Title

“Wasn't even on my radar”: Increasing Parental Mediation of Influencer Marketing Behaviors in 35 Minutes with a Brief Theory of Planned Behavior informed Online Randomized Controlled Intervention

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Abstract

Online marketing to humans in their childhood, adolescent and early adulthood is an increasingly important research topic because it can on a larger scale than previously possible with traditional marketing lead to undesirable outcomes (e.g., obesity) and target more ethical grey zones between questionable, unfair and deceptive marketing to achieve its goals (Buijzen & Valkenburg, 2005; De Pauw et al., 2019).

The largest recent research trend and solution to address the problems related to online young consumer marketing was the establishment of online marketing disclosure policies (De Veirman et al., 2019; FTC, 2017; Gürkaynak et al., 2018; Riefa & Clausen, 2019). Disclosures have their merits, but also shortcomings. In particular, increased process fairness (i.e., awareness of the selling intent) appears not to be enough to diminish undesirable outcomes because young consumers also need the knowledge and the skills to counter the undesirable effects resulting from marketing exposures (De Pauw et al., 2019; Isaac & Grayson, 2019; Jung & Heo, 2019; Youn & Shin, 2019). In intervention research targeting the increase of knowledge and skills of children, the largest yet comparatively small trend are school-based interventions (De Jans et al., 2019; Nelson, 2016; O'Rourke et al., 2019; Truman & Elliott, 2019). However, school-based interventions have a few vital shortcomings. First, school-based marketing literacy interventions are costly to scale. Second, they create further competition for scarce school-based financial, human and attention resources. Lastly, they might not be frequent or context-specific enough to produce a lasting change in marketing-related knowledge and skills.

In contrast, parent-targeted interventions that increase the parental intentions to engage in behaviors that increase marketing-related knowledge and the skills of children before middle adulthood do not have these shortcomings and, as a result, can be considerably more important for researchers and policymakers (De Pauw et al., 2019; Isaac & Grayson, 2019; Jung & Heo, 2019; Youn & Shin, 2019). Compared to school-based interventions, parents have more opportunities and time to influence the media diet directly and educate them with higher frequency and higher context-specificity by daily discussing the marketing their children actually engage with (Chen & Shi, 2019; Lin et al., 2019; Nelson et al., 2017). As a result, the research on interventions for parental mediation of new forms of marketing is highly important.

In particular, social media influencer content and embedded marketing might have a large effect (Folkvord et al., 2019). Consequently, the research purpose was to advance the knowledge of interventions that target parental intentions to engage in marketing-literacy-relevant behaviors. To this end, the study combined a conceptual and theoretical framework based on the theory of planned behavior (TPB) and broader intervention science concepts, in particular behavioral change techniques (BCTs) and mechanisms of actions (MoA), and an advanced experimental design. More specifically, 21 theory-informed hypotheses were tested in a randomized controlled online experiment composed of six interventions and one control condition with a sample of 196 (pre-intervention and immediately post-intervention) and 166 participants (one-month post-intervention).

Numerous contributions are made. First, relatively brief (35 minutes) TBP-based online interventions can have a significant effect on parental intentions to engage in the discussion of influencer marketing and on self-reported one-month post-intervention behaviors. Second, the combined framework consistent of the four TPB-based constructs (attitudes, subjective norms, perceived behavioral control and intentions), MoA and BCTs was highly valuable to inform an intervention design that produces effects of practical and theoretical importance. Third, the parsimonious TPB-based model (i.e., consistent of attitudes, subjective norms, perceived behavioral control and intentions) is also appropriate for the context of parental mediation of influencer marketing because the three-based constructs (i.e., attitudes, subjective norms, perceived behavioral control) could significantly explain the majority of parental intentions (74%), and parental intentions alone significantly predicted a moderate amount variance in the future behaviors (39%). Fourth, parental attitudes were the base-construct most susceptible to change and considerably predicted intentions. Therefore, research efforts should focus on the study of parental attitudes and practical efforts should focus on targeting parental attitudes until marketing and influencer marketing become mainstream topics in the parental discourse. Lastly, despite the high intentions in the attitude only condition, the condition had no significant impact on future behaviors. Even though the attitude and three-construct condition shared an identical intention level, the three-construct intervention had a marginally non-significant (.06) effect on future behaviors. The four-construct had a significant effect on future behaviors. As a result, time spent (10 minutes vs. 33 and 35 minutes) and associated elaboration might be an important moderator of future behavior.

1 Introduction

"The world of marketing and advertising is rapidly changing with the increased use of technology and other new forms of marketing communications" (Skiba et al., 2019, p. 1)

Experts found that consumers are exposed to thousands of explicit and disguised marketing communications in many different formats daily (Martin & Smith, 2008; Petty & Andrews, 2008). In particular, young consumers¹ have been an important target for marketers because of their impact on their parents' buying decisions and their role as future adult consumers (Calvert, 2008). As a result, young consumer marketing is a highly important research topic because it provides a lens into the development of important micro-level relationships (i.e., children, parents, policymakers, corporations, and social media influencers) and macro-level relationships (i.e., between society, technology, culture, politics, and economy).

In the present context, the most relevant development is the shift in media consumption of young consumers from traditional media to online media and the associated shift to online young consumer marketing which increased the severity of preexisting concern and problems related to young consumer marketing (De Veirman et al., 2019; FTC, 2017; Gürkaynak et al., 2018; Riefa & Clausen, 2019; Twenge et al., 2019). In recent years, an "average 12th grader in 2016 spending more than twice as much time online as in 2006" (Twenge et al., 2019, p. 329). In the United States, 8- to 18-year-olds are spending an average of roughly 6 hours per day on screen media for non-school purposes, while preteens spent an average of close to 5 hours per day in 2015 (Rideout, 2016). 45% of the United States teenagers report being "almost constantly" online (Pew Research Centre, 2018). In the United Kingdom, 99% of the 12- to 15-year-olds are online for an average of 20.5 hours a week (Ofcom, 2019).

Online young consumer marketing can on a larger scale than previously lead to undesirable outcomes (e.g., obesity) and target more ethical grey zones between questionable, unfair and deceptive marketing practices to achieve its goals (Buijzen & Valkenburg, 2005; De Jans et al., 2017; De Pauw et al., 2019). Young consumers are more frequently exposed to disguised marketing communications, which scholars gave different labels from native advertising,

¹ In this study, young consumer refers to humans from early childhood (age 6) to early adulthood (age 25)

content marketing, stealth marketing, sponsorship, branded content, product placement, and covert marketing (Wojdyski & Evans, 2019). Covert marketing is not a new phenomenon as it has been around for decades (Cameron et al., 1996; Erjavec, 2004). However, in this decade, marketing budgets have considerably shifted to covert marketing communication that resembles content that users want to consume (Einstein, 2016; Wojdyski & Evans, 2019). With the rise of the internet and different online content formats, new formats of covert online marketing were invented that mirror and/or integrate marketing into the surrounding non-commercial content subtly, such as sponsored reviews (Kim et al., 2019), sponsored news content (Amazeen & Wojdyski, 2019), sponsored social media posts (Boerman et al., 2017), sponsored blog posts (Hwang & Jeong, 2016), branded entertainment content (Choi et al., 2018), brand or product placement (Boerman et al., 2015a), and influencer marketing (De Jans et al., 2018). These and other studies demonstrated that these formats of subtle and embedded covert online marketing are, indeed, difficult for consumers to recognize as marketing. In particular, young consumers are expected to be even less likely than adult consumers to understand the commercial nature of covert online marketing because their marketing-related knowledge and skills, such as the understanding of an ad's selling intent, have often not matured (Boerman & Van Reijmersdal, 2020; Rozendaal et al., 2016).

The largest recent research trend and solution to address the problems related to online young consumer marketing was the establishment of online marketing disclosure policies (De Veirman et al., 2019; FTC, 2017; Gürkaynak et al., 2018; Riefa & Clausen, 2019). Disclosures have their merits, but also shortcomings. In particular, increased process fairness (i.e., awareness of the selling intent) appears not to be enough to diminish undesirable outcomes because young consumers also need the knowledge and the skills to counter the undesirable effects resulting from marketing exposures (De Pauw et al., 2019; Isaac & Grayson, 2019; Jung & Heo, 2019; Youn & Shin, 2019). In intervention research targeting the increase of knowledge and skills of children, the largest yet comparatively small trend are school-based interventions (De Jans et al., 2019; Nelson, 2016; O'Rourke et al., 2019; Truman & Elliott, 2019). First, they are costly to scale. Second, they create further competition for scarce school-based financial, human and attention resources. Lastly, school-based intervention might not be frequent or context-specific enough to produce a lasting change in marketing-related knowledge and skills.

