .01)
					Type of : Co-use & active Restrictive	Parental education Aged 13–14 years Aged 15–17 years Aged 13–14 years Aged 15–17 years Internet access at home Gender Parental internet use Parental internet use Co-use/active mediation & digital skills Children age	C & APM (b= 0.12, p < .01) C & APM (b= -0.23, p < .01) C & APM (b= -0.31, p < .01) RPM (b= -0.37 p < .01) RPM (b= -0.10 p < .01) C & APM (b= 0.32, p < .01) RPM (b= 0.23, p < .01) RPM (b= 0.26, p < .01) C & APM (b= 0.48, p < .01) Online opportunities (b= 0.04 p < .01) PPPM [F(2,1141)=4,28,p <0,01]
(Peled, 2018)	1.871 Parents in Israel 1.199 grade 5-10	20-73 M=42.23	914 (49%)	928 (51%)	Parental mediation questionnaire from Hart Associates	Family size Parent's parental mediation perception (PPMP)	PPPM [t (1797,0.95) = 4,62, p <0,001, Cohens d = 0,23] Children PPPM (t (1177,0.95) =3,05,p<0,01,Cohen's d= 0,12)
			571 (52%)	517 (48%)	Type of PM : Setting of rules, Monitoring & blocking	Parent Education Children age group (p9, 10-13, dan 14-18)	Father' <Mother'perception [t(507,0,95) = 2,29, p <0,05], PPPM F(2,11167)=3,61,p<0,05

(Nikken & Opre, 2018)	781 Parents of children aged 1-9 In Netherlands		275 (35.2%)	506 (64.8%)	Parental mediation scale (Livingstone and Helsper 2008; Nikken and Schols 2015)  Type of PM : Restrictive & active Supervision Co-use Monitoring Authoritarian Authoritative Permissive Laissez-faire	Parents' basic proficiency Parents' basic proficiency Advanced proficiency The less inclined parents are to adopt the latest media technologies Parent, family, child characteristics & parental attitudes Parent, family, child characteristics & parental attitudes Parent, family, child characteristics & parental attitudes The authoritative style was the most common parental mediation style related to technology use.	A & Co-Use PM (p = 0.000) RPM (p = 0.000) RPM (p = 0.025) RPM (p = 0.026)  A & Co-Use PM (R <sub>2</sub> = 0.34 F=18.32 p < 0.001)  RPM (R <sub>2</sub> = 0.26 F=12.98, p < 0.001)  TPM (R <sub>2</sub> = 0.31 F=15.88, p<0.001)
(Brito, Francisco, Diaz & Chaudron, 2017)	140 Families of children aged < 8 In Europe						
(Hwang, Choi, Yum & Jeong, 2017)	448 Parents in South Korea	31-51 (M = 43.12)	219 (48,7%)	229 (51.3 %)	Parental mediation scale  Type of PM : Restrictive Active	Perceived severity Response efficacy Self-efficacy Increased perceptions of severity, response & self-efficacy Perceived severity Response efficacy Self-efficacy Increased perceptions of severity, response & self-efficacy	RPM (B= 0.22, b=0.24, p<0.001) RPM (B= 0.20, b= 0.20,p< 0.001) RPM (B = 0.16, b = 0.17,p<0.001) RPM (R2=0.27)  APM (B=0,30, b=0,34, p <0,001) APM (B=0.13,b = 0.13, p< 0.01) APM (B=0.13, b = 0.13,p < 0.01) APM (R2=0.29)

(Symons, Ponnet, Emmery, et al., 2017)	34 Parents of teens aged 13-17 Belgia	Father (33-58) Mother (37-52)	9 (26.47%)	25 (73.52%)	FGD & Interview	-	-
(Gomez, 2017)	8 Families of teens aged 14-16 in USA	-	42%	58%	Survey, Interview Mapping	-	-
(Vongkulluksn, 2016)	291 Parents In USA	25-62 (M = 41)	55 (18.9%)	226 (77.7%)	Restrictive Technical & non-technical Monitoring Supportive	-	-
(Hwang & Jeong, 2015)	460 Parents in South Korea	M = 41.12	229 (49,8%)	231 (50.2%)	Parental mediation was measured using items adapted from Nikken and Jansz's study (2006)	Addiction Severity perception Severity perception Openness to experience Neuroticism Agreeableness Agreeableness Conscientiousness Covariates, personality, risk perceptions & addiction	APM ( = -0.13, p < 0.01) APM ( = 0.40, p < 0.001) RPM ( = 0.31, p < 0.001) APM ( = 0.10, p < 0.05) RPM ( = 0.11, p < 0.05) APM ( = 0.15, p < 0.001) RPM ( = 0.16, p < 0.001). RPM ( = 0.09, p = 0.06) APM (R2 = 27.8)
(Kalmus, Blinka, & Ólafsson, 2015)	18.709 Parents In Europe	11-16 (Usiaanak )	9352 (49.99%)	9357 50.01%)	Type of PM : Restrictive Active Restrictive Monitoring & technical solutions	Covariates, personality, risk perceptions & addiction APM, RPM & M&T PM RPM APM M&TPM	RPM (R2 = 19.0) Excessive internet use/EIU (B = 1.603 p=0.000) EIU ((B=0.067, =0.179,p=0.000) EIU (B=0.005, =0.002, p=0.007) EIU (B=0.006, =0.020, p=0.018)

