MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

Longitudinal Effects of Parental Mediation Styles on Children's Social Well-Being and Self-Esteem: The Role of Perceptual Discrepancy and Children's Social Media Use

verfasst von / submitted by

Ani Baghumyan

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Science (MSc)

Wien, 2021 / Vienna 2021

Acknowledgements

No kind of scientific endeavor can succeed without support and encouragement. I am, first and foremost, deeply grateful to my advisor, Jörg Matthes, for his constant support, patience, and generosity. I also would like to express my gratitude to Anja Stevic, who answered my questions patiently and guided me through the research process. I am also indebted to my two best friends, Aytalina Kulichkina and Sophie Mayen. Without their push, I would not have completed this project. Finally, I owe my deepest gratitude to my sister and my family.

Table of Contents

Introduction

Mobile phones, and smartphones, in particular, have become an integral part of our lives. And it is no longer just grown-ups who own mobile phones. The use of mobile phones, and particularly smartphones, is on the rise worldwide, especially among children and adolescents (Lenhart, 2015; Mascheroni & Ólafsson, 2014). In fact, children are becoming smartphone owners from a very young age. A study conducted in Germany found that 82% of children aged 10-11 used a smartphone. And this statistic goes up with age: 97% of 12 and 13-year olds and 98% of 14-year-olds own a smartphone (Berg/Bitkom, 2019). This development, of course, cannot escape the attention of the parents or caregivers who have used and continue to use different strategies to supervise and control their children's activities and behaviors in relation to various kinds of media consumption and media effects, otherwise known in the literature as parental mediation.

Parental mediation refers to strategies parents use to monitor their children's media behavior and mitigate potential negative media effects. First studies in this area have looked at the tactics parents use to control their children's television use (e.g. Corder-Bolz, 1980; Nathanson, 1999), later also incorporating video games (e.g. Coyne, Padilla-Walker, Stockdale, & Day, 2011; Nikken & Jansz, 2006) and the Internet (e.g., Livingstone & Helsper, 2008). There are generally three mediation strategies that parents utilize to monitor their children's media use: restrictive mediation, active mediation, and co-viewing or co-use (Nathanson, 1999; Valkenburg, Krcmar, Peeters, & Marseille, 1999; Valkenburg et al., 2013). *Restrictive* mediation refers to a set of strategies parents use to limit children's exposure to certain media content as well as the time they spend watching or interacting with that medium and/or content. *Active* mediation is when parents actively discuss certain media content with their

children and, for example, try to explain why it may or may not be acceptable, hence instilling critical thinking in children and helping them become more aware media consumers (Fikkers, Piotrowski, & Valkenburg, 2017). Finally, *co-viewing or co-use* is the practice of parents and children using or watching certain kinds of media together but without engaging in active discussion of the content. (Nathanson, 1999; Valkenburg et al., 1999l Padilla-Walker, Coyne, & Collier, 2016).

A large number of earlier studies on parental media mediation have investigated the antecedents of different media mediation strategies. These studies have shown, for instance, that both active and restrictive mediation are more utilized by families who have younger children (e.g., Hoffner & Buchanan, 2002; Nikken & Jansz, 2006), an open communication style (An & Lee, 2010; Buijzen & Valkenburg, 2005) and finally negative attitude towards media and media effects on children (Austin, Bolls, Fujioka, & Engelbertson, 1999; Nathanson, 2001a).

A great number of studies have also looked at the effectiveness of different mediation strategies, showing that parental mediation can mitigate a range of negative media effects on aggression (Nathanson, 1999) as well as fear (Buijzen, van Der Molen, & Sondij, 2007), sexual risk behaviors (Fisher et al., 2009), cyberbullying (Mesch, 2009), and (underage) alcohol use (Austin, Pinkleton, & Fujioka, 2000). Furthermore, research has demonstrated that parental mediation strategies can enhance the positive effects of media behavior in children. For instance, they can improve the positive influence of video games on prosocial behavior (Coyne et al., 2011) and enhance learning from educational or prosocial television (Calvert, 1999; Huston & Wright, 1994).

Despite the impressive body of research dedicated to the exploration of this crucially important phenomenon, several important research gaps still remain. First, while there are many

studies on the predictors and effectiveness of parental mediation styles, little is known about the impact that different mediation styles can have on children. Second, most of the studies have used cross-sectional data, and there is a lack of longitudinal studies. Third, majority of the studies are devoted to television, computers and video games, and internet use; research on the particular influences of mediation strategies on mobile phone behavior is surprisingly very scarce (Clark, 2011; Haddon, 2013; Mascheroni, 2014). Fourth, most of the parental mediation studies do not explicitly discuss theory (Collier, Coyne, Rasmussen, Hawkins, Padilla-Walker, Erickson, & Memmott-Elison, 2016). Parental mediation, in other words, is not contextualized in the backdrop of the literature on general parenting practices, styles, and family dynamic.

This study seeks to fill the above mentioned gaps and make a contribution to the extant literature by: a) contextualizing and discussing parental mediation strategies in the backdrop of several theories, such as self-determination theory, parental control and monitoring as well as general parenting styles, and by doing so, offer a comprehensive theoretical framework for better understanding parental mediation strategies and their possible consequences; b) employing longitudinal data to study the effects of parental mediation of children's smartphone use on two critical outcomes: children's well-being and self-esteem; and c) considering both parents' and children's perspectives, possible discrepancy effects, and, finally, the potential moderating role of social media use.

Parental Mediation: Theoretical Background

Parental Mediation Strategies and Smartphones

The literature generally distinguishes three parental mediation styles: active, restrictive, and co-use or co-viewing. However, not all mediation strategies identified in the literature can be applied to children's smartphone use. In particular, co-use and co-viewing were first applied to

television and computer, both of which can be used or watched by several people (in other words, parents can watch television with their children or play computer games with them). Smartphones, on the other hand, are personal gadgets with small screens and do not allow for multiple users or viewers. It is difficult to co-use smartphones (for example, parents and children cannot type simultaneously). It is also inconvenient for co-watching and co-sharing due to the small screen size. In addition, smartphones are usually thought to be more private devices while TV or PC are more like "public" mediums. So co-use is more likely to happen with media that can be shared with multiple viewers or users and is more "public" (e.g. TV) than with smartphones (Hwang et al., 2017). Hence only active and restrictive parental mediation styles are applicable to parents' monitoring of children's smartphones (Stevic & Matthes, 2021) while co-use is less relevant (Hwang et al., 2017). So in the context of smartphone use, active mediation entails talks and discussions parents have with children about using their smartphone as well as the content they view on it. Restrictive mediation is about curtailing the amount of time children spend on their smartphones as well as the kind of content they consume through it (Stevic & Matthes, 2021).

Parental Mediation Strategies and Parenting Styles

Parental mediation is part of a larger family dynamic that entails parental concern and potential conflict and so is likely to be influenced by parenting style. Parenting style is the reflection of the larger context of the parent-child relationship and the communication strategies parents deem as apt during child-rearing (Warren & Aloia, 2019). Baumrind (1991) developed a typology of parenting styles based on a range of parenting practices and communication strategies (e.g. parental control, discipline, supervision, etc.). Accordingly, three parenting styles were developed from this analysis: authoritarian, permissive, and authoritative. Authoritarian

parents are extremely demanding and lack responsiveness; they use rigid rules that demand child obedience without question. Permissive parents, on the other hand, are highly responsive but not demanding, displaying low levels of discipline in regards to their children's needs. Finally, authoritative parents are simultaneously demanding *and* responsive; they tend to encourage independence in their children through structured but flexible rules.

Some studies have explored the connection between parenting styles, parental mediation, and children's media use. For example, Eastin et al. (2006) found that compared to authoritarian and permissive parents, authoritative parents were most likely to use restrictive, active, and co-use Internet mediation, which as the authors argue, is likely a reflection of their desire to balance demandingness and responsiveness. Authoritarian parents employed restrictive mediation at comparable levels to authoritative parents, but unlike them, they used active and co-use mediation strategies at significantly lower levels. Finally, permissive parents used active, restrictive, and co-use mediation strategies at the lowest levels compared to the other two groups. When it comes to the link between parenting styles and parental mediation in the context of cell phone use, Warren & Aloia (2019) found that authoritarian parenting was positively related to restrictive cell phone mediation while authoritative parenting was positively related to active cell phone mediation.

To sum up, theories on parenting styles provide a useful framework for contextualizing and better understanding various parental mediations strategies. Another theory that can help better understand parental mediation strategies in the child-parent dynamic is self-determination theory, which is presented next in relation and together with parental restrictive and active mediation styles.

Parental Mediation Strategies: Self-Determination Perspective: Restrictive Mediation

Restrictive mediation can be viewed as a kind of parental monitoring (Collier et al., 2016). Parents directly get involved in the supervision and control of their children's media activity to shield them from potentially harmful outcomes of being exposed to certain kinds of media content. In the case of mobile phones, parents may restrict the time or the content of children's use of the smartphones (e.g., Collier et al., 2016), which also entails online activities such as using instant messaging apps (Livingstone & Helsper, 2008). By doing so parents hope to prevent children from potential negative outcomes such as problematic mobile phone involvement. (Van Deursen et al., 2015). Younger children might be more willing to accept such restrictions since they are more likely to consider parental rules as absolute and additionally do not have a high need for autonomy (Nathanson, 2001b). However, as they enter adolescence, their need for autonomy increases and, along with that, decreases parents' ability to monitor and mediate their children's mobile phone use as children get to spend more time outside the home (Kerr et al., 2010). Thus, restrictive mediation may, in fact. result in less openness between parents and their children, less willingness to disclose information to parents, hence resulting in negative adolescent outcomes (Kerr et al., 2010).

Restrictive mediation may also be considered in the backdrop of the self-determination theory. Self-determination theory essentially explores people's motivations without any outside influences and interferences (Grolnick, Deci, & Ryan, 1997). Human beings have a need for autonomy and competence and these serve as intrinsic motivations for children, adolescents, and adults. However, restrictive mediation may actually counteract parents' efforts to instill independence and decision-making skills in their children as they enter adolescence since it does not give room for internally regulated behaviors and values. In fact, research has found that

employing punitive restrictions or negative emotions like guilt or anxiety appear to be less effective and may even elicit reactance (e.g., Valkenburg et al., 2013; White, Rasmussen, & King, 2015) potentially increasing rather than decreasing the very behavior it tries to affect (Brehm & Brehm, 1981). Hence, active rather restrictive mediation may actually be more effective for adolescents who require more autonomy and responsibility as they begin to make their own decisions.