In contrast, parent-targeted interventions do not have these shortcomings and, as a result, can be considerably more important for researchers and policymakers. Compared to schools or teachers, parents have more opportunities and time to influence the child's² media diet directly and educate their children with higher frequency and higher context-specificity by discussing the marketing the child actually sees daily (Chen & Shi, 2019; De Pauw et al., 2019; Hudders & Cauberghe, 2018; Lin et al., 2019; Nelson et al., 2017; Pearce & Baran, 2018). As a result, the research on interventions for parental mediation of new forms of marketing is highly important.

All the previously outlined formats of covert online marketing merit careful scientific research. However, influencer marketing appears to be especially relevant because social media influencer content is one highly popular type of online media (Dolliver, 2019). In this study, a social media influencer (SMI) refers to a person or user that passes a predetermined threshold of social influence on social media evaluated based on the quantity of relationships and the quality of relationships that are beyond those of an average person (e.g., on Instagram, having an unusually high quantity of relationships like one million followers or unusually high quality of relationships like more than 100 positive comments on a piece of content) (Hughes et al., 2019; Jiménez-Castillo & Sánchez-Fernández, 2019). In contrast, a person or user with an average quantity of relationships (e.g., one thousand followers) would not be regarded as a social media influencer. Indeed, 57% of social media users reported using social media to keep up with SMIs (Buckle, 2018). As a result, one SMI can attract large audiences comparable to those of T.V. programs. For example, the YouTube-based SMI 'PewDiePie' had over 301 million views on YouTube in March 2020 across all his uploaded videos (SocialBlade, 2020). Indeed, amongst social media platforms, YouTube has emerged as a major channel for young people's screen time (Watson, 2019). 81% of U.S. parents allow their children under 11 to watch YouTube (Pew Research Center, 2018), exposing them to advertising before they watch a video and within the videos (Weiss, 2018). Consequently, SMI content as a content marketing channel is increasingly sought-after. In 2018, corporations planned to increase their marketing budgets for influencer marketing by

² In the parental context, the status of child refers not to the age-based notion but to the biological notion that the human referred to as child is the offspring of another two humans which are referred to as parents. Because the study examines parents of young consumers (humans aged 6 to 26), the readers should keep in mind that children refers to humans aged 6 to 26 and not the age-based notion of children or childhood which commonly refers to humans before reaching 18 years.

39% (LINQIA, 2018). In fact, a SMI with one to three million followers charges, on average, \$125,000 for a post on YouTube, \$62,500 for a post on Facebook, and \$50,000 for a post on Instagram or Snapchat (Captiv8, 2016). The ten highest-paid YouTube-influencers are estimated to have earned an average of 18 million U.S. dollars between June 2017 and June 2018 (Robehmed and Berg, 2018).

On YouTube, one type of SMI content is especially popular: video blogs (short: vlogs; Liu et al., 2019). The core characteristic of vlogs is an SMI talking to a camera about personal topics (Frobenius, 2011). Vlogs are highly popular as more than half of Chinese and Americans watch vlogs, especially millennials (China Daily, 2019; Nguyen, 2018). The popularity may result from vlogs being the most likely video genre to feature positive, neutral, and negative types of self-disclosure, and this may lead to more interesting content and a stronger para-social relationship between viewers and influencers (Ferchaud et al., 2018). Young consumers are motivated to watch vlogs because they provide entertainment, information, social validation of their own interests, and window into different yet highly interesting lives (Coates et al., 2020). They feel a strong attachment, intimacy, and even addiction to the influencers as young consumers perceive them to be more accessible, authentic, and similar than traditional celebrities (Coates et al., 2020). Consequently, content marketing in vlogs has a high impact on young consumers. For example, more than half of young consumers reported buying or asking their parents to buy brands or products shown in vlogs, close to 75% of the young consumers report that they gained brand awareness because of vlogs, 80% of the young consumers reported that other children would buy brands or products seen in the vlogs, and most young consumers (72%) would like the brands and products more because they were shown in the vlog (Folkvord et al., 2019).

However, concerns have been raised about young consumers and influencer marketing.

"Influencer marketing on YouTube, also referred to as (...) vlog advertising, raises ethical concerns because this type of advertising is integrated in non-commercial content that is made by an independent content creator, and thus it blurs the lines between what is advertising and what is not. (...). Children are expected to be even less likely than adults to understand the commercial nature of influencer marketing" (Boerman & Van Reijmersdal, 2020, p. 2)

First, influencer marketing may exploit general vulnerabilities of young consumers, such as their underdeveloped persuasion knowledge, limited cognitive skills, hyper-responsive emotional system and biological and socio-emotional developments (Blakemore & Mills,

2014; Frankenhuys & Walasek, 2020; Livingstone & Helsper, 2006; Pechmann et al., 2005; Valkenburg & Piotrowski, 2017). As a result, influencer marketing can become highly unfair and ethically questionable (e.g., Boerman & van Reijmersdal, 2020). For example, Ethan Klein, a YouTube-influencer, commented on videos from other YouTube-influencers, Jake Paul and his brother Logan Paul, that, "they can sell the backpack for \$100. It's just there's something about the way they do it and who's the audience? It's kids. That's the thing. It's not adults who make their own decisions. It's like go tell your mom that you're not cool if you don't have this backpack" (H3 Podcast, 2017). Also, influencer marketing can lead to undesirable outcomes for young consumers, such as the promotion of negative stereotypes, values, or attitudes. For example, influencer vlog marketing of unhealthy foods increased young consumers' immediate food intake, while the equivalent marketing of healthy foods had no effect (Coates et al., 2019).

In sum, the exposure of children and young adults to influencer marketing is a highly relevant area of concern. Consequently, the purpose of the thesis was to advance the knowledge of the factors and relationships that could lead to an increase in parental intentions to engage in discussing influencer marketing with their children.

The conceptual and theoretical framework which informed the hypotheses, the design and the interpretation was grounded in the evidence-based theory of planned behavior (TPB) and broader intervention science considerations, in particular behavioral change techniques (BCTs) and mechanisms of actions (MoA). The methodology was a randomized controlled online experiment composed of six intervention and one control condition to test the 14 theory-informed hypotheses.

The results of the study have numerous theoretical and practical implications. First, relatively brief (20 to 35 minutes) TBP-based online interventions can have a significant effect on parental intentions to engage in the discussion of influencer marketing. Second, the theoretical and conceptual framework that combined considerations related to the four TPB-based constructs (attitudes, subjective norms, perceived behavioral control and intentions), MoA and BCTs were highly valuable to inform the design of intervention conditions that not only produce effects that have practical importance but also have theoretical relevance. Third and more specifically, the parsimonious TPB-based model with three base-component that predict intentions is also appropriate for parental mediation of influencer marketing

because the three factors explained the majority of the differences in parental intentions (74%). Lastly, the evidence indicates that most practical and research efforts should be focused on parental attitudes as they are most susceptible to change and considerably influence intentions. Large-scale and small-scale campaigns and interventions should spend most of their efforts on parental attitudes until influencer marketing to children becomes a mainstream topic in the parental discourse.

The thesis is structured as follows: next section will review the most relevant literature to identify the current state of theoretical, conceptual, and empirical knowledge and relevant methodological considerations, and it will outline important knowledge gaps related to young consumer marketing. Next, the most appropriate theoretical framework and methodological approach to examine the gaps is discussed. More specifically, methodological concerns for the experimental survey method are discussed to collect evidence rigorously. In the next section, the experimental results are presented. In the concluding section, the results are discussed in terms of contributions, limitations, implications, and further opportunities.

2 Literature Review

This section reviews the most relevant scientific thoughts and findings related to young consumers and influencer marketing. First, the current state of scientific knowledge is summarized. Second, highly relevant knowledge gaps that follow from the review are discussed.

2.1 Ethics of Young Consumer Marketing

Because the study purpose is embedded in the ethics of marketing, it is useful to review the most relevant theoretical notions of marketing ethicists that could be applied to contextualize and inform the discussion of the empirical findings.