(De Morentin et al., 2014)	1238 Adolescent in Spanish	14-19	545 (44.02%)	676 (55.98%)	Television Viewing Habits Questionnaire Type of PM : Inhibited Co-viewing Instructive Restrictive	Restrictive Co-viewing Instructive	Internet use (F(7, 1185)= 7.43; p .000) (h2 .056) Internet use (F(7, 1185)= 3.85; p .000) (h2 .023) Internet use (F(7, 1185)= 13.47; p .000) (h2 .098)
(Chng et al., 2015)	3,079 students in Singapore	(M = 13.01)	1553 (66.4%)	1526 (63.7%)	EU Kids Online Project Type of PM : Active Restrictive	RPM RPM, Var.moderator = high levels of comfort with living at home RPM, Var.moderator = the parent-child communication RPM, Var.moderator = the parental attachment Parent-family variables and child variables	Pathological internet users (PIU) (b = - 0,11, p < 0.01) PIU (b=-0.15, (OR)=0.860,p<0.001) PIU (b = - 0,135, OR = 0,874, p <0,001) PIU (b=- 0,124, exp (B) = 0,883, p <0,001) SPM (F =21.66,R <sup>2</sup> =0.29,p=0.001) Co-use PM (F = 28.93 R <sup>2</sup> = 0.36, p = 0.001) APM (F=38.83,R <sup>2</sup> =0.43,p=0.001) RPM (F=35.85,R <sup>2</sup> =0.41,p= 0.001) TRPM(F= 14.18,R <sup>2</sup> =0.21,p=0.001) SPM ( =0.11 p \ 0.05) APM ( =0.20 p \ 0.001) RPM ( =0.27 p \ 0.001) TRPM ( =0.20 p \ 0.001) Co-use ( =0.28 p \ 0.001) APM ( =0.25 p \ 0.001) SPM( =0.15 p \ 0.001) RPM ( =0.12 p \ 0.001)
(Nikken & Schols, 2015)	896 parents of children aged 0-7 in Dutch	18-63 (M = 37.3)	421 (47%)	475 (53%)	Parental mediation of digital media scale Type of PM : Supervision Co use Active Restrictive Technical	Children media skills Positive effects media Positive effects media Negative effects media Negative effects media	

(Lee & Chae, 2012)	566 Adolescents in Korean	10-15	290 (51.2%)	276 (48.8%)	Restrictive parental mediation	Negative effects media Parental restrictive mediation RPM & online participation	TPM ( $\beta = 0.08$ , $p < 0.05$ ) Online participation ( $\beta = -0.08$ , $p < 0.05$ ) Online risks ( $b = -0.13$ , $p < 0.001$ ) Online risks ( $R_2 = 0.27$ , $p < 0.001$ )
(Lee, 2012)	566 Mothers in Korean	31-53 years (M= 41)	-	566 (100%)	Restrictive parental mediation	Type of PM : Restrictive Moderator : internet skills & parental restrictive mediation Child's age (school grade) Parental perception of negative internet influence Child's low self-control Parental internet skills All variance	RPM ( $\beta = -.10$ , $p = .010$ ) RPM ( $\beta = .22$ , $p = .000$ ) RPM ( $\beta = .19$ , $p = .000$ ) RPM ( $\beta = .12$ , $p = .002$ ) RPM ( $R_2 = 0.10$ , $p < .001$ ) Time spent online during weekdays ( $\beta = -.21$ , $p = .000$ ) Time spent online during weekend ( $\beta = -.08$ , $p = .000$ ) Exposed to online risks (content-related risks, privacy risks and contact risks) ( $\beta = -.14$ , $p = .001$ ) Time spent online during weekdays ( $b = -.09$ , $p = .04$ ) Online risks ( $b = -.13$ , $p = .002$ )
	566 adolescents	10-15 years	290 (51.2%)	276 (48.8%)	Type of PM : Restrictive	RPM RPM RPM RPM & a child's self-control RPM & a child's self-control	

Ket :PM = Parental Mediation, APM = Active Parental Mediation, RPM = Restrictive Parental Mediation, MPM = Monitoring Parental Mediation, M/T PM = Monitoring/Technical Parental Mediation, CAPM = Co-use & Active Parental Mediation, CPM = Co-use Parental Mediation, SPM = Supervision Parental Mediation