Parental Mediation Strategies: Self-Determination Perspective: Active Mediation

Active mediation entails parental talks with children about media content aimed to prevent potential negative outcomes for children (e.g., Nathanson, 1999). By doing so, parents can help their children understand the content better, develop a critical outlook or change their attitudes about certain media exposure (e.g. violent media content) thus helping their children become more media literate (e.g., Lwin, Stanaland, & Miyazaki, 2008; Fikkers, Piotrowski, & Valkenburg, 2017). While mobile phone use is more individual and private, parents, however, can still discuss certain mobile activities with their children (e.g. talk about mobile games they play). Parents can also further expand the conversation to include their own mobile phone use and share their own experience and difficulties with managing negative or potentially harmful mobile phone behavior, thus their children develop healthier ways of using their mobile phones (Hefner, Knop, & Klimmt, 2018a). This, in turn, can encourage and help kids develop their own idea of beneficial mobile phone use and what it might look like (Hefner et al., 2018). There is some evidence on the effectiveness of active mediation of the mobile phone as well as the Internet. Collier et al. (2016), for example, found in their meta-analysis that active mediation can have protective effects on substance use, sexual behavior, but not on media use. Kalmus et al., (2015) found that active mediation can reduce excessive internet use, and

Duerager and Livingstone (2012) showed that active parental mediation can effectively reduce risks experienced online.

Similar to restrictive mediation, active mediation can also be viewed in the context of self-determination theory. In the case of employing active mediation, parents encourage internal regulation of values, open discussion, and disclosure of media content and use (including negative) (Kerr et al., 2010). Open disclosure between a parent and a child from an early age may in its turn increase the chance of disclosing other sorts of information in adolescence, including issues related to media use (Kerr & Stattin, 2000). Parents who engage in active mediation hope to encourage critical thinking toward media without directly addressing the content itself (Nathanson, 1999; Valkenburg et al., 1999). To develop critical thinking skills in children and adolescents, parents teach and explain their media standards to their children instead of demanding compliance to their standards of media use. (Grusec & Goodnow, 1994). Thus, through active mediation, parents try to influence the impact of media exposure on their children by offering a counter perspective (Fikkers et al., 2017). It is then more likely that active mediation will allow children to have more autonomy than restrictive mediation. Hence, it is a better way of helping children "accept and internalize media rules in order to abide by them willingly" (Clark, 2011, p.327).

This Study

The Potential Effects of Parental Mediation on Children's Self-Esteem

One of the most utilized variables for understanding the effects of parenting on children and adolescents is self-esteem (Martinez et al., 2019). Self-esteem is defined as a positive or negative orientation toward oneself (Rosenberg, 1965) and a person's appraisal of their own value (Leary & Baumeister, 2000). It constitutes the affective and/or evaluative aspects of the

self-concept (Leary & Baumeister, 2000). Self-esteem is an important component when it comes

to understanding individuals' behavioral, cognitive, emotional, and social functioning

(Shavelson, Hubner, & Stanton, 1976). It is also a key objective of parental socialization

(Grusec, Danyliuk, Kil, & O'Neill, 2017) and has been shown to be affected by parenting

practices (Barber, Chadwick, & Oerter, 1992; Martínez & García, 2007).

As stated above, research on the effects of mediation strategies on mobile phone use is

very scarce (Clark, 2011; Haddon, 2013; Mascheroni, 2014). Furthermore, the impact of parental

mediation strategies on children is essentially underexplored. There is nevertheless a vast body

of research indicating that parent-child relationship quality is positively related to children's and

adolescents' self-esteem (e.g. Bulanda and Majumdar, 2009). For example, a range of studies

employing experimental (DeHart et al., 2006), cross-sectional (e.g. Bean et al., 2003), and

longitudinal designs (e.g. Boudreault-Bouchard et al., 2013; Roberts and Bengtson, 1993) have

found that perceived parental support positively affects adolescents' self-esteem. In particular, a

longitudinal study looked at the relationship between parental emotional support and

adolescents' (between 14 and 18 of age) self-esteem over the course of 4 years and found that

both maternal and paternal emotional support positively affected self-esteem over time

(Boudreault-Bouchard et al., 2013). In addition, a two-wave panel study revealed that lower

perceived parental control decreased children's self-esteem over time (Schmuck, Stevic,

Matthes, & Karsay, 2021).

There is also some evidence on the effects of general parenting styles – authoritarian,

authoritative, and passive—on children's self-esteem but not of parental mediation per se. For

example, Martínez, I., & García, (2007) found that adolescents aged 13-16 who came from

authoritarian Spanish households scored the worst on self-esteem. The same result was observed

among Brazilian adolescents between the age group of 11-15 years old: authoritarian parenting was linked to worse self-esteem. Milevsky, A., Schlechter, M., Netter, (2007) did a study on children aged 9-11 and found that children who had authoritative parents had higher self-esteem and lower level of depression, whereas those with authoritarian parents had lower self-esteem and a higher level of depression.

Furthermore, literature on parents' control of their children's behavior can also help better understand possible implications of parental mediation as it can also be viewed as a type of behavioral control (e.g. controlling children's mobile phone behavior). It is known from the literature that parents' behavior toward their children can affect how children perceive themselves (Bretherton, 1991; Harter, 1999, 2003). However, as children enter adolescence, a certain tension arises in response to parents' attempt to control their behavior. This is because, as argued by Barber et al. (1994), children both have a need to learn to control their own behaviors in order to become functioning members of society and they need to be independent in order to become self-sufficient and competent. In a similar vein, Deci and Ryan's (2000) self-determination theory highlights the importance of two opposite needs: "relatedness" (i.e. connection with other) and "autonomy" (i.e. ability to control and influence one's own outcomes). Yet, extreme levels of both of these needs can be problematic and so it is up to parents to determine what levels of which are best for their children. When children enter adolescence, they are particularly under pressure to develop skills needed to enter adulthood (Dahl, 2004), and parents' attempts to control their behavior and maneuver the fine line between providing autonomy and connection becomes particularly challenging. Moreover, as argued by Baumrind (1968, 1978), the goal of behavioral control is to give children the skills they need to

make their own decisions as they enter adulthood. And so for adolescence, the benefits of behavioral control are less clear.

When it comes to the effects of parents' behavioral control on children's self-esteem, the research is divided. There is evidence on both possible positive and negative outcomes on self-esteem as well as null effects. For example, Han and Grogan-Kaylor (2013) studies the effects of parental monitoring on 3263 Korean adolescents aged 15-16 years old over five years and found that parental monitoring positively predicted self-esteem change over time. However, other studies that looked at the influences of behavior control on self-esteem reported null effects (Doyle & Markiewicz, 2005; Ojanen & Perry, 2007). Contrary to Han and Grogan-Kaylor (2013), Kakihara, Tilton-Weaver, Kerr, and Stattin (2010) studies the effects of parental rules and parental restrictions on adolescents' self-esteem among 1022 Swedish adolescents and found that feelings of being over-controlled and having restricted freedom negatively predicted self-esteem over time.

The Potential Effects of Parental Mediation on Children's Social Well-Being

Well-being is a multidimensional concept, and life satisfaction or quality of life have been identified as the main components of well-being (e.g.,Diener, Oishi, & Tay 2018; Dodge et al. 2012). Literature suggests that parenting practices can influence children's well-being both directly and indirectly. For example, it has been found that perceived parental involvement is crucial to an adolescent's psychological well-being (Gecas & Schwalbe, 1986). Parenting styles have also been found to affect children's well-being. For instance, authoritative parenting style is associated with greater well-being as it influences children's development, self-evaluation, and self-esteem as well as intrinsic motivation to learn in a positive manner (Baumrind, 1966, 2005; Doyle & Markiewicz, 2005). Furthermore, self-esteem, which is a cause of many life outcomes

(Neff and Vonk, 2009; Orth et al., 2012), has been found to affect individuals' well-being (Wang et al., 2017). A vast body of research suggests that there is a strong positive link between self-esteem and individuals' subjective well-being (Paradise and Kernis, 2002). Self-esteem is a positive predictor of well-being both for adolescents and adults. (Burke and Kraut, 2016; Szabo et al., 2019; Valkenburg et al., 2006). High levels of well-being are important since it can affect relationship quality, work, and academic performance (Diener et al., 2018). So self-esteem is a crucial predictor of satisfaction with life (or well-being) as it ensures individuals' positive self-image (Diener and Diener, 1995; Kernis, 2002).

Well-being has traditionally been operationalized in the psychological literature as individuals' subjective evaluation of life satisfaction and affect or personal functioning (Keyes, 1995). However, as argued by Keyes (1995), individuals are deeply rooted in social and community structures and ties, and to better grasp their functioning and mental health, social well-being should also be examined and explored. Furthermore, research in recent years has been clear on the importance of social networks, positive relationships, and friendships for attaining high levels of well-being (Dodge et al. 2012; Ryff & Singer, 2008). For children entering adolescence, social well-being is especially critical to consider in the context of overall well-being. Children spend a considerable amount of their time at school with friends and classmates, and so it is logical to assume that social well-being will have even greater importance and effect on their subjective overall well-being or life satisfaction.

Perceptual Differences: Parents' and Children's Reports

Parental mediation of children's media use is perceived differently by children and parents. For example, research has shown that parents and children perceive differently the degree of the mediation while tend to agree on the mediation style (Nathanson, 2001; Nikken and

Jansz, 2006). Some researchers have also questioned the validity of parents reports claiming that child reports are more valid (Liau, Khoo, & Ang, 2005; Van den Bulck & Van den Bergh, 2000). Others, however, have argued that both perspectives are equally valid and should be considered (Nathanson, 2001b; Van der Voort, van Lil, & Peeters, 1998). There are few empirical studies systematically investigating the relative validity and the level of agreement between parent and child reports of parental mediation (Beyens & Valkenburg, 2019). One of the studies that has attempted to fill in this gap is by Beyens & Valkenburg (2019), where the researchers found that both parents' and adolescents' reports are valid when it comes to evaluating the frequency and style of parental mediation, and both perspectives should be taken into account in order to develop a full understanding of parental mediation phenomenon.

Against this backdrop, this study will consider both parents' and children's reports to further our understanding of the consequences of perceptual discrepancy of parental mediation styles among parents and children and consider potential implications for psychological and social outcomes for children.

Hypotheses

In the light of the literature findings on parents' and children's reports of mediation styles, I propose my first hypotheses:

H1a: Parents and children will tend to agree in their reports of active parental mediation.

H1b: Parents and children will tend to agree in their reports of restrictive parental mediation.

Furthermore, based on the findings from the literature on parenting practices, their effects on children's self-esteem and well-being as well as the nature of active and restrictive parental mediation strategies and their unique characteristics, I propose the following hypotheses:

H2a: Restrictive mediation reported by parents will have a direct negative effect on children's self-esteem over time.