Young consumer marketing is an interaction between marketer and child. These interactions have been labeled as a persuasive episode/attempt/appeal/exposure, a form of market exchange or sales pitch (Rowthorn, 2019). In the marketing literature, relevant ethical qualifiers for these interactions are "unethical," "deceptive," "unfair," "misleading," "covert," "native," "masked," "intrusive," "harmful," "ambiguous" or "ethically

questionable" (Belanche, 2019; Bellizzi & Hasty, 2015; Darke et al., 2010; Gubiniova & Bartáková, 2017; Petty & Andrews, 2008; Shrum, 2003; Wojdyski & Evans, 2019).

Presumably, in young consumer marketing ethics, the most important and useful moral concept is fairness because it can subsume and entail the other ethical qualities (Rowthorn, 2019). In general, two components of interactions are labelled as fair or unfair: the interaction process or the interaction outcome(s) (Rowthorn, 2019). Unfair marketing interaction outcomes are outcomes that entail actual harm or the increased risk of harm due to marketing encounters (Rowthorn, 2019). More specifically, these marketing encounters leave children worse off than before the encounter, such as a soda ad that increases the risk of the child consuming a harmful amount of sugar, which they otherwise would not have. Other examples of harms are the promotion of negative stereotypes, values, or attitudes - in particular, materialistic values and attitudes are often discussed (Buijzen, 2009; Buijzen & Valkenburg, 2003a, 2003b, 2005; Lou & Kim, 2019).

Three ethical positions can be identified on the requirements of fairness or unfairness: (1) outcome-exclusive view (interaction(s) x is fair, if the outcomes of the interaction(s) is fair), (2) process-exclusive view (interaction(s) x is fair, if the process of the interaction(s) is fair), and (3) the most demanding inclusive view (interaction(s) x is fair, if the outcomes of the interaction(s) are fair and the process of the interaction(s) is fair) (Rowthorn, 2019).

In the outcome-exclusive view, marketing interactions would be unfair, if they lead to negative outcomes or carry a sufficient risk of negative outcomes for young consumers (Jansen & Wall, 2013). In the process-exclusive view, marketing interactions are unfair, if a weakness or vulnerability of young consumers was exploited to achieve favorable marketing outcomes (Jansen & Wall, 2013). Under process-exclusive view, young consumer marketing could be regarded as inherently unfair because evidence shows that, compared to adults, young consumers have well-established emotional and cognitive weaknesses and vulnerabilities that limit their ability to process marketing interactions and properly defend themselves against fine-tuned marketing persuasion (Ham & Nelson, 2019; John, 1999).

Marketing researchers use arguments related to process and outcome unfairness when discussing (disguised, covert, masked or native) marketing techniques targeted at young consumers, but they do not always clearly and explicitly prescribe to one view (Rowthorn,

2019; Wojdyski & Evans, 2019). Overall, empirical researchers of young consumers aim to improve non-evaluative fairness constructs, such as improved recognition of the commercial intent, and stay mostly normatively agnostic about evaluative outcome constructs, such as desired attitude and behavioral change, unless there is a social consensus on the promoted products being clearly harmful to young consumers, such as unhealthy foods or alcohol (Coates et al., 2019; Van Reijmersdal & van Dam, 2020). Indeed, studies have demonstrated that young consumers susceptibility to advertising can be decreased by, for example, instructing them about the persuasive and selling intent of advertisements (e.g., Buijzen, 2007). Likewise, legislative, executive, and judicial agents evaluate unfairness in process and outcomes considering the specific context, such as the features of the promoted product (Riefa & Clausen, 2019; Rowthorn, 2019).

There are different theories and robust empirical evidence on what could promote process and outcome fairness in the context of young consumer marketing. In particular, the persuasion knowledge model (PKM) has been used to inform empirical marketing research on young consumers (Ham & Nelson, 2019; Wang & Mizerski, 2019). The PKM argues that (i) situational awareness of marketing and (ii) knowledge related to persuasion and marketing should be the most effective targets to promote process and outcome fairness (Friestad & Wright, 1994). As a result, marketing researchers have been investigating the effects of situational interventions mostly under the umbrella of 'disclosures' and knowledge interventions under the umbrella of 'marketing/advertising literacy' (Ham & Nelson, 2019). In the next sections, findings from these both interventions are summarized to understand if and how these promote process and outcome fairness in the context of young consumer online marketing.

2.1.1 Marketing Disclosure and Young Consumers

Marketing disclosures (short: disclosure) are understood as an umbrella term for contextual interventions immediately before, during, or after a marketing encounter that provides marketing-relevant information that should promote higher fairness via marketing fairness constructs based on theoretical reasoning and/or empirical evidence. The term marketing fairness constructs refers to non-evaluative constructs used to measure short-term improvements in awareness, recognition, recall, and understanding related to specific marketing elements. The most common constructs are recognition of sponsored content as

advertising, understanding of the real source of the marketing message (also: 'understanding of authorship'), perceived sponsorship transparency (composed of perceived brand presence, sponsorship clarity, disclosure, lack of deception), ad recognition, understanding persuasive intent, understanding of selling intent, attention to disclosure and recognition of disclosure (Boerman et al., 2018; Boerman & Van Reijmersdal, 2020; Evans et al., 2017; Spielvogel et al., 2019; Van Reijmersdal & van Dam, 2020; Wojdyski et al., 2018).

Presumably, disclosure increases marketing fairness constructs by providing information that triggers more informed and less vulnerable processing of the marketing message, such as disclosing that ambiguous message has, in fact, a selling intent. Consequently, disclosures promote fairness by moderating the weaknesses and vulnerabilities of consumers for certain marketing messages (Friestad & Wright, 1994; Wojdyski & Evans, 2019).

However, because only a few disclosure studies directly focus on young consumers in the context of vlog marketing, the review will also draw on disclosure studies from different marketing contexts and, to a limited extent, on different consumer groups to develop a robust evidence-based understanding of disclosures. Beyond, marketing contexts and consumer groups, disclosures studies have also significant variety in terms of study designs (i.e., cross-sectional, experimental and qualitative), disclosure interventions (i.e., text vs picture), marketing stimuli (i.e., YouTube video vs Instagram picture) and analytical frameworks (i.e., persuasion knowledge as outcome vs persuasion knowledge as moderator) (Boerman & Van Reijmersdal, 2020; Evans et al., 2017; Ham & Nelson, 2019).

Overall, a large body of empirical disclosure studies has robustly demonstrated the effect of disclosures on marketing fairness constructs (Boerman et al., 2015b; Van Reijmersdal & van Dam, 2020). However, many factors moderate the effect size of disclosures (Spielvogel et al., 2019). The examined explanatory factors for the effect size of disclosures can be roughly classified in audience-focused factors, message-focused, and disclosure-focused factors. The investigated audience-based factors were the consumer's awareness of the disclosure (Boerman et al., 2012; Nelson & Park, 2015), recall of disclosure (Boerman et al., 2015b), mood (Hullett, 2005; Kuykendall & Keating, 1990; Mackie & Worth, 1989; Van Reijmersdal et al., 2015), age (Van Reijmersdal & van Dam, 2020) and perceived credibility and ethicality of the source (Dekker & Van Reijmersdal, 2013; Nelson & Park, 2015). The important disclosure-based factors were disclosure timing (Boerman et al., 2014; Campbell

et al., 2013), duration (Boerman et al., 2012), repetition (Spielvogel et al., 2019) and modality (Evans & Hoy, 2016). The effect size was also moderated by the ad type, such as the ad being embedded in an advergame or the television program (Boerman et al., 2015a; Carr & Hayes, 2014; Dekker & Van Reijmersdal, 2013).

According to a recent disclosure review, disclosure awareness is one of the most important conditions for the disclosure effect (Boerman & Van Reijmersdal, 2016). However, awareness is often surprisingly low because moderators of awareness are often not sufficiently considered, such as the type, duration, modality, or timing of the disclosure (Boerman & Van Reijmersdal, 2016). For example, disclosure policies in the U.K. and Belgium for television programs were found to be ineffective in informing consumers (Boerman et al., 2015a; Tessitore & Geuens, 2013). For instance, in the context of duration, three-second disclosure in a television program increased cognitive persuasion knowledge and brand memory, but attitudinal persuasion knowledge and brand attitudes were only affected by a six-second disclosure (Boerman et al., 2012).

More recently, several studies examined the effectiveness of disclosures in the context of influencer marketing. For disclosure-focused constructs, they examined wording, type, and timing, while for the message- and source-focused constructs they investigated message sidedness and followers of the influencer. Lastly, the examined audience-focused constructs were the para-social relationship, age, and attitudes. The findings from these disclosure studies enable a deeper understanding of how younger consumers process influencer marketing on Instagram and YouTube.