### *Participants and Settings*

The participants of the research that included in the literature review consisted of 2 groups: parents and child/adolescent (Table 1). Most parents who participated in these studies had teenage children (Jeffery, 2020; Chang et al., 2019; Clay, 2019; Cabello-Hutt, Cabello & Claro, 2018; Peled, 2018 ; Hwang, Choi, Yum & Jeong, 2017; Symons, Ponnet, Walrave, et al., 2017; Gomez, 2017; Vongkulluksn, 2016; Hwang & Jeong, 2015 ; Kalmus, Blinka, & Ólafsson, 2015; Lee, 2012). Meanwhile Dedkova and Smahel (2019), Lee and Chae (2012) and Lee (2012) used parent participants with children from childhood to adolescence. Whereas Nikken and Oprea (2018), Brito, Francisco, Dias and Chaudron, (2017) and Nikken and Schols (2015) used parent participants with children from toddlers to grade school age.

On the other hand, research with child participants were carried out from late childhood through adolescence (table 1), where Fu et al. (2020) examined children aged 12 to 19 who were in grades 7-11, while Chang et al.(2019) researched fifth-grade students. Likewise, other researchers used participants who were children to adolescents, students grade 5-10 (Peled, 2018), children and adolescents aged 8 to 19 years (Chang et al., 2015), 14 to 19 years (De Morentin et al., 2014), and adolescents aged 10-15 years(Lee & Chae, 2012; Lee, 2012).

As many as 68.78% of the participants used in the literature reviews were parents, while 31.22% of the participants were children and adolescents (table 2). Parents' participation consisted of 86.46% Caucasian (white), from Australia (Jeffery, 2020), United States (Clay, 2019; Gomez, 2017); Vongkulluksn, 2016), Czechoslovakia (Dedkova & Smahel, 2019), Belgium (Symons, Ponnet, Walrave, et al., 2017), Brazilian (Cabello-Hutt, Cabello & Carlo, 2018), Arab (Peled, 2018) and Netherlands (Nikken & Oprea, 2018; Nikken & Schols, 2015). The gender of the parent participants of the Caucasian race were 41.4% male and 44.92% female, and 0.14% did not mention their gender (table 2). Meanwhile, 13.55% of parent participants came from Mongoloid namely Taiwan (Chang et al., 2019), South Korea (Hwang Choi, Yum & Jeong, 2017; Hwang & Jeong, 2015; Lee & Chae, 2012; Lee, 2012). The gender of the parent participants of the Mongoloid race were 4.19% male and 9.33% female, and the remaining 0.03% did not mention their gender (table 2).

Table 2  
*Total participants by sex and race*

Participants	Total	N	Male	Female	Didn't report gender
Parents	68,78%				
Caucasian		86.46%	41.4%	44.92%	0,14%
Mongoloid		13.55%	4,19%	9.33%	0,03%
Children	31.22%				
Caucasian		31.28 %	14.09%	16.23%	0.97%
Mongoloid		68.72%	34.93%	33.15%	0.64%

A total of 31.28% of the children's participants were of the Caucasian race, the rest came from the Mongoloid race (table 2). Children in Caucasian races originating from Spain (De Morentin et al., 2014) and Arabian (Peled, 2018) consisted of 14.09% boys, 16.23% girls and 0.97% did not mention their gender. While participants from the Mongoloid race originating from Taiwan (Chang et al., 2019), Singapore (Chng et al., 2015), Korea (Lee & Chae, 2012; Lee, 2012) and Chinese (Fu et al., 2020) were 34.93% male, 33.15% female, and 0.64% did not mention their gender (table 2). In addition, there are a number of participants who are families, 140 families in 10 European countries (Brito, Francisco, Dias & Chaudron, 2017) and 8 families in USA (Gomez, 2017).

#### *Measuring Instrument of Parental Mediation*

Of the 20 articles used in this literature review, there were 4 articles that used qualitative methods for its data retrieval, 1 article that used the mix-methods for data collection and there were 15 articles that used the qualitative methods in data collection. Several studies using qualitative methods conducted in-depth interviews and focus group discussions (Jeffery, 2020 ; Gomez, 2017; Symons, Ponnet, Walrave, et al., 2017; Brito, Francisco, Dias & Chaudron, 2017). Meanwhile, Brito, Francisco, Dias & Chaudron (2017) added home visits and observation methods, while Gomez (2017) also conducted a survey and mapping of children's activities in taking research data. Whereas Vongkulluksn (2016) employed the mix-method method which uses quantitative data collection and analysis and qualitative data collection and analysis. The first step was confirmatory factor analysis and path analysis to 291 parents. Measuring instruments used were supportive technology mediation scale and regulatory technology mediation scale. In the second stage it was conducted to obtain qualitative data using individual interviews with 8 parents.