H2b: Restrictive mediation reported by parents will have a direct negative effect on children's social well-being over time.

H3a: Active mediation reported by parents will have a direct positive effect on children's self-esteem over time.

H3b: Active mediation reported by parents will have a direct positive effect on children's social well-being over time.

H4a: Restrictive mediation perceived by children will have a direct negative effect on children's self-esteem over time.

H4b: Restrictive mediation perceived by children will have a direct negative effect on children's social well-being over time.

H5a: Active mediation perceived by children will have a direct positive effect on children's self-esteem over time.

H5b: Active mediation perceived by children will have a direct positive effect on children's social well-being over time.

H6: Children's self-esteem will positively predict social well-being.

The Role of Social Media

The term "social media" is used to refer to the various internet-based networks that allow users to communicate with others, both verbally and visually (Carr & Hayes, 2015). According to the Pew Research Center report (2018), as smartphones have become more prevalent and accessible, the number of teens reporting using the Internet has doubled since 2014-2015, some

45% of teens reporting using the internet "almost constantly," nine-in-ten teens going online at least several times a day. Furthermore, social media platforms take up a big amount of the screen time users spend on their smartphones. According to the "Digital 2021 Global Digital Overview" report by DataReportal, social and communication apps (e.g. Facebook) take up 44% of the mobile time while for video and entertainment apps the number is around 26%. In addition, the typical social media user now spends 2 hours and 25 minutes on social media each day (DataReportal, 2021). Social media platforms (e.g. Facebook and Twitter) are also increasingly becoming an important part of young people's lives over 90% of youth reporting using social media day and night (Duggan & Smith, 2013).

The use of social media platforms has been found to come both with risks and benefits and so social media can be thought of as a "double-edged sword." On one edge of the sword are the benefits people receive when they are allowed to express their idea and feelings on social media platforms (Lenhart et al., 2015; Lilley, Ball, & Vernon, 2014; O'Keeffe & Clarke-Pearson, 2011; Rosen, 2011). Furthermore, Davis (2012) reported that social networking sites such as Facebook help foster a sense of belonging among adolescents by providing them an opportunity to experience connectedness hence fulfilling their need to belong (Baumeister & Leary, 1995; Nurullah, 2009). There are also positive effects of social media for lonely adolescents. In particular, adolescents who are not comfortable or successful in face-to-face interaction might benefit from using social media. For example, a study conducted by Bonetti, Campbell, and Gilmore (2010) suggests that online communication may encourage lonely and socially anxious adolescents to participate in self-disclosure with their peers, thus increasing their feelings of social connection. Furthermore, Bonetti et al. (2010) found that compared to non-lonely students, lonely students were more likely to admit to using online communication to

meet new people and get a sense of belonging to a group. These findings align with the social compensation hypothesis (Laghi et al., 2013), which suggests that socially anxious people feel more at ease when self-disclosing with others online due to reduced social cues that social media and the internet, in general, provide (Valkenburg & Peter, 2009).

On the other edge of the social media sword are a range of psychological and social problems and negative consequences that have been linked to social media use. For example, a meta-analysis of 23 studies found that Facebook use is correlated with psychological distress in adolescent and young adults (Marino, Gini, Vieno, & Spada, 2018). Furthermore, a systematic review of 11 studies found a small but statistically significant relationship between social media use and depressive symptoms in children and adolescents (McCrae, Gettings, & Purssell, 2017). Significant links between social media use and depression have also been found in other systematic reviews (Best, Manktelow, & Taylor, 2014; Hoare, Milton, Foster, & Allender, 2016). Furthermore, social media can also negatively affect one's sense of belonging and, ultimately, psychological and social well-being. The term "cyberostracism" describes a kind of ostracism that can sometimes occur in online social environments (D'Amato et al., 2012). It has been proposed that online ostracism can be as damaging and hurtful as its offline equivalent (Gonsalkorale & Williams, 2007; Zadro, Williams, & Richardson, 2004). Research has found that cyberostracism poses a threat to one's sense of belonging in the same way that ostracism does (Abrams et al., 2011).

When it comes to self-esteem and well-being among children and adolescents, there is evidence that social media use negatively affects different aspects of adolescent well-being, such as sleep and mental health (e.g. Pantic et al., 2012). Poor sleep quality, in turn, can contribute to depression, anxiety, and low self-esteem (Alfano,Zakem,Costa,Taylor, &Weems, 2009;

Fredriksen, Rhodes, Reddy, & Way, 2004). Furthermore, it has been postulated that longer exposure to social networking sites can negatively affect self-esteem. For example, Vogel and colleagues (2014) showed that frequent Facebook use leads to increased upward social comparison and decreased self-esteem. And specifically, upward social comparison on social networking sites has been shown to have a direct and negative effect on self-esteem (Liu et al., 2017; Wang et al., 2017). Furthermore, several cross-sectional studies have found that changes in people's self-esteem as a result of social media use are associated with changes in their well-being as well (Liu et al., 2017; Wang et al., 2017).

Finally, it is important to consider how teens themselves perceive social media. According to a 2018 survey by Pew Research Center, teens seem to have mixed views on the influence of social media on their lives. 45% of teens think that social media has neither positive nor negative effects on them and their peers; 31% consider social media's influence positive on their lives, while 24% describe it as mostly negative (Pew Research Center, 2018). Those considering social media as a positive influence on their lives emphasize issues having to do with connectivity and connection (e.g. social media helps them keep in touch and interact with other people, and makes it easier to communicate with family and friends) (Pew Research Center, 2018).

To sum up, literature seems to be divided when it comes to the potential risk and benefits of social media use on children's and adolescents' psychological and social well-being with some studies reporting benefits, others null effects, or negative outcomes. For self-esteem, however, there have been predominantly reported risks and negative influences of social media use rather than positive outcomes.

Hypotheses and Research Questions

Based on the literature findings on social media use and outcomes, this study proposes that the effects of parental mediation will likely differ for children based on the frequency of social media use on their smartphones. For example, for children who use social media a lot on their smartphones, parental restrictive mediation can have two-fold effects. For children who use social media more frequently, it can potentially curb some of the negative effects of social media use as children will be using their smartphones less and spend less time on social media and, by doing so, also mitigate the effects of restrictive parental mediation on children's social well-being and self-esteem.

However, social media also allows adolescents to form new friendships and strengthen the existing ones (O'Keeffe, Clarke-Pearson, & Council on Communications and Media, 2011). And friendships are crucial for children's social well-being. For children who are not frequent social media users and can potentially benefit from the use of social media, restrictive parental mediation can have even stronger negative influences, especially on their social well-being (but not their self-esteem). Children may also perceive their parents' efforts to restrict their smartphone use also as an attempt to cut their "online ties" with their friends.

In the case of active mediation, for more frequent social media users, the benefits of active mediation may conversely decrease both self-esteem and social well-being. For less frequent users, social media use may actually boost the positive influence of active mediation on children's social well-being but not self-esteem. However, as stated above, the literature is divided on the effects of social media on children's well-being. Against the backdrop of the mixed findings on the influence of social media use on adolescents' and children's well-being, and I propose my first research question:

RQ1: How does children's social media use frequency on smartphones moderate the relationship between a) active parental mediation and social well-being b) restrictive parental mediation and social well-being based on reports from parents and children.

Based on the findings regarding social media's negative effects on adults' and adolescents' self-esteem, I put forward the following hypotheses:

H7: Frequency of children's social media use on smartphones will negatively influence the relationship between restrictive parental mediation and children's self-esteem a) as reported by parents, and b) as perceived by children.

H8: Frequency of children's social media use on smartphones will negatively moderate the relationship between active parental mediation and children's self-esteem a) as reported by parents, and b) as perceived by children.

Method

Sampling Procedure and Participants

This study draws on a large longitudinal two-wave panel survey that was administered by Advertising and Media Psychology Research Group (AdMe) at the University of Vienna in cooperation with "GfK", a private research institute in Germany. The aim of the project is to investigate the mutual influences of children's and parents' smartphone use by linking children's data to data from one of their parents, i.e. parent–child dyads (see Matthes et al., 2021). The survey was conducted by a private polling company in Germany in two waves in a 4-month-long interval. The first wave of the survey was administrated in September/October 2018 and the second wave was in January/February 2019. A 4-month interval between two waves of longitudinal studies is quite common in research (e.g., Van Zalk et al., 2011) as it ensures a lower attrition rate and, at the same, time allows to study possible changes in behavior with

respect to smartphone use and personal outcomes (e.g., Ye and Ho, 2018). The survey was administrated among parents and children, who were informed that the content of the survey concerns their smartphone use. After completing the first part of the survey, parents were asked to give the questionnaire to one of their children to fill out, who possessed a smartphone and used at least one social media platform on it. Participants' anonymity was ensured.

A total of 822 parent-child dyads completed the survey in the first wave or Time 1. Children who took part in the first wave were between 10-14 years of age (M = 12.09; SD = 1.37) and 51.1% were girls. In the parents' sample, 57.2% were women and the mean age was 42.94 years (*Mage* = 42.94 years, *SDage* = 7.10,) 53.5% reported not finishing high school, 20.8% had high school degree and 25.7% said they had a university degree. The attrition rate was 53% in the second wave of the survey. 384 parent–child dyads completed the survey at Time two (children: 46.6% girls, *Mage* = 12.37, *SDage* = 1.48; parents: 53.4% women, *Mage*= 43.57, *SDage* = 6.89; 49% no high school degree, 18.5% high school degree, 30.5% university degree). Parents who did not take part in wave two were not different from those who did with respect to age, $F(1, 820)$ = 1.25, p = .264, η2 = 0.00, education F (1, 821) = 2.43, p = .119, η2 = 0.00, active mediation $F(1, 820)$ = 0.335, p = .563, η2 = 0.00, and restrictive mediation, $F(1, 820)$ = 0.001, p = .090, η2 = 0.00. Women, however, were significantly more likely to drop out than men *χ2* (1, n = 822) = 4.23*, p* = .040. This, nonetheless, did not result in any problems since there were more women at Time 1. Additionally, there was a small difference with respect to parents' occupation F (1, 821) = 3.88, p = .049, η2 = 0.00. Children who did not take part in wave two were not different regarding to their age, $F(1,820)$ = 0.64, p = .426, partial η2 = .00, or self-esteem at T1, $F(1,820)$ = 1.96, p = .162, partial η2 = .00. Also, girls were slightly

underrepresented in wave two, as they were more likely to drop out than boys, $\chi 2(1, n = 822) =$ 5.79, $p = .016$.