Disclosure-focused findings. The effect of the disclosure on marketing fairness constructs may be affected by the wording used in the disclosure. Indeed, in the context of influencer marketing on Instagram, ad recognition and disclosure memory was higher for "Paid Ad" than for "S.P." and "Sponsored" (Evans et al., 2017). However, disclosure wording did not affect evaluative constructs, such as brand attitude, purchase intention and intention to spread (Evans et al., 2017). Nevertheless, in the context of influencer marketing on YouTube, the wording valence of the disclosure intervention (i.e., an introductory text using positive vs. negative words) did affect the perceived authenticity of the SMI as an evaluative construct (Luoma-aho et al., 2019). These findings appear intuitive as the first study

manipulated non-evaluative information, while the second study manipulated evaluative information, namely framing the act of sponsorship positively or negatively.

Timing of Disclosure. Marketing disclosures can be placed at before, during or after the vlog and this might influence the disclosure effect on fairness constructs. Young consumers showed more visual attention to the disclosure, recognition of disclosure, understanding of the sponsored content, when disclosure was placed before the start of the influencer vlog (vs. disclosure concurrent with the start of the vlogs) (Van Reijmersdal et al., 2020). Additionally, critical attitudes towards the brand, video, influencer and less behavioral intentions were found for pre-video disclosure (Van Reijmersdal et al., 2020). This finding suggests that pre-video disclosures should be used to promote fairness effectively.

Disclosure type. Sponsorship disclosures can differently convey their information to young consumers, which may affect the fairness constructs. Indeed, when consumers were exposed to an impartiality disclosure (i.e., a SMI endorses a product but explicitly discloses it not to be sponsored) compared to an explicit sponsorship disclosure or when no information about sponsorship was present, they were less likely to perceive the SMI product review as advertising (Stubbs & Colliander, 2019). This evidence implies that certain types of disclosures can also decrease fairness constructs.

Followers of the influencer. While follower number of the influencer was positively associated with the liking of the influencer, it did not moderate the disclosure effect on ad recognition, brand recall, intentions to engage with the post and para-social interaction with the influencer (Boerman, 2019; Veirman et al., 2017). Overall, follower number may have marketing relevant effects but possibly not for non-evaluative fairness constructs.

Message sidedness. The effect size of persuasive communication was strongly moderated by message sidedness in different advertising context (Eisend, 2006). Similarly, SMI can choose to use one-sided or two-sided messages to promote a product or brand. In fact, ad recognition was unrelated to message sidedness but two-sided messages diminished the negative disclosure effect on attitudes toward the brand and the influencer that was present for the one-sided message (Veirman & Hudders, 2019).

Attitude toward the marketing format. Attitudes toward specific marketing and advertising formats were found to influence the effect sizes of disclosures (De Jans et al., 2018). In particular, young consumers can hold general positive, neutral or negative attitudes towards vlog marketing in general and specific examples or strategies of marketing in vlogs. Indeed, the stronger the negative attitude towards vlog marketing, the stronger was the young consumers' purchase intention negatively affected by the disclosure (De Jans et al., 2018).

Para-social relationships. Young consumers can have a low, moderate or high para-social relationship (PSR) with the influencer. If a young consumer reported having low or moderate PSR with the influencer, then disclosure lead to less positive brand attitude (Boerman & Van Reijmersdal, 2020). However, the attitudes of young consumers with high PSR were affected by the disclosure (Boerman & Van Reijmersdal, 2020).

Age. The age of young consumers' influences which marketing information provided by the disclosure is effective. More concretely, early adolescents (aged 12-14) need more disclosure information (disclosure of advertising and its intent) to activate their marketing-relevant knowledge regarding sponsored influencer videos compared to middle adolescents (aged 15-16) where the disclosure of advertising alone is sufficient (Van Reijmersdal & van Dam, 2020). Further, stronger negative attitudes toward the brand and influencer were only found in middle adolescents, while purchase intention was unaffected in both groups (Van Reijmersdal & van Dam, 2020).

In sum, marketing disclosures promote fairness but the effect size is conditional on different factors. While marketing disclosure research has its merits, it is clear that it is only one of the components to solve the fairness problem because the fairness constructs are also conditional on young consumers persuasion and marketing knowledge and their ability and motivation to apply it (De Pauw et al., 2019; Isaac & Grayson, 2019; Jung & Heo, 2019; Youn & Shin, 2019). To establish a broad understanding about what factors impact marketing fairness related to the interaction between influencer marketing and young consumer marketing, it is vital to review the findings related to the role of knowledge, ability and motivation. Fortunately, recent research has been conducted to advance the understanding of the relationship between marketing literacy and fairness constructs (e.g., Van Reijmersdal & van Dam, 2020).

2.1.2 Marketing Literacy and Young Consumers

The concept of marketing-relevant knowledge of consumers has been referred to as "persuasion knowledge", "marketing literacy", "advertising literacy", and very broadly "media literacy" (Lawlor et al., 2016; Macdonald & Uncles, 2007; Meyers, 2017; Truman & Elliott, 2019; Wang & Mizerski, 2019; Zarouali et al., 2019). Marketing literacy is the preferred term used in this study because it captures the knowledge related to influencer marketing most accurately. Persuasion knowledge and media literacy are overly broad, while advertising literacy is overly narrow.

Similar to disclosure studies, marketing literacy studies have robustly demonstrated a moderating effect of marketing literacy on the concepts associated with higher fairness in different contexts (Van Reijmersdal & van Dam, 2020). However, because only a few marketing literacy studies directly focus on influencer marketing and young consumers, the review will also draw on marketing literacy studies from different marketing contexts and with different consumer groups. Most marketing literacy studies focus on marketing literacy as the explanatory variable and fewer on marketing literacy as the explained and outcome variable (Boerman & Van Reijmersdal, 2020; Evans et al., 2017; Ham & Nelson, 2019). The review will include findings from these three types of studies to establish a firm understanding of the role marketing literacy plays in the context of young consumer marketing.

Marketing Literacy as Moderator and Independent Variable

Marketing literacy was used to explain various relationships as a moderator or independent variable. The examined explained variable can be roughly classified in evaluative explained constructs (i.e., flow and emotions during interactions with advertainment, purchase intentions, benefits and risk, attitudes towards content and brand) and non-evaluative explained fairness constructs (i.e., identification of commercial content and brand recall).

Flow and emotions during interactions with advertainment. Marketing literacy might influence if and how much flow consumers experience and what emotions they feel during interactions with advertainment. In the context of interactive online games embedded with brand messages (advergAMES), higher persuasion knowledge of young consumers was

related to more flow experiences but not linked to the emotions (i.e., pleasure, dominance and arousal) they experienced during their playing experience (Vanwesenbeeck et al., 2016).

Content Attitude. Aside from potential effects of marketing literacy on flow and emotions, marketing literacy other ways are thinkable of how the attitude toward the content could be shaped by it. However, advergaming persuasion knowledge had no significant effect on young consumers' attitudes toward the advergence (Vanwesenbeeck et al., 2017).

Benefits and Risks. Marketing messages can provide benefits to consumers by providing valuable information, but they also entail the risks. Persuasion knowledge of young consumers about social media newsfeed advertising was positively associated with their benefit assessment of advertising message relevance, but not with their risk assessment of privacy risk (Youn & Shin, 2019). Their benefit-risk assessment was further linked to their skepticism toward SMNA, which in turn lead more or less information disclosure on Facebook (Youn & Shin, 2019). This indicates that persuasion knowledge alone might not be sufficient to increase the risk assessment of young consumers.

Purchase intentions. The findings indicate a mixed effect of marketing literacy on purchase intention across contexts. In advergaming, a higher level of persuasion knowledge was counterintuitively associated with a higher intention to buy the advertised product (Vanwesenbeeck et al., 2017). Overall, the findings indicate that more work is needed to identify the key moderator of the relationship.