In quantitative research, some researchers measured parental mediation of parents with a measuring instrument developed by Livingstone and Haddon (2009), which is the Mediation Strategies from the EU Kids Online II project (Dedkova & Smahel, 2019; Cabello-Hutt, Cabello & Claro, 2018; Chng et al., 2015). However, Fu et al., (2020) who conducted research in schools in China, used The Chinese of the Parental Mediation of internet use scale developed by Wu (2016). Nikken and Oprea (2018), Hwang and Jeong (2015) and Nikken and Schols (2015) used the parental mediation of digital media scale developed by Nikken and Jansz (2014). While Chang et al., (2019) used the Net Children Go Mobile measuring instrument which was adapted from the study of Livingstone et al., (2014) and Mascheroni and Ólafsson (2014). Peled (2018) used a parental mediation questionnaire from the Hart Research Associates to retrieve parental mediation data from parents. Yet, other researchers used the parental mediation scale which has also been modified according to research needs (Clay, 2019; Hwang, Choi, Yum & Jeong, 2017; Kalmus, Blinka & Olafsson 2015; De Morentin et al., 2014; Lee & Chae, 2012; Lee, 2012).

#### *Types of Parental Mediation*

From the literature review process, there were several forms of parental mediation that were used. Restrictive parental mediation is the most common type of parental mediation in studies (Chang et al., 2019; Clay, 2019; Dedkova & Smahel, 2019; Hwang, Choi, Yum & Jeong, 2017; Vongkulluksn, 2016; Hwang, Choi, Yum & Jeong, 2017; Hwang & Jeong, 2015; Kalmus, Blinka & Olafsson, 2015; Chng et al., 2015; Nikken & Schols, 2015; De Morentin et al., 2014; Lee & Chae, 2012 ; Lee, 2012). In addition, active parental mediation is also commonly found (Fu et al., 2020; Chang et al., 2019; Clay, 2019; Dedkova & Smahel, 2019; Hwang, Choi, Yum & Jeong, 2017; Hwang & Jeong, 2015; Kalmus, Blinka & Olafsson et al., 2015; Chng et al., 2015; Nikken & Schols, 2015). Meanwhile, Nikken and Oprea (2018) merged the two into a form of restrictive and active parental mediation, while Cabello-Hutt, Cabello and Claro (2018) combined it with other forms and called it co-use and active parental mediation.

Another form that emerges is monitoring/technical parental mediation (Chang et al., 2019; Clay, 2019; Dedkova & Smahel, 2019; Nikken & Oprea, 2018; Kalmus, Blinka & Olafsson, 2015; Nikken & Schols, 2015). In addition to that, there are several other forms that emerged, namely the type of co-use/co-viewing parental mediation (Nikken & Oprea, 2018; De Morentin et al., 2014; Nikken &

Schols, 2015), supervision mediation type (Nikken & Opre, 2018; Nikken & Schols, 2015), inhibited mediation type and instructive mediation type (De Morentin et al., 2014) and supportive mediation type (Vongkulluksn, 2016). There are also several studies that implemented other forms as mentioned by Peled (2018) namely parental controls setting of rules and limits as well as parental control technologies (monitoring and blocking). Whereas Brito, Francisco, Dias and Chaudron (2017) used traditional forms of parenting namely authoritarian style, authoritative style, permissive style and laissez-faire style.

#### *Role of Parental Mediation in Research*

In most studies, parental mediation is a dependent variable (table 1), seen in studies from (Chang et al., 2019; Clay, 2019; Dedkova & Smahel, 2019; Peled, 2018; Nikken & Opre, 2018; Hwang, Choi, Yum & Jeong, 2017; Hwang & Jeong, 2015; Nikken & Schols, 2015; Lee, 2012). However, there are several studies where parental mediation acts as a predictor. Research conducted by Fu et al.(2020)stated that parental active mediation is a predictor of children's behavioral intention and children's behavioral attitude on the use of teenage smartphones. In addition, parental active mediation indirectly through children's behavioral attitude and children's behavioral intention become predictor of children's mobile phone dependencies.

Research from Kalmus, Blinka and Ólafsson (2015) shows that all forms of parental mediation namely restrictive mediation, active involvement and monitoring & technical solutions are predictors of excessive internet use behavior in children. Likewise, co-use and active parental mediation and restrictive parental mediation are predictors of online opportunity behavior and online risk behavior Cabello-Hutt, Cabello and Claro (2018). The parental mediation variable also acts as a moderator variable (table 1). In the research of Lee and Chae (2012), they stated that online participation behavior of adolescents has a positive relationship in online risks weakened, with internet skills and parental restrictive mediation moderating variables.