Data Analysis

The proposed moderated mediation model was analyzed in SPSS using the PROCESS macro version 3.4 model 8 provided by Hayes (2018). In all of the four models, the auto-regressive effects of the dependent variables were controlled. Additionally, based on the finding from the literature, parents' age, gender (coded as 0 = fathers, 1 = mothers), education (coded as 1 = low education, 2 = high education), as well as children's age and gender (coded as 0 = boys, 1 = girls) were included in the moderated mediation analysis as control variables. In line with previous research (e.g., Nikkelen, Vossen, Piotrowski, & Valkenburg, 2016), I also controlled for the opposite mediation strategy in the moderated mediation models (e.g., when testing for the effect of parental active mediation on dependent variables, restrictive mediation was included as a control). To assess the agreement between parents' and children's reports of active and restrictive mediation strategies, further paired t-test analysis as well as zero-order correlation analysis were performed in SPSS. The hypotheses regarding the effects of parental mediation strategies on children were tested on the age group of 10-14-year-olds as this is an age group that is often in conflict with their parents regarding their online media use (Lee, 2013). It is also an age group transitioning from childhood to early adolescence and is especially receptive to social cues. In addition, around this time, peer influences become more influential and, at the same time, parents are still highly involved in their children's lives (Gomez et al.,2017).

Measures

Active parental mediation. Active parental mediation was computed with three items adapted from Dürager and Sonck (2014) and Hefner et al. (2019). On a 4-point scale (ranging

from 1 "*strongly disagree*" to 4 "*strongly agree*"), parents were asked to indicate their agreement with the following three statements: "I often explain to my child why certain apps or functions on the mobile phone are good or bad"; "I often recommend apps or functions on the mobile phone to my child"; "I often talk to my child about what he/she does with the mobile phone" (α = 0.68; *M* = 2.63; *SD* = 0.70 at Time 1).

Restrictive parental mediation. Restrictive parental mediation was measured with three items from two scales adapted from Dürager and Sonck (2014) and Hefner et al. (2019). Parents were asked to indicate their agreement on a 4-point scale (ranging from 1 "*strongly disagree*" to 4 "*strongly agree*") with the following statements: "I often determine the times when my child is allowed to use the mobile phone"; "I often determine which apps or functions my child may use on the mobile phone"; "I often determine the duration of my child's mobile phone use" (α = 0.82; *M* = 2.60; *SD* = 0.85 at Time 1).

Active parental mediation (child's perspective). The same items measuring parents' active mediation from Dürager and Sonck (2014) and Hefner et al. (2019) were adapted for children. Children were asked to indicate their agreement on a 4-point scale (ranging from 1 "*strongly disagree*" to 4 "*strongly agree*") with the following statements: "My parents often explain to me why certain apps or functions on the mobile phone are good or bad"; "My parents often recommend apps or functions on the mobile phone to me"; "My parents often talk to me about what he/she does with the mobile phone" (α = 0.82; *M* = 2.76; *SD* = 0.74 at Time 1).

Restrictive parental mediation (child's perspective). The same questions measuring parental restrictive mediation from Dürager and Sonck (2014) and Hefner et al. (2019) were similarly adapted for children. On a 4-point scale (ranging from 1 "*strongly disagree*" to 4 "*strongly agree*"), children were asked to indicate their agreement with the following statements:

"My parents often determine the times when I am allowed to use the mobile phone"; "My parents often determine which apps or functions I may use on the mobile phone"; "My parents often determine the duration of my mobile phone use" ($\alpha = 0.86$; $M = 2.56$; $SD = 0.95$ at Time 1).

Child's self-esteem (child's perspective). This variable was computed with three items that were based on the "self-worth" dimension of the KINDL questionnaire (Ravens-Sieberer and Bullinger, 1998). Children were asked to indicate on a 5-point Likert-type scale how they felt during the last week, from 1 (never) to 5 (always): "I was proud of myself"; "I felt good with myself"; "I liked myself."($\alpha=0.75$; $M=3.79$; $SD=0.71$ at Time 1, $\alpha=0.75$; $M=3.78$; $SD=0.68$ at Time 2),

Child's social well-being (child's perspective). This variable was computed with three items that were based on the "friends" dimension of the KINDL questionnaire (Ravens-Sieberer and Bullinger, 1998). Children were asked to indicate on a 5-point Likert-type scale how often -- from 1 (never) to 5 (always)-- during the last week a) they experienced nice moments with their friends; b) were liked by other children; c) got along with their friends ($\alpha=0.81$; $M=4.05$; $SD=0.67$ at Time 1, $\alpha=0.77$; $M=3.78$; $SD=0.68$ at Time 2).

Children's social media use frequency on smartphones: Children were asked to indicate on a 6-point Likert-type scale how often (ranging from "never" to "several times a day") they used the following social media sites on their mobile phones: Whatsapp, Facebook, Instagram, Snapchat, and Youtube ($\alpha=0.68$; $M=3.17$; $SD=1.06$ at Time 1).

Control Variables: Autoregressive effects of the dependent variables, parents' age, gender, and education, children's age and gender.

Results

The results of the zero-order correlation analysis and paired t-test analysis on parents' and children's reports are shown in Table 1. The results of correlation analyses are shown in Table 2. The results of regression models are presented in Table 3. and Fig. 1.

Table 1. Means, standard deviations, correlations, t-tests, and effect sizes for parent and adolescent reports of the parental mediation strategies.

	Parent Report		Child Report		Statistics		
	M	*SD*	*M*	*SD*	*Correlation*	t df=821	Cohen's d
AM	2.63	0.71	2.76	0.74	0.59**	-5.56***	-0.19
RM	2.61	0.85	2.56	0.95	0.76**	2.02*	0.07

Note. AM = active mediation; RM = restrictive mediation. *p < .05. **p < .01. ***p < .001.
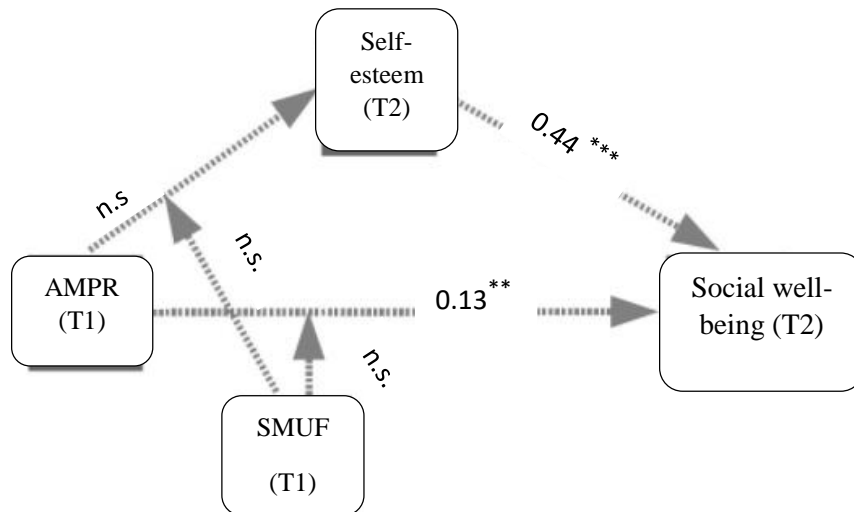
Table 2. Two-tailed Pearson's Correlations.

Variable	1	2	3	4	5	6	7
1. Active Mediation Parent	-	.60**	.59**	.47**	.21**	.18**	-.08*
2. Restrictive Mediation Parent	.60**	-	.45**	.76**	.07	.11*	-.19**
3. Active Mediation Child	.59**	.45**	-	.49**	.21**	.24**	-.12**
4. Restrictive Mediation Child	.47**	.76**	.49**	-	-.07	.01	-.20**
5. Social Well-Being	.21**	.07	.21**	-.07	-	.61**	-.01
6. Self esteem	.18**	.11*	.24**	.01	.61**	-	-.08
7. Social Media Use Frequency	-.08*	-.19**	-.12**	-.20**	-.01	-.08	-

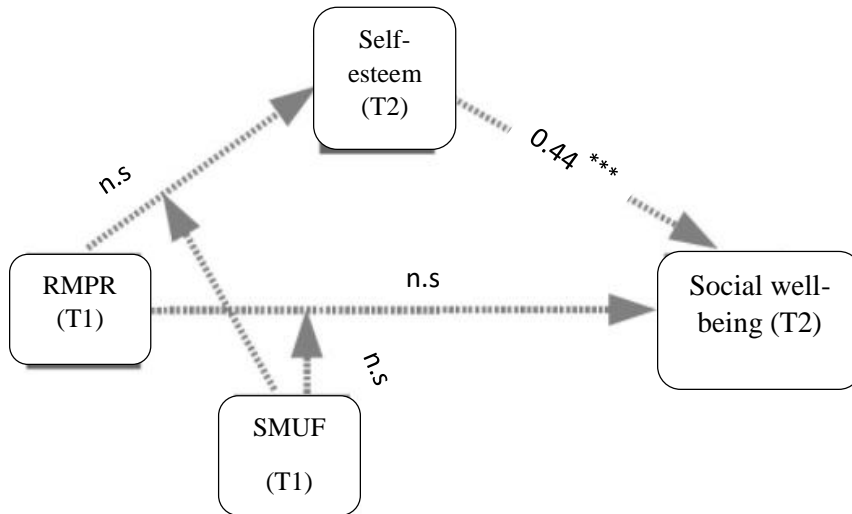* *p < .05* (two-tailed). ** *p < .01* (two-tailed). *** *p < .001* (two-tailed).

Table 3. Results of the regression analyses.