Brand Attitude. Marketing literacy has different effects in size and direction on attitudes toward brands depending on the marketing context. In advergaming, persuasion knowledge had no significant effect on brand attitude (Vanwesenbeeck et al., 2017). However, when young consumers with high persuasion knowledge (vs. low) played slow-paced advergaming in low game-product congruence environment, then a less favorable brand attitude was found but the effect vanished for fast-paced advergaming (Vashisht & S, 2015). When persuasion knowledge was high and the level of presence was low, young consumers' brand attitudes were not affected by the advergaming experience, but when P.K. was low and presence was high, this was not the case (Waiguny et al., 2014). Low persuasion knowledge of young consumers was linked with a more positive brand attitude after exposure to a trailer ad and a combination of trailer and advergence but not for exposure to either the advergence or a

television ad (Verhellen et al., 2014). However, another study found a negative effect of persuasion knowledge on brand attitude for television ads but not for advergames (Waiguny et al., 2011). Overall, these findings indicate that there is no straight pathway between marketing literacy and brand attitude and moderators need to be considered.

Identification of commercial content. Marketing literacy does impact the identification of commercial content as a key construct of fairness. When young consumers were asked about if they recognized any brands, products, or advertisements in the content, persuasion knowledge was associated with a higher identification of commercial content in advergames (Waiguny et al., 2014). However, the effect of P.K. was reduced when the young consumers' sense of presence in the game was high (Waiguny et al., 2014). This indicates that certain moderators can shrink the effect size of marketing literacy on fairness constructs.

Brand recall. Brand recall is a non-evaluative construct was found to be associated with evaluative constructs. However, the direction and size of the effect were moderated by various factors. In advergames, young consumers with high persuasion knowledge (vs. low) playing slow-paced advergames in low game-product congruence condition showed high brand recall, but the effect did not occur for fast-paced advergames (Vashisht & S, 2015). This indicates how important the content elements are for evaluative constructs.

In sum, marketing literacy appears to be a highly relevant explanatory variable. However, the evidence is not robust enough to fully understand the different relationships between marketing literacy as a moderator, covariant or independent variable across marketing contexts. Nevertheless, the evidence indicates that marketing literacy should be an important target of interventions. Indeed, recent efforts have been made to understand how marketing literacy can be improved. The findings from these studies will be review in the next section.

Marketing Literacy as Dependent Variable in Intervention Studies

The conducted marketing literacy intervention studies are limited and diverse in terms of participants' age, intervention length and types. However, the effects on fairness constructs are overall significant.

In students aged 8 to 9, the understanding of the message creator, the selling intent, persuasive strategy, and target audience was increased after a three-hour advertising literacy

classroom intervention given over three-weeks to high-poverty schools in the United States (Nelson, 2016). Conformingly, positive effects on cognitive advertising literacy for the understanding of persuasive intent and selling intent of marketing messages were found for a four lessons advertising literacy intervention for children aged 8-11 (O'Rourke et al., 2019). Further affirmingly, increased perceived dispositional advertising literacy and motivation to reflect critically on advertising was found for an advertising literacy serious mini-game platform intervention (De Jans et al., 2019). Additionally, compared to an informational booklet, young consumers reported stronger experience of flow among the adolescents, enjoyment, perceived learning, motivation to reflect critically on advertising and motivation to interact with the learning materials (De Jans et al., 2019). In a more targeted intervention, increased analysis and evaluation skills for the understanding of food marketing and ability to assess the nutritional content of packaged foods were found after a six-module media literacy and food marketing intervention for children ages 8 to 11 and 11 to 14 (Truman & Elliott, 2019).

However, in a school-based, six 60-min sessions, advertising intervention study these findings were only partly confirmed and conflicted because positive short- and long-term effects were found for one of three components of cognitive advertising literacy, namely understanding of advertising's tactics, but not for understanding selling and persuasive intent - the other two components (Rozendaal & Figner, 2019). Further, no effect was found on children's attitudinal advertising literacy (i.e., advertising skepticism and general critical attitude toward advertising) and on children's motivation and ability to use coping strategies (Rozendaal & Figner, 2019).

Overall, the findings point in the direction that marketing literacy interventions are effective in increasing fairness constructs not only short-run like disclosures but also in long-run. One particular shortcoming of recent marketing literacy studies is that they have primarily investigated the influence of school-based interventions and, to a lesser extent, parental explanations about marketing. However, research has shown that parental mediation can increase children's knowledge and understanding of marketing because parents more than educators can intervene on marketing exposure with higher frequency and higher context-specify (De Pauw et al., 2019; Hudders & Cauberghe, 2018; Lin et al., 2019; Nelson et al.,

2017; Pearce & Baran, 2018). Consequently, interventions targeting the improvement of parental mediation for marketing could be a highly valuable area of research.

2.2 Parental Mediation and Young Consumers

2.2.1 Parental Mediation of Media Use

As primary agents of children's socialization, parents are vital in the process through which children acquire and develop social attitudes and behaviors (Maccoby, 2007). In particular, parents strongly influence the child's media diet and media use (Chen & Shi, 2019). Parental mediation has been conceptualized as *"the way parents teach children how to cope with media content and prevent negative consequences of media use on their psychological and mental health"* (Hudders & Cauberghe, 2018, p. 199) and as *"the strategies that parents introduce to maximize the benefits and minimize the risks (potential negative impacts) of media influence"* (Jiow et al., 2017, p. 310). In this study, parental mediation refers to parental strategies aimed to maximize the benefits and minimize the risks of media on young consumers.

Historically, the theoretical and empirical contributions started with parental mediation of television media but now also include parental mediation of new media types, such as internet media, social media and SMI media (Daneels & Vanwynsberghe, 2017; Dedkova & Smahel, 2019; Jiow et al., 2017; Lou & Kim, 2019; Robertson, 1979). Cognitions, emotions, and behaviors related to parental mediation tend to be clustered around broad mediation strategies regardless of media type (Daneels & Vanwynsberghe, 2017; Domoff et al., 2019; C. A. Evans et al., 2011; Palaigeorgiou et al., 2018; Shin, 2015; Symons et al., 2017; Vaterlaus et al., 2014; Vijayalakshmi et al., 2019; Zaman et al., 2016).

The proposed strategy clusters are gatekeeping (also referred to as "regulatory", "rule-based" and "restrictive") mediation, discursive ("active", "evaluative", "instructive" and "interpretative", "autonomy-supportive") mediation, co-use ("co-viewing" or "co-play") mediation, clarity-seeking activities ("investigative", "information-seeking", "monitoring", "supervising", self-directed knowledge- and skill-building) and alternative-encouraging activities ("diversionary", "positive-active" and "negative-active") (Beyens et al., 2018; Jiow et al., 2017; Nimrod et al., 2019; Valkenburg et al., 2013).

First, gatekeeping mediation refers to parental regulatory activities targeted at the child's media use, while discursive mediation refers to discussions between parents and children about media use that are more or less informative, educative, dialogic, collaborative and interactive. Second, co-use mediation refers to activities in which the parent and the child use media together usually without actively engaging in discussions, whereas clarity-seeking activities refer to information-seeking and skill acquisition activities that aim to improve the effectiveness of parental mediation activities. Finally, alternative-encouraging activities refer to parents' active and intentional efforts to divert their children from certain media use by parents' criticisms of certain content (i.e., negative-active mediation) and parents' endorsements of certain content (positive-active mediation).

However, recent research on parental mediation of digital media concerning young children (under 8) revealed that rather than using one strategy cluster, parental mediation tends to combine various strategies and actions that could be indicative of different styles, such as limiting screen-time and co-use (e.g., playing together but only for 30 minutes) (Ponte et al., 2019). Moreover, parental mediation is an ongoing and evolving process, and depends on negotiation with the child, on the development of the child, and on previous experiences (e.g. if limiting screen-time did not work, another strategy is tried) (Livingstone et al., 2017).

Overall, higher parental mediation of media use was linked to lower undesirable correlates and outcomes of media consumption, such as aggression, substance abuse (alcohol, tobacco and illicit drugs), risky sexual attitudes and behaviors and materialism (Buijzen & Valkenburg, 2003a; Chen & Shi, 2019; Chen & Austin, 2012; Collier et al., 2016; Radanielina-Hita, 2015). However, the link between parental mediation activities and less undesirable media correlates and outcomes was strongly mediated by the nature of parental mediation (Chen & Shi, 2019; Collier et al., 2016). In particular, the type, variety, consistency and frequency of parental media mediation were vital (Chen & Shi, 2019; Collier et al., 2016; Valkenburg et al., 2013). These findings indicate that parental mediation could also play a vital part in young consumers encounter with marketing and advertising.