#### *DETERMINANT FACTORS*

##### *Child Characteristics*

Child age factors influence the level of parental mediation (Table 1). Dedkova & Smahel, (2019)

stated that compared to the group of the youngest children (5-8 years), the oldest age group (14-17 years) had less parental mediation. However, there is no difference in the level of parental mediation between the youngest age group (5-8 years) and the middle age group (9-13 years). In addition, Peled (2018) added that parents who have younger children tend to have higher levels of parental mediation compared to parents with older children. Furthermore, Cabello-Hutt, Cabello and Claro (2018) stated that age is negatively related to both co-use and active parental mediation and restrictive parental mediation. Whereas the use of restrictive parental mediation and co-use and active parental mediation are increasingly reduced in the group of older children (15-17 years) compared to the younger age group (13-14 years). It was also made clear by Nikken and Schols (2015) that parents implement active mediation and restrictive mediation in older children. Somewhat different from the opinions of Lee (2012) who stated that age is negatively related to parental restrictive mediation. The younger the child is, the more parents will apply parental restrictive mediation.

Furthermore, it is mentioned in Peled (2018) that the perception of parental mediation in parents differs from the perception of parental mediation of children. Parents' perceptions on parental mediation ( $M = 4.07$ ) are higher than their children's perceptions on the effects of parental mediation in the use of digital media ( $M = 3.87$ ). Parents assume they oversee their children's online activities, while the children feel it is not done so by the parents.

The gender of the child also influences the level of parental mediation, Dedkova and Smahel (2019) declared that girls get more parental mediation monitoring than the boys. This is reinforced by the study of Cabello-Hutt, Cabello and Claro (2018) which found that parents tend to use restrictive parental mediation on their daughters. Despite that, Peled (2018) stated that the perception of boys on parental mediation is similar to the perception of girls. This is in line with Nikken and Schols (2015) that parents do not distinguish between the types of parental mediation for boys and girls.

The number of children in the family also influences the level of parental mediation in parents (table 1). Peled's research (2018) found that parents with fewer children (1-3 children) have a higher level of parental mediation than families who have more children ( $4 <$ ). While according to Nikken and

Schols (2015), parents with a greater number of family members often use all types of parental mediation, except co-use mediation (supervision, active mediation, restrictive mediation, technical restrictions).

#### *Characteristics of Parents*

Gender is considered as one of the influential factors that determine the level of parental mediation (table 1). Research from Dedkova and Smahel (2019) stated that gender contributes to active parental mediation. Women (mothers) have higher active parental mediation than fathers. This is confirmed by the research results of Chang et al., (2019) found that women (mothers) have a higher level of parental active mediation, parental monitoring/technical mediation and parental restrictive mediation than men (fathers). Nikken and Schols (2015) mentioned that mothers implement supervision mediation more than fathers. Nevertheless, the results of Peled's research (2018) report a different finding, that men (fathers) have the same parental perception of mediation as women (mothers).

Concurrently, the level of education contributes to the level of parental mediation (table 1). Mothers who have higher levels of academic education perceive greater parental mediation than fathers (Peled, 2018). This was also stated by Cabello-Hutt, Cabello and Claro (2018) that the level of parental education is positively related to parental co-use and active mediation. According to Nikken and Schols (2015) parents with low education often choose technical restrictions meditation for their children's digital media use more than parents with higher education. There is also a positive relationship between parents' negative perceptions of the influence of the internet with restrictive mediation. The stronger the parents feel the negative influence of the internet on children, the more often they practice restrictive mediation Lee (2012). Likewise, parental internet skills have a positive correlation with the use of restrictive mediation.

#### *Personal Factor*

Personal factors also contribute to a parent's parental mediation level (table 1). The response of efficacy and self-efficacy of parents will increase a more active parental mediation. The higher the parent's self-efficacy, the higher they will be involved in parental mediation (Hwang, Choi, Yum &

Jeong, 2017). In addition, there is a positive correlation between parental perceptions of children's low self-control and the use of restrictive mediation (Lee, 2012). The lower the perception parents have of the child's self control, then they will use restrictive mediation more often.

Research from Hwang and Jeong (2015) found that parents' addiction to smartphones (parents' addiction), risk perceptions, and personality traits play an important role in predicting parental mediation behavior of parents. The results of the study explain that parents' addiction to smartphones is a negative predictor of parental active mediation, while risk perceptions are positive predictors for parental active mediation and parental restrictive mediation. Hwang, Choi, Yum and Jeong (2017) also mentioned that perceived severity has a positive relationship with the two types of parental mediation namely restrictive mediation and active mediation. Likewise, response efficacy and self-efficacy also have a positive relationship with the two types of parental mediation, namely restrictive mediation and active mediation. This study states that perceived severity, response efficacy and self-efficacy are predictors at the level of parental mediation both restrictive mediation and active mediation. The more parents assume that smartphone addiction is a severe problem (perceived severity) and the higher the level of efficacy by parents, the greater the involvement of parents in parental mediation on children in using smartphones (table 1).