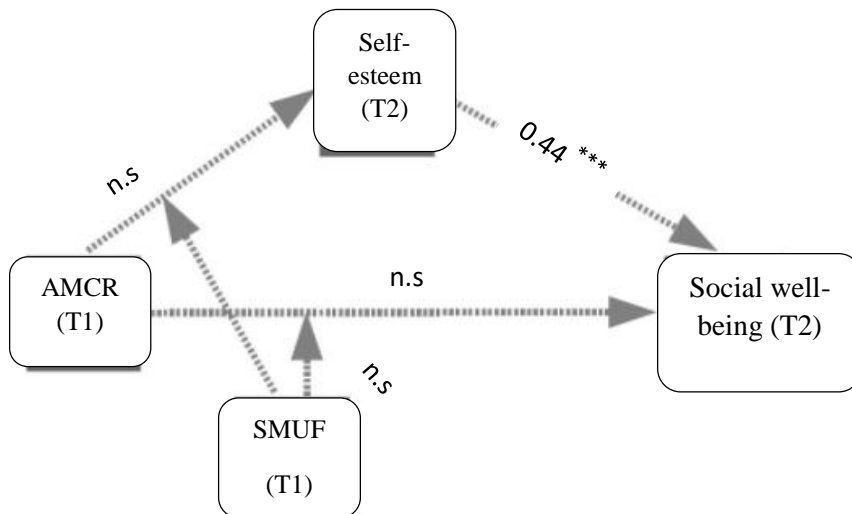| Predictors	Self-Esteem (T2)	Social Well-Being (T2)
	b (SE)	*b (SE*
Children's Age (T1)	-0.03(0.03)	0.02(0.02)
Children's Gender (T1)	-0.03(0.06)	-0.03(0.05)
Parents' Age (T1)	0.01(0.00)	0.00(0.00)
Parents' Gender (T1)	0.09(0.06)	-0.09(0.05)
Parents' Education (T1)	-0.01(0.02)	0.00(0.01)
Active Mediation Parent Report (T1)	0.01(0.06)	0.13(0.05)**
Active Mediation Child Report (T1)	0.11(0.06)	-0.02(0.05)
Restrictive Mediation Parent Report (T1)	0.09(0.07)	0.09(0.07)
Restrictive Mediation Child Report (T1)	-0.13(0.05)*	-0.09(0.04)*
Children's Self-Esteem (T1)	0.29(0.07)***	-0.51(0.04)
Children's Social Well-Being (T1)	0.16(0.08)*	0.32(0.04)***
Children's Self-Esteem (T2)	--	0.44(0.04)***
AMPR (T1) * SMUF(T1)	0.02(0.04)	-0.01(0.04)
AMCR (T1) * SMUF(T1)	0.01(0.03)	-0.03(0.02)
RMPR (T1) * SMUF(T1)	0.01(0.04)	-0.03(0.03)
RMCR (T1) * SMUF(T1)	0.01(0.33)	-0.03(0.02)
Adjusted R^2	0.26	0.51

*Note. N*T2 = 384, T1 = Time 1, T2 = Time 2, AMPR = Active mediation parent report, AMCR = Active mediation child report, RMPR = Restrictive mediation parent report, RMCR = Restrictive mediation child report. The table consists of four separate regression models with two dependent variables. Auto-regressive effects of T1 on T2 were controlled for in each regression model. The moderating variable has been mean centered. $* p < 0.05$; $** p < 0.01$; $*** p < 0.001$
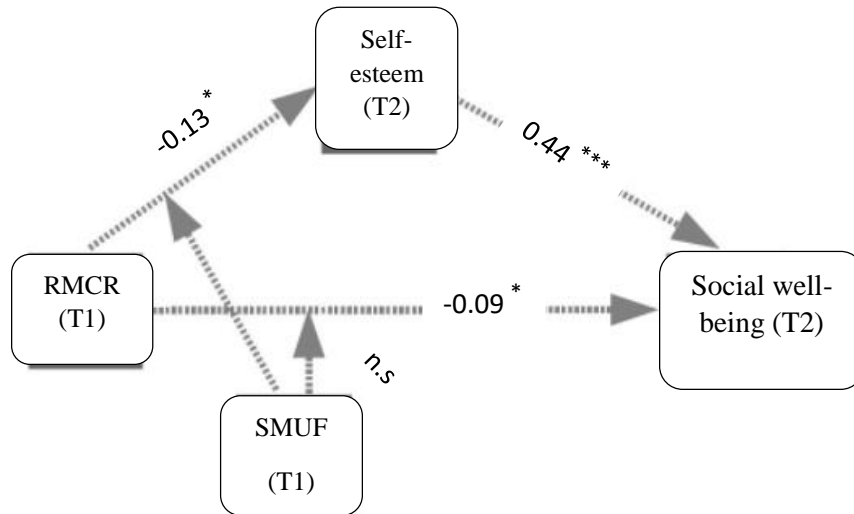

Note. AMPR (T1) = active mediation parent report, SMUF = social media use frequency (T1). Controlled for auto-regressive effects, children's age and gender (T1) as well as parents' age, gender, and education (T1), restrictive parental mediation as reported by parents (T1), self-esteem (T1), social well-being (T1).

Note. RMPR (T1*)* = restrictive mediation parent report, SMUF = social media use frequency (T1). Controlled for auto-regressive effects, children's age and gender (T1) as well as parents' age, gender, and education (T1), active parental mediation as reported by parents (T1), self-esteem (T1), social well-being (T1).

Note. AMCR (T1) = active mediation child report, SMUF = social media use frequency (T1). Controlled for auto-regressive effects, children's age and gender (T1) as well as parents' age, gender, and education (T1), restrictive parental mediation as reported by children (T1), self-esteem (T1), social well-being (T1).

Note. RMCR (T1) = restrictive mediation child report, SMUF = social media use frequency (T1). Controlled for auto-regressive effects, children's age and gender (T1) as well as parents' age, gender, and education (T1), active parental mediation as reported by children (T1), self-esteem (T1), social well-being (T1).

To begin with, in my first two hypotheses (H1a and H1b), I expected to find agreement between parents' and children's reports of active and restrictive mediation strategies. As Table 1 shows, parent and adolescent reports were significantly correlated. Furthermore, paired t-test analysis revealed that parents reported significantly lower levels of active mediation than children (M = 2.63, SD = 0.71 vs M = 2.76, SD = 0.74). Parents also reported significantly higher levels of restrictive mediation than their children (M = 2.61, SD = 0.85 vs M = 2.56, SD = 0.95). Cohen's d values (Cohen, 1988) indicated small standardized mean differences (d = -0.19 for active mediation; d = 0.07 for restrictive mediation. In other words, there is a discrepancy between parents and children's perception of parental mediation strategies, hence H1a and H1b are rejected.

In my second pair of hypotheses (H2a and H2b), I considered the direct effects of restrictive parental mediation as reported by parents on children's self-esteem and social well-being. I expected to find direct negative effects of restrictive parental mediation on children's

self-esteem (H2a) and social well-being (H2b). However, the results indicated no significant association between restrictive parental mediation at Time 1 and children's self-esteem at Time 2 ($b = 0.09$, $SE = 0.07$, $p = .171$), and restrictive parental mediation at Time 1 and children's social well-being at Time 2 ($b = 0.03$, $SE = 0.05$, $p = .521$).

Next, I hypothesized that parental active mediation as reported by parents will have a direct positive influence on children's self-esteem (H3a) and social well-being (H3b) over time. The results showed a significant positive association between active parental mediation at Time 1 and children's social well-being at Time 2 ($b = 0.13$, $SE = 0.05$, $p = .010$). However, no significant relationship was found between active parental mediation at Time 1 and children's self-esteem at Time 2 ($b = 0.01$, $SE = 0.06$, $p = .811$).

My fourth pair of hypotheses (H4a and H4b) considered the effects of restrictive parental mediation based on children's reports on their self-esteem (H4a) and social well-being (H4b), assuming negative associations for both outcomes. The results of the analysis lent support for both hypotheses. Restrictive parental mediation based on children's reports at Time 1 negatively influenced their self-esteem ($b = -0.13$, $SE = 0.05$, $p = .019$) and social well-being ($b = -0.09$, $SE = 0.04$, $p = .024$) at Time 2.

In addition, I looked at the effects of active parental mediation perceived by children. I expected to find positive effects for active parental mediation on children's self-esteem (H5a) and social well-being (H5b). However, no significant associations were found between active parental mediation at Time 1 and children's self-esteem ($b = 0.11$, $SE = 0.06$, $p = .084$) and social well-being ($b = -0.02$, $SE = 0.05$, $p = .706$) at Time 2.

My sixth hypotheses (H6) predicted a positive association between children's self-esteem at Time 2 and their social well-being at Time 2. The results provided support for H6, indicating

significant positive relationship between self-esteem at Time 2 and social well-being at Time 2 ($b = 0.44$, $SE = 0.04$, $p < .001$).

Finally, in my RQ1 and seventh and eighth hypotheses, I considered the potential moderating effects of social media use frequency on restrictive and active parental mediation on children's self-esteem and social well-being. No significant interaction effects were found regarding social media use frequency and parental active mediation reported by parents on self-esteem ($b = 0.02$, $SE = 0.04$, $p = .576$) and social well-being ($b = -0.01$, $SE = 0.04$, $p = .754$) ; social media use frequency and restrictive mediation reported by parents and self-esteem ($b = 0.01$, $SE = 0.04$, $p = .705$) and social well-being ($b = -0.03$, $SE = 0.03$, $p = .877$); social media use frequency and parental active mediation perceived by children on self-esteem ($b = 0.01$, $SE = 0.03$, $p = .774$) and social well-being ($b = -0.03$, $SE = 0.02$, $p = .136$; social media use frequency and parental restrictive mediation perceived by children on self-esteem ($b = 0.01$, $SE = 0.33$, $p = .794$) and social well-being ($b = -0.03$, $SE = 0.02$, $p = .234$)

Regarding the control variables, only significant positive association was found between children's social well-being at Time 1 and their self-esteem at Time 2 ($b = 0.16$, $SE = 0.08$, $p = .033$).

Finally, all predictors in the models explained 26% of the variance in children's self-esteem and 51 % of the variance in children's social well-being.

Discussion

This study investigated how active and restrictive parental mediation of smartphone use influenced children's self-esteem and social well-being over time. Furthermore, it considered the role of social media use frequency, both parents' and children's reports as well as the extent of agreement between them. While the literature on parental mediation is rich in studies exploring

the effectiveness of different mediation styles, the potential consequences of such mediation techniques remain underexplored. Furthermore, studies on parental mediation of smartphone use are still scarce. This study sought to fill that gap.

Regarding the effects of parental mediation of smartphone use on children's self-esteem and well-being, it was found that active parental mediation reported by parents increased children's well-being over time, while restrictive parental mediation reported by parents had no effect. Conversely, active parental mediation perceived by children had no effect on their self-esteem or social well-being. However, restrictive parental mediation perceived by children decreased children's self-esteem and social well-being. In addition, a positive association was found between social esteem and social well-being at Time 2. So child-reported restrictive parental mediation can also influence children's social well-being indirectly through self-esteem. Children's social media use frequency on smartphones had no moderating influence on any of these outcomes.

It is possible that parental active mediation increases social well-being as it improves children's satisfaction with online communication and, consequently, friendships. Findings regarding restrictive mediation indicate that parental restrictive mediation per se may not be harmful; however, children's perception of restrictive mediation is, in fact, more important as children may feel that their parents do not trust them as well as that their autonomy is being compromised. As a result, children's perception of their parents' strict rules negatively affects their self-esteem. Taken together, these findings highlight the importance of incorporating the views of both sides, parents *and* children, when studying the effects of parenting practices on children outcomes.