2.2.2 Parental Mediation of Marketing and Advertising

Most research of parental mediation in the context of marketing and advertising was conducted for traditional ads, such as television (Bijmolt et al., 1998; Buijzen & Mens, 2007;

Buijzen & Valkenburg, 2003b; Robertson, 1979; Vijayalakshmi et al., 2019), and movies (Hudders & Cauberghe, 2018; Hudson et al., 2008; Naderer et al., 2018). More recently, studies on parental mediation in new marketing and advertising formats are slowly emerging, such as for advergames (Evans, 2014; Evans et al., 2013; Evans & Hoy, 2016), social network games (Vanwesenbeeck et al., 2016), online advertising (Cornish, 2014; Kowalczyk & Royne, 2016; Vijayalakshmi et al., 2018) and influencer marketing (Evans et al., 2018; Lin et al., 2019; Lou & Kim, 2019). Most parental marketing mediation studies focus on mediation as the explanatory and explained variable, while less focus on it as the outcome variable.

Parental Mediation as Moderator and Independent Variable

Studies found that the type and the intensity of parental mediation could explain relevant fairness outcomes, such as child's food consumption, and marketing outcomes, such as child's purchase intentions and requests (Lou & Kim, 2019). More specifically, the relevant examined fairness outcomes were child's materialism, child's advertising literacy, food consumption, parental attitude toward regulation, understanding of commercial content, selling intent and persuasive intent. As for the marketing outcomes, parental mediation had an effect on the child's liking of media, attitude toward the brand and sponsor, purchase intentions and requests, parental attitude toward marketing, parent-child conflicts. However, the effect size of parental mediation on these outcomes vary across studies as many different marketing contexts were examined (Evans, 2014; Hudders & Cauberghe, 2018; Naderer et al., 2018; Vanwesenbeeck et al., 2016).

Undesirable Attitudes and Values. High materialism has been associated with various undesirable outcomes across ages, such as unhappiness (Van Boven, 2005). Promisingly, parental mediation of marketing shows potential to decrease young consumers materialism. For T.V. ads and influencer marketing, active mediation and parental concept-oriented and socio-oriented communication was associated with a lower level of materialism amongst young consumers (Buijzen, 2009; Buijzen & Valkenburg, 2003a, 2003b, 2005; Lou & Kim, 2019). In particular, active mediation might be slightly more effective than restrictive mediation (Buijzen & Valkenburg, 2003a, 2003b, 2005). Further, materialistic attitudes were most effectively reduced when parent-child dyads both reported that parents frequently discussed the role and nature of advertising (Buijzen et al., 2008). Overall, the evidence

indicates that parental mediation of marketing can decrease materialism as an undesirable and negative outcome of marketing exposure.

Undesirable Health Outcomes. Marketing has been associated with undesirable health outcome (Buijzen, 2009). However, parental mediation is an effective means to decrease these undesirable health outcomes. Active mediation of T.V. ads was associated with lower levels of children's food consumption than restrictive mediation in younger and older children (Buijzen, 2009). However, restrictive mediation was most strongly linked to lower food consumption in children between the age of four and eight (Buijzen, 2009). Further, parental concept-oriented and socio-oriented communication of T.V. ads were both associated with lower children's food consumption regardless of age – with socio-oriented communication being slightly more effective (Buijzen, 2009). Indeed, the studies indicate a significant potential for parental mediation to improve the health of children.

Understanding of commercial content, selling intent and persuasive intent. Similar to disclosure and marketing literacy, it was expected that parental mediation of marketing could increase the understanding of commercial content, selling intent and persuasive intent. However, the level of active and passive parental mediation was not associated with the identification of commercial content regardless of age (Hudders & Cauberghe, 2018). Parental mediation of advergames was not linked to parents' recognition of the selling and persuasive intent (Evans, 2014). Perceived autonomy-supportive restrictive media mediation was only related to the understanding of selling intention and perceived autonomy-supportive active media mediation was only associated with understanding of persuasive intention in SNG (Vanwesenbeeck et al., 2016). Perceived controlling and inconsistent, restrictive and active parental mediation were linked with neither the understanding of the persuasive intention nor the selling intention (Vanwesenbeeck et al., 2016). Similarly to disclosure and marketing literacy studies, these findings indicate that the marketing contexts affects the fairness outcomes considerably.

Marketing and advertising literacy. Theoretically, parental mediation of marketing as an educational intervention should be able to increase marketing literacy similar to those of schools. However, active and passive parental mediation was not related to advertising literacy regardless of age (Hudders & Cauberghe, 2018). Similarly, parental mediation was not associated with children's persuasion knowledge about product placements and brand

choices (Naderer et al., 2018). This indicates that parental mediation might need more elements from school-based interventions to build facilitate marketing literacy building in their children.

Value and attitude toward marketing surrounding content. Attitudes towards the brand or product benefit from the consumers having favorable toward the content in which the brand or product is embedded in (Kretchmer, 2004). However, in movies, active and passive parental mediation were not linked to a decreased or increased favorable attitudes toward the movies regardless of age (Hudders & Cauberghe, 2018). Nevertheless, higher parental mediation of the YouTube unboxing videos was related to more positive perceptions of the unboxing video (Evans et al., 2018). Overall, the findings appear mixed and the pathways are not clear yet.

Young consumers' brand and sponsor attitudes. Arguably, parental mediation might affect young consumers attitudes toward the brand and the sponsor by changing the young consumers' evaluation of the marketing encounter. Surprisingly, higher parental mediation of movie brand placements was associated with more favorable brand attitudes in younger but not older children (Hudders & Cauberghe, 2018). However, in the context of movie product placements, higher parental mediation was also associated with children reporting less favorable brand evaluations (Naderer et al., 2018). In the case of YouTube unboxing videos, higher parental mediation was associated with more positive attitudes toward the sponsor but not the brand (Evans et al., 2018). Overall, the link between parental mediation and attitude formation cannot be well explained by the current evidence

Parental attitudes toward marketing. Presumably, parental mediation is associated with critical attitudes toward marketing. Indeed, higher parental mediation was associated with more negative perceptions toward child-directed advergames (Evans, 2014). Perceived autonomy-supportive restrictive media mediation was linked to stronger critical attitude toward SNG advertising and higher perceived inconsistent restrictive mediation was related to lower critical attitude toward SNG advertising (Vanwesenbeeck et al., 2016). These findings indicate that critical attitudes could facilitate more parental mediation.

Purchase intentions and requests. Higher perceived autonomy-supportive active media mediation was associated with lower purchase request intentions, while no link was found

for perceived controlling restrictive and active mediation (Vanwesenbeeck et al., 2016). However, higher perceived inconsistent restrictive mediation was associated with stronger purchase request intention (Vanwesenbeeck et al., 2016). Active and passive mediation and parental concept-oriented and socio-oriented communication were both associated with fewer purchase requests connected to T.V. advertising (Buijzen & Valkenburg, 2003a, 2003b, 2005). Restrictive mediation was linked to higher purchase intentions of young consumers concerning the influencer-promoted products (Lou & Kim, 2019).

Others. Active and passive mediation and parental concept-oriented and socio-oriented communication were related to lower parent-child conflict regardless of age – with socio-oriented communication being slightly more effective (Buijzen & Valkenburg, 2003a, 2003b, 2005). Active and restrictive parental mediation of SMI marketing were not associated with the para-social relationship (PSR) between young consumers and SMIs (Lou & Kim, 2019). The attitude towards regulation of unboxing videos was unaffected by the level of parental mediation (Evans et al., 2018).

In sum, there is evidence that parental mediation is associated with lower materialism in the context of T.V. advertising and influencer marketing, a better understanding of selling intent and persuasive intent in the context of SNG, a positive parental perception given sponsorship transparency in the context of YouTube unboxing videos, more positive brand attitudes in younger but not older children in the context of movie brand placements and more negative brand attitudes in the context of product placements, more positive parental attitudes toward the sponsor but not the brand in the context of YouTube unboxing videos, more negative perceptions toward child-directed advergames, mixed attitudes toward SNG advertising, mixed purchase request intentions in the context of T.V., SNG and influencer marketing, lower parent-child conflict in the context of T.V. ads and lower children's food consumption.

However, there is also evidence that parental mediation is not linked to the understanding of commercial content, selling intent and persuasive intent in the context advergames and movie placements, advertising literacy in the context of movie placements, liking of movies, the para-social relationship between young consumers and SMIs and parental attitude towards regulation of unboxing videos.

Overall, the findings indicate that the marketing and advertising context considerably shapes the effect of parental mediation. As a result, only the two published studies in the context of SMI marketing appear highly valid. Regardless, the other studies are still useful to inform theory and methodology.