Hwang and Jeong (2015) also explained that personality trait (neuroticism and agreeableness) is a positive predictor for parental restrictive mediation. Neuroticism parents seem to be easily depressed and have less emotional stability, so they may be more likely to choose parental restrictive mediation rather than parental active mediation. While, personality trait (openness to experience and agreeableness) is a positive predictor for parental active mediation. Parents who are high in openness (openness to experience) tend to enjoy new experiences, so they prefer parental active mediation rather than parental restrictive mediation. Whereas parents who have agreeableness personality traits are positive predictors for both types of parental mediation because they are more likely to do both of these things together, namely providing warmth (and parental active mediation) as well as protection (and parental restrictive mediation) as parents.

#### *Parent's Digital Technology Skills*

Dedkova and Smahel (2019) stated that internet skills and abilities to help children with online

problems are positively related to active mediation and monitoring mediation. Moreover, the ability of couples in using the internet has an influence on the level of parental mediation. It is shown that the more skilled a partner's internet skills is and their ability to help children with online problems, then active mediation behavior decreases (Dedkova & Smahel, 2019) (see table I).

According to Vongkulluksn (2016), contextual factors such as parental technology knowledge mediated by motivational factors have an influence on parental mediation in the type of monitoring mediation and supportive mediation, whereas this contextual factor only has a direct relationship with restrictive parental mediation. After demographic variables are controlled, parents who have higher mobile device skills tend to apply parental active mediation and parental monitoring/technical mediation to their children (Chang et al., 2019). Meanwhile, parent who have high levels of risk perception and mediation efficacy, but possess mobile device skills, tends to apply parental restrictive mediation to their children in using the internet and smartphones (see table I).

Cabello-Hutt, Cabello and Claro (2018) explained that having internet access at home tends to be associated with a higher level of co-use and active mediation. Other than that, parental internet use is positively related to both co-use and active mediation and restrictive mediation. While Nikken and Oprea (2018) states that parents' ease of active co-use was predicted in the proposed direction by parents' basic proficiency, while ease of restrictive mediation was predicted in the proposed direction by parents' basic proficiency and parents' advanced proficiency, and the ease of imposing technical restrictions was predicted in the proposed direction by parents of advanced media proficiency. Parents' perceived mediation concerns are not related to parents' media proficiency. Also, as expected, low educated parents were less inclined to adopt new media technologies. Adoption of new media was negatively related to perceived mediation concerns, yet did not predict parents' perceived competence.

#### *Parent's Attitude towards Digital Technology Effect*

Nikken and Schols (2015) research results shows that parental attitudes towards the effects of media on children are important predictors in the selection of parental mediation strategies. Parents who agree on the positive influence of media prefer supervision mediation along with co-use and active mediation, while parents who view the negative media effects prefer supervision mediation, technical mediation and technical restrictions mediation to deal with children's behavior

in using digital media. Meanwhile, parents who are convinced that the media are too complicated for their child less often supervise and co-use the media with the child and they more often restrict the child's media use (Nikken & Schols, 2015). Likewise, parents who spend more time on the media themselves are somewhat less inclined to apply active and restrictive mediation on their child's media use.

### *Children Internet Skills*

The children's skills to use digital media and the types of media content children use are very important in explaining the differences in parental mediation used by parents (Nikken & Schols, 2015). If children have better digital media skills, parents will use all types of parental mediation, especially active mediation, restrictive mediation and technical restrictions. Furthermore, especially regarding entertainment content, parents supervise their child's media use or co-use electronic screens with their child. Moreover, they apply all mediation strategies more often when their child is engaged in educational gaming and apply technical restrictions more often when their child is involved in social media activities.

### *The Impact of Parental Mediation*

Parent's parental mediation influences the behavior of digital media use in children (see table 1). One of them is parental active mediation which affects children's behavioral intention and children's behavioral attitude in adolescents use of smartphones (Fu et al., 2020). In addition, parental active mediation and parental phubbing also affect children's behavioral attitude in using smartphones. Furthermore, parental active mediation and children's behavioral attitude are also predictors of the behavioral intention of adolescents who use smartphones. Thus, parental active mediation also indirectly influences children's mobile phone dependency (Fu et al., 2020).

Meanwhile, Cabello-Hutt, Cabello and Claro (2018) reported that restrictive parental mediation influences the behavior of online opportunities and online risk behaviors in adolescents. Conversely, co-use and active parental mediation are positively related to digital skills, whereas restrictive mediation has a negative relationship (table 1). All forms of parental mediation, namely restrictive mediation, active involvement and monitoring & technical solutions affect the behavior of excessive internet use in children (Kalmus, Blinka & Olafsson, 2015). Teens who receive highly restrictive mediation will reduce their involvement in online participation activities (engage in online participation) (Lee & Chae, 2012). In addition, Lee and Chae (2012) also mentioned that parental restrictive mediation and online participation affect adolescent online risk.