Furthermore, this study investigated the agreement between parents' and children's reports. Previous research (e.g. Nathanson, 2001; Nikken and Jansz, 2006) found that parents and children tend to agree on mediation styles. This study, however, found that parents reported higher levels of restrictive mediation while children reported higher levels of active mediation.

Finally, an interesting association was revealed between a control variable and a dependent variable: children's social well-being at Time 1 and self-esteem at Time 2. It was found that social well-being at Time 1 positively predicted self-esteem at Time 2. However, no significant relationship was found between self-esteem at Time 1 and social well-being at Time 2. This is especially interesting to consider in the context of the findings on self-esteem. As stated above, self-esteem is considered to be a cause of many life outcomes (see Neff and Vonk, 2009; Orth et al., 2012) and can affect individuals' well-being (Wang et al., 2017). Self-esteem is a positive predictor of well-being both for adolescents and adults. (Burke and Kraut, 2016; Szabo et al., 2019; Valkenburg et al., 2006). It is, however, possible that for the children who are entering early adolescence (in this case, aged 10-14) and are especially vulnerable to peer pressure and social cues, social well-being might matter more for self-esteem than vice versa.

Limitations and Future Research

This study comes with important limitations. First, this study did not incorporate parental mediation communication styles. As suggested by researchers, a restrictive mediation strategy does not automatically mean authoritarian or controlling parenting. It is also possible to communicate restrictive rules, for example, in autonomy-supporting ways Collier et al., 2016; Eastin, Greenberg, & Hofschire, 2006; Valkenburg et al., 2013). In fact, both restrictive and active mediation strategies have been found to increase effectiveness when communicated in an autonomy-supportive way (Valkenburg et al., 2013). Future research then can explore the effects

of parental mediation communication styles (e.g., autonomy-supportive restrictive mediation and active mediation, controlling active mediation and restrictive mediation, and inconsistent restrictive mediation) and frequency on children outcomes.

Next, the panel survey was based on self-reports, which means that children's and parent's data are susceptible to memory biases (see Schnauber-Stockmann & Karnowski, 2020). In addition, although the relationship between variables was tested twice at two time points in a four-month-long interval, it is possible that the effects can wear out over a longer period of time. Hence, future research should investigate the effects of parental mediation strategies and styles by employing three or more waves.

Finally, future research can also explore potential mediators that could reveal more pathways of the effects of parental mediation. For example, based on the findings of this study on the relationship between social well-being and self-esteem, future research can consider the opposite mediation path between these two variables to better our understanding of the indirect and long-term effects of parental mediation. Furthermore, previous research has found that parent and adolescent reports of controlling restrictive and active mediation, and inconsistent restrictive mediation are positively related to family conflict Beyens & Valkenburg, 2019). So it is possible, for example, that for children who are about to enter adolescence restrictive rules can incite reactance potentially leading to family conflict which, in turn, can have negative effects on children's well-being and self-esteem as well as other important social and psychological outcomes.

Conclusion

This study highlights the importance of studying the effects of parental mediation strategies on children both from parents' and children's perspectives. It investigates the effect of parental restrictive and active mediation of children's smartphone use, a medium that compared to others has received less attention.

Furthermore, parental mediation literature has devoted a lot of effort to studying the effectiveness of various mediation styles and strategies. The outcomes and effects of these mediation strategies on children remain unexplored. In this respect, this study makes a valuable contribution to the extant literature on parental mediation by furthering our understanding of parental mediation strategies of smartphone use and their effects on child outcomes.

References

Abrams, D., Weick, M., Thomas, D., Colbe, H., & Franklin, K.M. (2011). On-line ostracism affects children differently from adolescents and adults. *British Journal of Developmental Psychology*, *29*, 110–123. doi:10.1348/026151010´494089

Alfano, C. A., Zakem, A. H., Costa, N. M., Taylor, L. K., & Weems, C. F. (2009). Sleep problems and their relation to cognitive factors, anxiety, and depressive symptoms in children and adolescents. *Depression and anxiety*, *26*(6), 503–512. https://doi.org/10.1002/da.20443

Austin, E. W., Pinkleton, B. E., & Fujioka, Y. (2000). The role of interpretation processes and parental discussion in the media's effects on adolescents' use of alcohol. *Pediatrics, 105,* 343–349. http://dx.doi.org/10.1542/peds.105.2.343

Austin, E.W., Bolls, P., Fujioka, Y., &Engelbertson, J. (1999). *How and why parents take on the tube. Journal of Broadcasting & Electronic Media*, *43*, 175–192. doi:10.1080/08838159909364483

Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development, 65*(4), 1120–1136.

Barber, B., Stolz, H., Olsen, J., Collins, W., & Burchinal, M. (2005). Parental Support, Psychological Control, and Behavioral Control: Assessing Relevance across Time, Culture, and Method. *Monographs of the Society for Research in Child Development, 70*(4), I-147.

Baumeister,R.F., & Leary, M.R. (1995).The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497–529. doi:10.1037/0033-2909.117.3.497

Baumrind D. (2005). Patterns of parental authority and adolescent autonomy. *New directions for child and adolescent development*, (108), 61–69. https://doi.org/10.1002/cd.128

Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. The Journal of Early Adolescence, 11, 56–95. doi:10.1177/0272431691111004

Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth & Society, 9*(3), 239–267.

Baumrind, D. (1968). Authoritarian vs. authoritative parental control. *Adolescence, 3*, 255–272.

Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development, 37*(4), 887–907. https://doi.org/10.2307/1126611

Bean, R.A., Bush, K.R., McKenry, P.C., & & Wilson, S. M. (2003) The impact of parental support, behavioral control, and psychological control on the academic achievement and

self-esteem of African American and European American adolescents. *Journal of Adolescent Research, 18*(5): 523–541.

Berg/Bitkom, 2019. Kinder und Jugend in der digitalen Welt. Berlin, 28. Mai 2019. Retrieved from: https://www.bitkom.org/sites/default/files/2019-05/bitkom_pk-charts_kinder_und_jugendliche_2019.pdf.

Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, *41*, 27–36.

Bonetti, L., Campbell, M.A., & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children's and adolescents' online communication. *Cyberpsychology, Behavior, and Social Networking*, *13*(3), 279–285. doi:10.1089/cyber.2009.0215

Boudreault-Bouchard, A. M., Dion, J., Hains, J., Vandermeerschen, J., Laberge, L., & Perron, M. (2013). Impact of parental emotional support and coercive control on adolescents' self-esteem and psychological distress: results of a four-year longitudinal study. *Journal of adolescence*, *36*(4), 695–704. https://doi.org/10.1016/j.adolescence.2013.05.002

Brehm, J. W., and Brehm, S. S. (1981). *Psychological Reactance: A Theory of Freedom and Control*. San Diego, CA: Academic Press.

Bretherton, I. (1991). Pouring new wine into old bottles: The social self as internal working model. In M. R. Gunnar, & L. A. Sroufe (Vol. Eds.), *Self processes and development: The Minnesota symposia on child development: Vol. 23*, (pp. 1–41). Hillsdale, NJ: Erlbaum.

Buijzen, M., Valkenburg, P.M., (2005). Parental mediation of undesired advertising effects. *Journal of Broadcasting & Electronic Media 49*(2), 153–165. https://doi. org/10.1207/s15506878jobem4902_1.

Buijzen, M., Walma van der Molen, J. H., & Sondij, P. (2007). Parental mediation of children's emotional responses to a violent news event. *Communication Research*, *34*(2), 212–230. https://doi.org/10.1177/0093650206298070

Bulanda, R.E., & Majumdar D. (2009). Perceived parent–child relations and adolescent self-esteem. *Journal of Child and Family Studies 18*(2): 203–212.

Burke, M., & Kraut, R. (2016). The Relationship between Facebook Use and Well-Being depends on Communication Type and Tie Strength. *Journal of Computer-Mediated Communication., 21*. 265-281.

Calvert, S. (1999). Children's journeys through the information age. Boston, MA: McGraw- Hill.

Carr ., C. T., & Hayes, A. R. (2015) Social Media: Defining, Developing, and Divining, Atlantic *Journal of Communication*, *23*(1), 46-65, DOI: 10.1080/15456870.2015.972282

Clark, L. S. (2011). Parental mediation theory for the digital age. *Communication Theory*, *21*, 323–343. doi:10.1111/j.1468-2885.2011.01391.x

Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Collier, K. M., Coyne, S. M., Rasmussen, E. E., Hawkins, A. J., Padilla-Walker, L. M., Erickson, S. E., & Memmott-Elison, M. K. (2016). Does parental mediation of media influence child outcomes? A meta-analysis on media time, aggression, substance use, and sexual behavior. *Developmental psychology*, *52*(5), 798–812. https://doi.org/10.1037/dev0000108

Corder-Bolz, C. R. (1980). Mediation: The role of significant others. *Journal of Communication*, *30*(3), 106–118. doi:10.1111/j.1460-2466.1980.tb01997.x

Coyne, S. M., Padilla-Walker, L. M., Stockdale, L., & Day, R. D. (2011). Game on … girls: Associations between co-playing video games and adolescent behavioral and family

outcomes. *Journal of Adolescent Health*, *49*(2), 160–165.

doi:10.1016/j.jadohealth.2010.11.249

D'Amato, G., Cecchi, L., Liccardi, G., Pellegrino, F., D'Amato, M., & Sofia, M. (2012). Social

networks: A new source of psychological stress or a way to enhance self-esteem? Negative

and positive implications in bronchial asthma. *Journal of Investigational Allergology and

Clinical Immunology*, *22*(6), 402–405. Retrieved from

http://www.ncbi.nlm.nih.gov/pubmed/23101183

Dahl, R. E. (2004). Adolescent brain development: A period of vulnerabilities and opportunities -

Keynote address. *Annals of the New York Academy of Science, 1021*, 1–22.

https://doi.org/10.1196/annals.1308.001.

DataReportal (2021), "Digital 2021 Global Digital Overview," retrieved from

https://datareportal.com/reports/digital-2021-global-digital-overview

Davis, K. (2012). Friendship 2.0: Adolescents' experiences of belonging and self-disclosure

online. *Journal of Adolescence*, *35*, 1527–1536. doi:10.1016/j.adolescence.2012.02.013

DeHart, T., Pelham, B.W., & Tennen, H. (2006). What lies beneath: parenting style and implicit

self esteem. *Journal of Experimental Social Psychology 42*(1): 1–17.