This concludes the review of the current evidence on what factors are associated with how parents mediate marketing and advertising directed at their children and what outcomes these choices have. In the next section, the evidence is reviewed on interventions that may influence how parents mediate marketing and advertising directed at their children.

Parental Mediation as Dependent Variable in Correlative Studies

Studies have collected evidence on variables that could explain the intensity of parental mediation (continues variable) and the type of mediation used by the parent (categorical variables, such as active vs. restrictive) (Dens et al., 2007; Lin et al., 2019). The explanatory variables examined are parental internet skills (continues variable), parental social media use (categorical variable: active vs. passive), parental perceived empowerment (categorical variable: intrapersonal vs. interactional), parental locus of control (LOC; categorical variable: internal vs. external), parental attitudes toward advertising and advertising directed at their children (continues variable), parental concern about child nutrition and internet advertising (continues variable), expected family conflict (continues variable), and child age (Kowalczyk & Royne, 2016; Lin et al., 2019).

Parental internet skills. High parental internet skills were indirectly linked to higher levels of parental mediation via higher levels of active social media use (Lin et al., 2019). Further, higher parental internet skills were associated with higher internal LOC which was linked to parents' perceptions of parents being responsible to regulate internet advertising targeted at children (Vijayalakshmi et al., 2018).

Parental social media use. Parents' active (vs. passive) social media use was directly and indirectly associated with more parental mediation of SMIs content, while passive use was not linked to more parental mediation (Lin et al., 2019).

Parental empowerment. Parents' active social media use was directly related to more intrapersonal empowerment which was directly linked to more parental mediation, whereas

passive-use parents felt more interactional empowerment which did not change the level of parental mediation (Lin et al., 2019).

Parental attitudes toward marketing and advertising. More negative parental advertising attitudes were associated with higher levels of restrictive mediation of television and videogame use but not computer use (Kowalczyk & Royne, 2016). However, the attitude toward food ads was not linked to higher levels of restrictive mediation of T.V. ads (Dens et al., 2007).

Parental locus of control. Parental locus of control was associated with parental perceived responsibility for regulating online advertising targeted at their children. More specifically, an internal (vs. external) parental LOC was linked to higher preference for parental (vs. governmental, firm or independent organization) responsibility for regulating online advertising targeted at their children (Vijayalakshmi et al., 2018).

Child's age. Parental mediation was influenced by the children's age. When children were in earlier grade levels, SMI content marketing was stronger moderated (Lin et al., 2019). Parents of older children use more active T.V. advertising mediation, while those of younger children use more restrictive mediation (Soni & Singh, 2012).

Others. A higher parental concern with child nutrition was related to higher levels of restrictive mediation of T.V. ads (Dens et al., 2007). The expected degree to which advertising causes family conflict was linked to higher levels of restrictive mediation of T.V. ads (Dens et al., 2007). The expected degree of children's understanding of the commercial intent of ads was not associated with higher levels of restrictive mediation of T.V. ads (Dens et al., 2007). Perceived effectiveness of ads was not related to higher levels of restrictive mediation of T.V. ads (Dens et al., 2007). Internal LOC was related to a higher educational background but not to income (Vijayalakshmi et al., 2018).

In sum, restrictive mediation may occur more often when parents have higher internet skills, higher educational background, an internal LOC, expect ads to cause conflict, use social media actively, feel more intrapersonal empowerment, are concerned about child-related marketing and advertising, and children are younger. Active mediation may happen more often when children are older and parents have similar characteristics.

Parental Mediation as Dependent Variable in Intervention Studies

The development of evidence-based social interventions that target relevant social problems is an important goal of social science. The prior evidence indicates that parental mediation is such a valuable target for intervention research because it is associated with outcome fairness, such as lower materialism, and higher process fairness, such as understanding of selling intent (Buijzen & Valkenburg, 2005; De Jans et al., 2017; De Pauw et al., 2019). It might be more cost-effective for policy makers to support interventions targeting parental motivation of marketing mediation than to support school-based marketing literacy interventions because parents generally have more opportunities and time to intervene and educate once they are motivated. Additionally, parents, unlike schools, can intervene in a highly child-relevant way by targeting the SMI media and marketing the child actually watches daily.

Unfortunately, only few intervention studies aimed at developing evidence-based interventions to increase parental ability and motivation for the mediation of media and marketing. In the context of parental mediation of marketing, four peer-reviewed intervention studies have been published. In the first study, parents reported stronger intentions for concept-oriented mediation (i.e., actively discussing consumer issues with their children) but not for active or restrictive mediation after the exposure to one educative video intervention about persuasion ethics and marketing ethics in which the TARES (i.e., truthfulness, authenticity, respect, equity, social responsibility) Test of ethical persuasion was explained and the failure of marketing to children meeting the basic standards of ethical persuasion were discussed (Pearce & Baran, 2018). In the second study, more critical attitudes of unhealthy food advertisements were reported by parents after they participated in 2-hour one-session marketing literacy interventions (Powell & Gross, 2018). In the third, a family-based 2-hour six-session media literacy curriculum increased the parents' active negative mediation to foster youths' critical thinking about food marketing, parent efficacy for making healthy dietary changes for their families, family discussion about nutrition labels and decreased youths' requests for marketed foods (Austin et al., 2018). In the fourth and most comprehensive study, parents' understanding television advertising, attitudes about television ads, outcome expectations, values, self-efficacy, and T.V. mediation behaviors,

and ability to read and understand food labels was improved after a four-week media literacy nutrition education intervention (Hindin et al., 2004).

Overall, these parent-focused interventions show a positive effect. However, the diverse design of these studies does not allow to compare them and, thereby, does not allow to answer the most important key questions of interventional studies: what components make an intervention more effective and which do not. This study aims to facilitate our understanding of these more nuanced questions because parental mediation is a highly important target. Consequently, the key concepts that need to be examined more deeply are related to factors that are relevant to increase parents engaging more frequently in the mediation of marketing. Previous cross-sectional and intervention studies on parental psychology left clues on what factors might be important to increase parental mediation but they were not closely related to influencer marketing and, therefore, it is uncertain how well they are generalizable. In other words, robust evidence for influencer marketing is needed and highly important.

Especially because recent studies revealed that parents have a limited understanding of new marketing formats, such as advergames (Cornish, 2014; Evans & Hoy, 2016). Consequently, parental mediation of influencer marketing might be especially low because they could lack the ability to detect it as an area of concern and, as a result, lack motivation for mediation.

Consequently, the goal of this thesis is to deepen our understanding of the following questions:

RQ1: Can an intervention increase parental intentions for the mediation of influencer marketing effectively?

RQ2: What factors and relationships play a role in the effectiveness of an intervention targeted at increasing parental intentions for the mediation of influencer marketing?

To inform how to design behavioral change intervention study that has not only practical but also theoretical value, the next section will summarize the most informative findings and consideration from recent studies.

3 Theoretical and Conceptual Framework

3.1 Intervention Science

The research question and purpose clearly situated the study in intervention science. Intervention science is related but different from implementation science as it focuses on intervention effectiveness, whereas implementation science focuses on methods and strategies used by practitioners and policymakers that promote the adoption and integration of evidence-based practices into regular routines to close the gap between what we know and what we do (also: the know-do gap). In other words, intervention science is about the ‘what works?’, ‘under what circumstances does it work’, and ‘how does I work?’ questions, while implementation science asks ‘how do we get ‘what works’ to the people who need it, with greater speed, fidelity, efficiency, quality, and relevant coverage?’. In this study, the core questions fall into the category of intervention science. As a result, a brief summary of the key current theoretical considerations related to conducting high-quality intervention science studies are reviewed.

One behavioral change intervention study can contain one or more behavioral change interventions (BCIs) that are made of systems and combinations of behavioral change techniques (BCTs) and even more fine-grained distinctions could be made with the category of one BCT. Consequently, the complex hierarchical abstractions pose a challenge for theoretical and applied behavioral change science.