Research results of Chng et al. (2015) shows that parental restrictive mediation is negatively correlated with pathological internet users. Adolescents whose parents apply parental restrictive mediation tend to be less pathological internet users, especially in adolescents who are more comfortable living at home, have good parent-child communication and high levels of attachment with parents. The use of restrictive mediation is negatively correlated with the amount of time children spend using the internet (Lee, 2012). On top of that, the more often parents apply restrictive mediation, the less the child will be exposed to the risks of using the internet, both content-related risks, privacy risks and contact risks. There were interaction effects between parental restrictive mediation and a child's low self-control on time spent online during weekdays and on exposure to online risks.

#### *Descriptive Results of Parent's Parental Mediation of Internet Use*

Aside from the quantitative research results, the dynamics of the parental mediation process are also illustrated by interviews conducted by Jeffery (2020), Symons, Ponnet, Walrave, et al. (2017), Gomez, (2017), Brito, Francisco, Dias and Chaudron (2017). Jeffery (2020) stated that parents distinguish between the use of media that is considered to enhance their child's development and the use that has the potential to interfere with children's learning, by categorizing various activities as appropriate and inappropriate. This shows that a tight form of parental mediation is no longer a realistic choice for parents. The results of this study are also a form of parental practical effort to simultaneously minimize risks, while maximizing opportunities is not always captured by the type of parental mediation available. This finding reaffirms the latest research which shows that parental mediation is not static and rule driven, but instead is a dynamic process, driven by a flexible context and can often be negotiated between parents and their children.

The above findings also support the research results of Symons, Ponnet, Walrave, et al. (2017) which shows that parental mediation is best understood as a dynamic process stemming from daily interactions between parents and their teenage children, rather than as a set of rules and established strategies that are applied. Open communication and creating connections with children in terms of internet use is a strategy that parents preferred to apply in parental mediation. Whereas the results of a study conducted by Brito, Francisco, Dias and Chaudron (2017) stated that authoritative parenting style is the most common type of parental mediation used by parents in applying the use of digital technology for their children. In general, there are transversal rules to all

parental mediation styles (except laissez-faire style), such as withdraw or give devices to children according to their behavior, control (inappropriate) content and control the time of use. In addition, parents' perceptions and attitudes towards technology also have a big influence on the type of parental mediation that will be adopted by parents for the use of their child's digital technology.

Meanwhile, Gomez (2017) shows findings which provide a thorough understanding of the daily information practices of adolescents in a family context. Adolescents describe that they generally obey parental rules and respect parental authority. They do not view parental mediation as something that is outside their parent's rights and they try to use digital technology that is considered appropriate by parents and will maintain the balance of their relationship. At the same time, adolescents describe the negotiation of the parental mediation limitations in ways that allow them to pursue their own interests and use digital technology in the academic world as well as in their relationships with friends.

## **Discussion**

Based on the findings obtained, the majority of participants used in the study were parents of teenagers (Jeffery, 2020; Chang et al., 2019; Clay, 2019; Cabello-Hutt, Cabello & Claro, 2018; Peled, 2018; Hwang, Choi, Yum & Jeong, 2017 ; Symons, Ponnet, Walrave, et al., 2017; Gomez, 2017 ; Vongkulluksn, 2016; Hwang & Jeong, 2015; Kalmus, Blinka & Olafsson, 2015; Lee, 2012). Adolescents are greater users of digital technology than children. Although they have good skills in the use of technology, they often ignore the negative risks it causes. This is what often generates problems with parents. In addition, problems arise between parents and children because there is a gap between parent and child competencies in the use of digital technology. This is because parents are included in the digital immigrant group, while their children are included in the digital native group (Prensky, 2001). It oftentimes happens that parents do not know how to use their authority in managing digital technology on their children (Brooks, 2011).

There are several types of parental mediation that appeared namely active parental mediation, restrictive parental mediation, monitoring parental mediation, supportive parental mediation, and couse/coviewing parental mediation. Active parental mediation is the most often common type that appears which refers to the conversation parents spend with children to help them criticize media

content when they engage in activities such as reading, watching or listening, which involve either positive or instructional mediation or forms of criticism (Nathanson, 2001; Livingstone & Helsper, 2008). In addition, restrictive parental mediation is also often chosen by parents who refer to the types of rules that parents have and how strict parents apply them on television and internet media content (Nathanson, 2001; Livingstone & Helsper, 2008).