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-

esteem. *Journal of Personality and Social Psychology, 68*(4), 653–

663. https://doi.org/10.1037/0022-3514.68.4.653

Diener, E., S. Oishi, and L. Tay. 2018. "Advances in Subjective Well-Being Research." Nature

Human Behaviour 2: 253–260. doi:10.1038/s41562-018-0307-6.

Dodge, R., A. Daly, J. Huyton, & L. Sanders. (2012). The Challenge of Defining Wellbeing.

International Journal of Wellbeing, 2(3). 222–235. doi:10.5502/ijw.v2i3.4.

Doyle, A. B., & Markiewicz, D. (2005). Parenting, Marital Conflict and Adjustment From Early-to Mid-Adolescence: Mediated by Adolescent Attachment Style? *Journal of Youth and Adolescence, 34*(2), 97–110. https://doi.org/10.1007/s10964-005-3209-7

Doyle, A. B., & Markiewicz, D. (2005). Parenting, marital conflict and adjustment from early-to mid-adolescence: Mediated by adolescent attachment style? *Journal of Youth and Adolescence, 34*(2), 97–110.

Dürager, A., Sonck, N., 2014. Testing the reliability of scales on parental internet mediation. Retrieved from, EU Kids Online

Eastin, M. S., Greenberg, B. S., & Hofschire, L. (2006). *Parenting the internet. Journal of Communication*, *56*, 486–504. doi:10.1111/j.1460-2466.2006.00297.x

Espinoza, G. (2011). The pervasiveness, connectedness, and intrusiveness of social network site use among young adolescents. *Cyberpsychology, Behavior & Social Networking*, 14(12), 705-709.

Fikkers, K. M., Piotrowski, J. T., & Valkenburg, P. M. (2017). A matter of style? Exploring the effects of parental mediation styles on early adolescents' media violence exposure and aggression. Computers in Human Behavior, 70, 407–415. doi:10.1016/j.chb.2017.01.029

Fisher, D. A., Hill, D. L., Grube, J. W., Bersamin, M. M., Walker, S., & Gruber, E. L. (2009). Televised sexual content and parental mediation: Influences on adolescent sexuality. *Media Psychology, 12,* 121–147. http://dx.doi.org/10.1080/15213260902849901

Fredriksen, K., Rhodes, J., Reddy, R., & Way, N. (2004). Sleepless in Chicago: tracking the effects of adolescent sleep loss during the middle school years. *Child development*, *75*(1), 84–95. https://doi.org/10.1111/j.1467-8624.2004.00655.x

Gecas, V., & Schwalbe, M. L. (1986). Parental behavior and adolescent self-esteem. *Journal of Marriage and the Family, 48*(1), 37–46. https://doi.org/10.2307/352226

Gonsalkorale, K., & Williams, K.D. (2007). The KKK won't let me play: Ostracism even by a despised outgroup hurts. *European Journal of Social Psychology*, *37*, 1176–1186. doi:10.1002/ejsp.392

Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: The self-determination theory perspective. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values: A handbook of contemporary theory* (pp. 135–161). Hoboken, NJ: Wiley.

Grusec, J. E., Danyliuk, T., Kil, H., & O'Neill, D. (2017). Perspectives on parent discipline and child outcomes. *International Journal of Behavioral Development*, *41*(4), 465–471. https://doi.org/10.1177/0165025416681538

Haddon, L. (2013). Mobile media and children. *Mobile Media & Communication*, *1*, 89–95. doi:10.1177/205015791245950

Han, Y., & Grogan-Kaylor, A. (2013). Parenting and youth psychosocial well-being in South Korea using fixed-effects models. *Journal of Family Issues, 34*(5), 689–715.

Harter, S. (1999). *The construction of the self: A developmental perspective*. New York, NY: Guilford Press.

Harter, S. (2003). Development of self-representation during childhood and adolescence. In M. R. Leary, & J. P. Tangney (Eds.). *Handbook of self and identity*. New York,NY: Guilford Press.

Hefner, D., Knop, K., & Klimmt, C. (2018a). Being mindfully connected – Responding to the challenges of adolescents living in a POPC world. In P. Vorderer, D. Hefner, L.

Reinecke, & C. Klimmt (Eds.), Permanently online, permanently connected. Living and communicating in a POPC world (pp. S. 176–S. 187). New York, NY: Routledge.

Hefner, D., Knop, K., Schmitt, S., & Vorderer, P. (2019). Rules? Role Model? Relationship? The impact of parents on their children's problematic mobile phone involvement. *Media Psychology 22* (1), 82–108. https://doi.org/10.1080/15213269.2018.1433544.

Hoare, E., Milton, K., Foster, C., & Allender, S. (2016). The associations between sedentary behaviour and mental health among adolescents: a systematic review. *The international journal of behavioral nutrition and physical activity*, *13*(1), 108. https://doi.org/10.1186/s12966-016-0432-4

Huston, A., & Wright, J. C. (1994). Educating children with television: The forms of the medium. In D. Zillmann, J. Bryant, & A. C. Huston (Eds.), Media, children, and the family: Social scientific, psychodynamic, and clinical perspectives (pp. 73–84). Hillsdale, NJ: Lawrence Erlbaum Associates Publishers.

Hwang, Y., Choi, I., & Yum, J., Jeong, S. (2017). Parental mediation regarding children's smartphone use: Role of protection motivation and parenting style. *Cyberpsychology, Behavior, and Social Networking*, 20(6), 362–368. https://doi.org/10.1089/cyber.2016.0555.

Kakihara, F., Tilton-Weaver, L., Kerr, M., & Stattin, H. (2010). The relationship of parental control to youth adjustment: Do youths' feelings about their parents play a role? *Journal of Youth and Adolescence, 39*(12), 1442–1456. https://doi.org/10.1007/s10964-009-9479-8.

Kernis M. H. (2005). Measuring self-esteem in context: the importance of stability of self-esteem in psychological functioning. *Journal of personality*, *73*(6), 1569–1605. https://doi.org/10.1111/j.1467-6494.2005.00359.x

Kerr, M., Stattin, H., & Burk, W. J. (2010). A reinterpretation of parental monitoring in longitudinal perspective. *Journal of Research on Adolescence, 20,* 39–64. http://dx.doi.org/10.1111/j.1532-7795.2009.00623.x

Keyes, C. L. M. (1998). Social Well-Being. *Social Psychology Quarterly, 61*(2), 121-140. doi:10.2307/2787065

Laghi, F., Schneider, B.H., Vitoroulis, I., Coplan, R.J., Baiocco, R., Amichai-Hamburger, Y., Hudek, N., Koszycki, D., Miller, S., & Flament, M. (2013). Knowing when not to use the Internet: Shyness and adolescents' on-line and off-line interactions with friends. *Computers in Human Behavior*, *29*, 51–57. doi:10.1016/j.chb.2012.07.015

Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology,* Vol. 32, pp. 1–62). Academic Press. https://doi.org/10.1016/S0065-2601(00)80003-9

Lenhart, A., Duggan, M., Perrin, A., Stepler, R., Rainie, H., & Parker, K. (2015). *Teens, social media & technology overview 2015*. Pew Research Center: Internet. Science & Tech https://www.pewresearch.org/internet/2015/04/09/teens-social-media- tech nology-2015/

Liau, A. K., Khoo, A., & Ang, P. H. (2005). Factors influencing adolescents engagement in risky internet behavior. *CyberPsychology & Behavior*, 8(6), 513–520. doi:10.1089/cpb.2005.8.513

Lilley, C., Ball, R., & Vernon, H. (2014). The experiences of 11–16 year olds on social networking sites. NSPCC. Retrieved from

https://www.nspcc.org.uk/globalassets/documents/research-reports/experiences-11-16-year-olds-socialnetworking-sites-report.pdf

Liu, Q., Zhou, Z., Yang, X., Niu, G., Tian, Y., & Fan, C., (2017). Upward social comparison on social network sites and depressive symptoms: a moderated mediation model of self-esteem and optimism. *Pers. Individ. Dif*, *113*, 223–228. https://doi.org/10.1016/j.paid.2017.03.037

Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's internet use. *Journal of Broadcasting & Electronic Media*, *52*(4), 581–599. doi:10.1080/08838150802437396

Lwin, M. O., Stanaland, A. J., & Miyazaki, A. D. (2008). Protecting children's privacy online: How parental mediation strategies affect website safeguard effectiveness. *Journal of Retailing*, *84*, 205–217. doi:10.1016/j.jretai.2008.04.004

Maeve Duggan and Aaron Smith, Pew Research Center, January 2014, "Social Media Update 2013" Available at: http://pewinternet.org/Reports/2013/Social-Media-Update.aspx

Marino, C., Gini, G., Vieno, A., & Spada, M. M. (2018). The associations between problematic Facebook use, psychological distress and well-being among adolescents and young adults: A systematic review and meta-analysis. *Journal of Affective Disorders*, 226, 274–281.

Martinez, I, Murgui, S, Garcia, O.F., & Garcia, F. (2019) Parenting in the digital era: protective and risk parenting styles for traditional bullying and cyberbullying victimization. *Computers in Human Behavior,* 90: 84–92.

Martínez, I., & García, J. F. (2007). Impact of parenting styles on adolescents' self-esteem and internalization of values in Spain. *The Spanish Journal of Psychology*, 10(02), 338-348.

Martínez, I., García, J. F., & Yubero, S. (2007). Parenting styles and adolescents' self-esteem in Brazil. *Psychological reports, 100*(3), 731-745.

Mascheroni, G. (2014). Parenting the mobile Internet in Italian households: Parents' and children's discourses. *Journal of Children & Media, 8*, 440–456. doi:10.1080/17482798.2013.830978

Mascheroni, G. and Ólafsson, K. (2014). Net Children Go Mobile: risks and opportunities. Second Edition. Milano: Educatt.

McCrae, N., Gettings, S., & Purssell, E. (2017). Social media and depressive symptoms in childhood and adolescence: A systematic review. *Adolescent Research Review*. doi:10.1007/s40894-017-0053-4

Mesch, G.S., 2009. Parental mediation, online activities, and cyberbullying. *CyberPsychology & Behavior, 12* (4), 387–393. https://doi.org/10.1089/cpb.2009.0068.

Milevsky, A., Schlechter, M., Netter, S. et al. J Child Fam Stud (2007) 16: 39. doi:10.1007/s10826-006-9066-5

Nathanson, A. I. (2001a). Parent and child perspectives on the presence and meaning of parental television mediation. *Journal of Broadcasting & Electronic Media, 45*(2), 201–220. doi:10.1207/s15506878jobem4502_1

Nathanson, A. I. (2001b). Parents versus peers exploring the significance of peer mediation of antisocial television. *Communication Research, 28,* 251–274. http://dx.doi.org/10.1177/009365001028003001

Nathanson, A. I. (1999). Identifying and explaining the relationship between parental mediation and children's aggression. *Communication Research, 26*, 124–143. doi:10.1177/009365099026002002\

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: two different ways of relating to oneself. *Journal of personality*, *77*(1), 23–50. https://doi.org/10.1111/j.1467-6494.2008.00537.x

Nikken, P., & Jansz, J. (2006). Parental mediation of children's videogame playing: A comparison of the reports by parents and children. *Learning, Media and Technology, 31*(2), 181–202. doi:10.1080/17439880600756803

Nurullah, A.S. (2009). The cell phone as an agent of social change. *Rocky Mountain Communication Review*, *6*(1), 19–25. doi:10.1016/j.trf.2013.03.006

O'Keeffe, G., & Clarke-Pearson, K.; Council on Communications and Media. (2011). The impact of social media on children, adolescents and families. *Pediatrics*, *124*, 800–804.

Ojanen, T., & Perry, D. G. (2007). Relational schemas and the developing self: Perceptions of mother and of self as joint predictors of early adolescents' self-esteem. *Developmental Psychology, 43*(6), 1474–1483. https://doi.org/10.1037/0012-1649.43.6.1474.

Orth, U., Robins, R. W., & Widaman, K. F. (2012). Life-span development of self-esteem and its effects on important life outcomes. *Journal of personality and social psychology*, *102*(6), 1271–1288. https://doi.org/10.1037/a0025558

Padilla-Walker, L. M., Coyne, S. M., & Collier, K. M. (2016). Longitudinal relations between parental media monitoring and adolescent aggression, prosocial behavior, and externalizing problems. *Journal of Adolescence, 46*, 86–97. doi:10.1016/j.adolescence.2015.11.002

Pantic, I., Damjanovic, A., Todorovic, J., Topalovic, D., Bojovic-Jovic, D., Ristic, S., & Pantic, S. (2012). Association between online social networking and depression in high school students: Behavioral physiology viewpoint. *Psychiatria Danubina, 24*(1), 90-93.

Paradise, A. W., & Kernis, M. H. (2002). Self-esteem and psychological well-being: Implications of fragile self-esteem. *Journal of Social and Clinical Psychology, 21*(4), 345–361. https://doi.org/10.1521/jscp.21.4.345.22598

Pew Research Center. 2018. Who Owns Cellphones and Smartphones. Accessed October 31, 2018. http://www.pewinternet.org/chart/who-owns-cellphones-andsmartphones/.

Pew Research Centre (2015). Teens, social media & technology overview 2015. Retrieved from http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/

Ravens-Sieberer, U., & Bullinger, M. (1998). Assessing health-related quality of life in chronically ill children with the German KINDL: first psychometric and content analytical results. *Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation*, *7*(5), 399–407.

Roberts, R.E., & Bengtson, V.L. (1993). Relationships with parents, self-esteem, and psychological well-being in young adulthood. *Social Psychology Quarterly, 56*, 263–277.

Rosen, L. D. (2011). Social networking's good and bad impacts on kids. Washington, DC: American Psychological Association. Retrieved from http://www.apa.org/news/press/releases/2011/08/social-kids.aspx

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68.

Ryff, C. D., & Singer, B. H. (2008). Know thyself and become what you are: A eudaimonic approach to psychological well-being. *Journal of Happiness Studies: An Interdisciplinary*

Forum on Subjective Well-Being, 9(1), 13–39. https://doi.org/10.1007/s10902-006-9019-0

Schmuck, D., Stevic, A., Matthes, J., & Karsay, K. (2021). Out of control? How parents' perceived lack of control over children's smartphone use affects children's self-esteem over time. *New Media and Society*. Advance online publication. doi:10.1177/14614448211011452

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research, 46*(3), 407–441. https://doi.org/10.2307/1170010

Stevic, A., & Matthes, J. (2021). A vicious circle between children's non-communicative smartphone use and loneliness: Parents cannot do much about it. *Telematics and Informatics*, *64*, 101677. doi:10.1016/j.tele.2021.101677

Szabo, A., Alpass, F., Allen, J., Stephens, C., 2019. Longitudinal analysis of the relationship between purposes of Internet use and well-being among older adults. Gerontologist 59, 58–68. https://doi.org/10.1093/geront/gny036.

Valkenburg, P. M., Krcmar, M., Peeters, A. L., & Marseille, N. M. (1999). Developing a scale to assess three styles of television mediation: "Instructive mediation," "restrictive mediation," and "social coviewing". Journal of Broadcasting & Electronic Media, 43(1), 52–66. doi:10.1080/08838159909364474

Valkenburg, P. M., Piotrowski, J. T., Hermanns, J., & de Leeuw, R. (2013). Developing and validating the perceived parental media mediation scale: A self-determination perspective. Human Communication Research, 39(4), 445–469. doi:10.1111/hcre.12010

Valkenburg, P.M., & Peter, J. (2009). The effects of instant messaging on the quality of adolescents' existing friendships: A longitudinal study. *Journal of Communication*, *59*, 79–97. doi:10.1111/j.1460–2466.2008.01405.x

Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *Cyberpsychology & behavior : the impact of the Internet, multimedia and virtual reality on behavior and society*, *9*(5), 584–590. https://doi.org/10.1089/cpb.2006.9.584

Van den Bulck, J., & Van den Bergh, B. (2000). The influence of perceived parental guidance patterns on children's media use: Gender differences and media displacement. Journal of Broadcasting & Electronic Media, 44(3), 329–348. doi:10.1207/s15506878jobem4403

Van der Voort, T. H. A., van Lil, J. E., & Peeters, A. L. (1998). Determinants of parental television guidance as reported by parents versus children. Zeitschrift für Medienpsychologie, 10, 165–183.

Van Deursen, A.J.A.M., Bolle, C.L., Hegner, S.M., Kommers, P.A.M., 2015. Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender. Comput. Hum. Behav. 45, 411–420. https://doi.org/10.1016/j.chb.2014.12.039.

Wang, J. L., Wang, H. Z., Gaskin, J., & Hawk, S. (2017). The Mediating Roles of Upward Social Comparison and Self-esteem and the Moderating Role of Social Comparison Orientation in the Association between Social Networking Site Usage and Subjective Well-Being. *Frontiers in psychology*, *8*, 771. https://doi.org/10.3389/fpsyg.2017.00771

Warren, R., & Aloia, L. (2019) Parenting Style, Parental Stress, and Mediation of Children's

Media Use. *Western Journal of Communication, 83*(4), 483-

500. DOI: 10.1080/10570314.2019.1582087

White, S. R., Rasmussen, E. E., & King, A. J. (2015). Restrictive mediation and unintended

effects: Serial multiple mediation analysis explaining the role of reactance in U.S.

adolescents. *Journal of Children and Media, 9,* 510–527.

http://dx.doi.org/10.1080/17482798.2015.1088873

Zadro, L., Williams, K.D., & Richardson, R. (2004). How low can you go? Ostracism by a

computer is sufficient to lower self-reported levels of belonging, control, self-esteem, and

meaningful existence. *Journal of Experimental Social Psychology*, *40*, 560–567.

doi:10.1016/j.jesp.2003.11.006

Abstract

Parents often monitor their children's media consumption and use of different devices by

employing various mediation strategies. Effectiveness of such parental mediation strategies is

well studied in the literature. However, the potential impact of such strategies on children is not.

Furthermore, children's perception of their parent's behavior might different from their parents'

reports and can lead to different outcomes. This study draws on a two-pave panel survey among

parent-child pairs ($N_{T2} = 384$, children: 10-14 years, $M_{T2} = 12.37$, $SD = 1.48$, 46.4% girls) to test

and compare the effects of restrictive and active parental mediation of children's smartphones

reported parents and perceived by children on children's self-esteem and social well-being.

Results showed that parental active mediation had a positive influence on children's social well-

being but not self-esteem. Active mediation perceived by children had no effect on self-esteem

and social well-being. Parental restrictive mediation reported by parents had no impact on children's self-esteem and social well-being, while restrictive mediation perceived by children decreased their self-esteem and social well-being. Furthermore, children's social media use frequency did not influence these associations. The implications of these findings are discussed in the light of the literature on parent-child relationship.

Keywords: children, panel study, parental mediation, self-esteem, smartphone use, social well-being, active mediation, restrictive mediation

Zusammenfassung

Eltern überwachen häufig den Medienkonsum ihrer Kinder und die Nutzung verschiedener Geräte, indem sie verschiedene Vermittlungsstrategien anwenden. Die Wirksamkeit solcher elterlicher Vermittlungsstrategien ist in der Literatur gut untersucht. Die potenziellen Auswirkungen solcher Strategien auf Kinder sind jedoch nicht bekannt. Darüber hinaus kann sich die Wahrnehmung des elterlichen Verhaltens durch die Kinder von den Berichten der Eltern unterscheiden, was zu unterschiedlichen Ergebnissen führen kann. Diese Studie stützt sich auf eine zweigeteilte Panelerhebung unter Eltern-Kind-Paaren (NT2 = 384, Kinder: 10-14 Jahre, MT2 =12,37, SD = 1,48, 46,4 % Mädchen), um die Auswirkungen restriktiver und aktiver elterlicher Mediation von Kinder-Smartphones, die von den Eltern berichtet und von den Kindern wahrgenommen werden, auf das Selbstwertgefühl und das soziale Wohlbefinden der Kinder zu testen und zu vergleichen. Die Ergebnisse zeigten, dass aktive elterliche Mediation einen positiven Einfluss auf das soziale Wohlbefinden der Kinder hatte, nicht aber auf ihr Selbstwertgefühl. Die von den Kindern wahrgenommene aktive Mediation hatte keinen Einfluss

auf das Selbstwertgefühl und das soziale Wohlbefinden. Die von den Eltern berichtete restriktive elterliche Mediation hatte keinen Einfluss auf das Selbstwertgefühl und das soziale Wohlbefinden der Kinder, während die von den Kindern wahrgenommene restriktive Mediation ihr Selbstwertgefühl und ihr soziales Wohlbefinden verringerte. Außerdem hatte die Häufigkeit der Nutzung sozialer Medien durch die Kinder keinen Einfluss auf diese Zusammenhänge. Die Implikationen dieser Ergebnisse werden vor dem Hintergrund der Literatur zur Eltern-Kind-Beziehung diskutiert.

Schlüsselwörter: Kinder, Panelstudie, elterliche Mediation, Selbstwertgefühl, Smartphone-Nutzung, soziales Wohlbefinden, aktive Mediation, restriktive Mediation