As a predictor, parental mediation of internet use influences behavioral intention and behavioral attitude in adolescents' use of smartphones, and indirectly influences children's mobile phone dependencies (Fu et al., 2020). Moreover, several other studies also report that parental mediation of internet use is a predictor of the behavior of online opportunities, digital skills (Cabello-Hutt, Cabello & Claro, 2018), risk online behavior (Cabello-Hutt, Cabello & Claro, 2018 ; Lee & Chae, 2012), excessive internet use behavior (Kalmus, Blinka & Olafsson, 2015), engage in online participation (Lee & Chae, 2012), pathological internet users (Chng et al., 2015).

The determinant factors for parental mediation of internet use are internal and external factors. Internal factor findings that emerged were parental characteristics namely demographic characteristics (sex, level of education), parent's digital technology skills, self-efficacy, perception of severity, parent's attitude of digital technology effect and personality trait. The most common demographic factor is gender. Women (mothers) are considered to have better parental mediation than fathers (Dedkova & Smahel, 2019; Chang et al., 2019; Nikken & Schols, 2015).

In the term of personal factors, there are several indicators that influence parental mediation of internet use, such as parent self efficacy (Chang et al., 2019; (Hwang, Choi, Yum & Jeong, 2017), high levels of risk mediation efficacy (Chang et al., 2019), parental perception of their child's low self-control (Lee, 2012), parents' addiction risk perceptions, personality traits (Hwang, Choi, Yum & Jeong, 2017; Hwang & Jeong, 2015) risk perceptions, response efficacy and perceived severity (Hwang, Choi, Yum & Jeong, 2017). Parental digital ability factors also contribute to the level of parental mediation of internet use, such as internet skills and abilities to help children with online problems (Dedkova & Smahel, 2019), technological knowledge of parents (Vongkulluksn, 2016), mobile device skills (Chang et al., 2019).

Whereas the most external factors that influence parental mediation are children's characteristics including demographic characteristics (sex, age, the number of child in the family) as well as

partner's characteristics (age, sex, education level) and children's ability to use the internet. A demographic factor found is the younger the age of the child, the more parents will apply tighter parental mediation (Dedkova & Smahel, 2019 ; Peled, 2018 ; Cabello-Hutt, Cabello & Claro, 2018). In addition, other external factors according to Nikken & Schols (2015) are the child's skills to use digital media and the types of media content affect the type of parental mediation that will be chosen by parents.

The results of qualitative studies indicate that mediation by parents is not static and driven by rules, but is rather a dynamic process, driven by a flexible context, and often negotiated between parents and their children (Jeffery, 2020); Symons, Ponnet, Walrave, et al., 2017; Brito, Francisco, Dias & Chaudron, 2017; Gomez, 2017). This shows that a tight parental mediation is no longer a realistic choice for parents. Parents also try to minimize the risk of using digital technology while still trying to maximize opportunities to not always be apprehended by the existing parental mediation types.

## **Conclusion**

The results of this literature review examine various studies that have been carried out related to parental mediation of internet use in parents in children's use of digital technology. The result is information on the characteristics of the participants of the research, the type of measuring instrument on parental mediation of internet use, the type of parental mediation, the role of parental mediation, the determinants of parental mediation from various factors, and a description of the parental mediation process from qualitative data.

Participants in these articles are parents with children ranging from childhood to adolescence, and some of the other participants are children from late childhood to adolescence. Both the parents and child participants were predominantly Caucasian. In the quantitative research, the measuring instrument used is a questionnaire about parental mediation of internet use from previous studies or a questionnaire that has been modified according to the research setting. Meanwhile, qualitative research used the interview method and focus group discussion. The types of parental mediation of internet use that appeared were active parental mediation, restrictive parental mediation, monitoring parental mediation, supportive parental mediation, and co-use/co-viewing parental mediation. The role of parental mediation of internet use is mostly as a dependent variable, but in

some studies, it acts as a predictor variable.

Meanwhile, the determinants that affect parental mediation of internet use are internal factors and external factors. Internal factors that appear in parental mediation of internet use are demographic characteristics (sex, level of education), parent's digital technology skills, self-efficacy, perception of severity, parent's attitude of digital technology effect, and personality traits. Meanwhile, external factors that affect parental mediation of internet use are child's characteristics including demographic characteristics (sex, age, the number of children in the family) as well as partner's characteristics (age, sex, education level) and children's ability to use the internet. Nonetheless, the results of the dynamics of parental mediation of internet use showed a dynamic process, and not a static process with too many restrictions, but driven by a flexible context, and often negotiated between parents and their children.

This review literature is limited to research in 2011-2020, this constrains other variables that may be related to parental mediation of internet use that have not been discussed in this article. For this reason, a search for research published more than the scope of years is necessary to obtain a more complete picture. The results of this literature review are expected to be a ground work for other researchers who are interested to examine parental mediation of internet use of parents, especially the children's use of digital technology. Moreover, since other researchers use different terms to label digital parenting or parental mediation of internet use of parents in the children's use of digital technology, it is also necessary to conduct a more extensive search involving these keywords.

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