Currently, behavioral change theories provide very limited guidance on the selection and design in terms of the dosage and composition of BCTs for a specific behavior in a specific population at a specific time in a specific setting to achieve the strongest and most durable effect (Connell et al., 2019). In other words, theoretical explanations and answers to the big questions of intervention science are lacking:

“What works, compared with what, how well, with what exposure, with what behaviors, for how long, for whom, in what settings and why?” (Norris et al., 2019, p. 165)

Nevertheless, the recent attempts have been made to link BCTs with evidence-based and theory-informed explanations called “mechanisms of actions” (MoAs) which are hypothesized processes through which the BCTs drive behavioral change (Carey et al., 2019;

Connell et al., 2019; Michie et al., 2018). MoAs have been distinguished between individual-based MoAs (i.e., psychological processes related to traits) and social and physical environment-based MoAs (e.g., socially supportive environment) (Carey et al., 2019). Importantly, MoAs are conceptualized two-fold: one as theoretical explanations of the effects of BCTs and one as targets for BCTs.

Theories of behavioral change proposed MoAs that can be found only in one theory or in multiple theories as the most important targets for BCTs, such as perceived subjective norms related to a specific behavior being a highly important target for BCTs (Carey et al., 2019; Fishbein & Ajzen, 2010; Sheeran et al., 2017). However, the quality of the empirical evidence base varies across the theories and proposed different MoAs (Carey et al., 2019). Most importantly, theories do not specify in sufficient detail how or which of 93 BCTs or 16 clustered BCT-groups should be selected to target a specific MoA, such as the attitude toward the behavior (Fishbein & Ajzen, 2010; Michie et al., 2013; Sheeran et al., 2017). If the BCT-MoA-Behavior pathways would be accurately captured by theories based on empirical evidence, then BCIs could be designed and selected to achieve the ultimate goals of behavioral change science reliably: (i) the strongest durable most possible change in a behavior or (ii) the most cost-effective change in a behavior.

While substantial knowledge syntheses have been made to further our theoretical understanding of BCTs as a replicable component of interventions designed to change behavior (Michie et al., 2013), the synthesis of knowledge to advance our theoretical understanding of the BCT-MoA link only started recently (Carey et al., 2019). The BCT-MoA link refers to a pathway between a specific BCT producing change in a specific MoA through which behavior change occurs (Connell et al., 2019). BCTs have two basic mechanisms to change behavior: (1) augmenting factors that facilitate behavior change, or (2) mitigating factors that inhibit behavior change. In one instance, the BCT “Graded Tasks,” which consists a “*set easy-to-perform tasks, making them increasingly difficult, but achievable, until behavior is performed*” (Michie et al., 2013, electronic supplement material), may change behavior by increasing beliefs in the personal capabilities (MoA). In another instance, the BCT “Restructuring the Social Environment,” which “*change, or advise to change, the social environment in order to facilitate performance of the wanted behavior or create barriers to the unwanted behavior*” (Michie et al., 2013, electronic

supplement material), may change behavior by decreasing disincentivizing social influences (MoA).

However, from the reasonableness of these theoretical explanations does not follow that they are indeed the driver of change behind the BCTs. For example, one common MoA is the mere-measurement-effect that describes behavior change triggered by merely measuring or asking people about the behavior (also, called the question-behavior effect; QBE) and, consequently, it is important to measure different MoA-constructs for the BCT-Behavior link to rule out alternative MoAs (Wilding et al., 2016). As a result, evidence-based theories of specific BCT-MoA links that rule out alternative BCT-MoA links are vital to be developed. Before these theoretical developments are possible robust empirical evidence has to be collected on the BCT-MoA-Behavior links. To this end, the study will focus on uncovering the BCT-MoA-Behavior links for parental mediation of influencer marketing.

To increase the range of theoretical contributions of this study, the theory of planned behavior and its theoretical constructs as MoAs were selected. As a result, the study's examination of the link between BCTs, MoAs, and the behavior of parental mediation of influencer marketing is robustly theory-based and evidence-based.

3.2 Theory of Planned Behavior

TPB is a highly evidence-based theory because it was developed and refined according to the empirical evidence collected for the key constructs of the theory and proposed theoretical relationships over decades (Fishbein & Ajzen, 2010; Steinmetz et al., 2016). As a result, TPB is one of the most cited explanatory and predictive models of human behavior in many social science domains, including the study of marketing and consumer behaviors (Ajzen, 2015; Armitage & Conner, 2001). TPB has been characterized not only as an empirically supported but also as parsimonious, and easily to operationalize model of the antecedents of behavior for various reasons. First, decades of studies collected considerable evidence for the relationships proposed by the TPB. For example, meta-analyses found that attitude, subjective norm, and perceived behavioral control could explain between 30 to 50 percent of the intention variance and intention could explain a similar amount of variance in behavior (Armitage & Conner, 2001; Steinmetz et al., 2016). Second, the model is parsimonious because it proposes a relatively small number of constructs to predict behavior accurately.

Third, the TPB provides clear guidelines about how to measure the specified constructs to ensure predictive accuracy (Ajzen, 2011).

It proposes that the person's *intention* (e.g., "I intend to do X") and *perceived behavioral control* as MoAs are the best-combined predictors of behavioral performance (Fishbein & Ajzen, 2010). The three most important predictors (or MoA) of intention strength are the (i) people's evaluations of the behavior (theoretical focus on *attitudes*; e.g., "doing X would be good/bad"), (ii) the perceived social pressure to perform it (theoretical focus *subjective norm*; e.g., "people who are important to me think that I should do X"), and (iii) people's actual control over the behavior or its proxy, the perceived control over the behavior (theoretical focus *perceived behavioral control*; e.g., "doing X would be easy/difficult") (Fishbein & Ajzen, 2010). Additionally, all other not specified MoAs are assumed to have only indirect effects on behavior as moderators or mediators of the base three MoA-constructs (Ajzen, 2011). Because TPB proposed that attitudes, subjective norms, and perceptions of behavioral control (PBC) are rooted in associated *beliefs*, there are three additional theoretical MoA-constructs. First, the strength of the attitude is based on beliefs about how likely and important positive and negative consequences of the behavior are (*behavioral beliefs*; Ajzen, 2011). Second, the strength of subjective norms is rooted in beliefs about how likely and important normative expectations of important others are (*normative beliefs*; Ajzen, 2011). Third, the strength of PBC is grounded in beliefs about the presence of factors that may facilitate or limit the performance of the behavior (*control beliefs*; Ajzen, 2011). Consequently, changing beliefs of the three base components is the main route to change intentions and behaviors.

In sum, beliefs influence the attitude toward the behavior, the subjective norms regarding the behavior, and the perceived control over the behavior, which influence intentions to perform the behavior and intentions in turn influence the actual performance of the behavior (Figure 1; Ajzen, 1991).

Figure 1. The theory of planned behavior (Ajzen, 1991)

TPB is a highly suitable framework to design behavioral change interventions and to explain the mechanisms by which interventions are expected to impact behaviors (Steinmetz et al., 2016). In fact, the number of TPB-informed behavior change interventions has risen strongly in recent years, and meta-analyses found TBD-informed interventions across domains (e.g., sexual health) to be effective (Steinmetz et al., 2016). These interventions target changes in behavioral, normative, and control beliefs associated with the behavior of interest. More specifically, TPB-informed interventions strengthen beliefs about positive outcomes, weaken beliefs about negative outcomes, raise the perception that important others support the behavior, advance skills or knowledge to perform the behavior, and eliminate internal and external barriers and provide facilitators (Steinmetz et al., 2016).

However, TPB interventions are more theory-informed (or -inspired) instead of theory-based because TPB does not sufficiently specify the answers to the big question of intervention science: “*what [BCIs and BCTs] works, compared with what, how well, with what exposure, with what behaviors, for how long, for whom, in what settings and why?*” (Michie et al., 2018; Norris et al., 2019, p. 165). As a result, researchers design BCIs and select the BCTs to target the TPB-based MoAs rooted in their reasoning about the BCT-MoA link.

Before discussing the implications of this challenge for the current study, a more robust and detailed understanding of the model and its key MoA-constructs is useful. Consequently, the next four sections summarize the key considerations for each theoretical MoA-construct.

3.2.1 Behavioral Intention

“Behavioral intentions are indications of a person’s readiness to perform a behavior” (Fishbein & Ajzen, 2010, p. 39). The statements used to measure the readiness to act are: *“I will (or intent, expect, plan, try) engage in the behavior”* (Fishbein & Ajzen, 2010, p. 39). Interestingly, evidence found the predictive validity to be highly similar between behavioral expectations, willingness, and trying. Therefore, one measure is typically recommended and used (Fishbein & Ajzen, 2010). Similar to the other key components of the model, the intention is a hypothetical non-observable construct that is measured based on psychometrical reasoning (Fishbein & Ajzen, 2010).

The model’s proposed measures of intention aim to capture the evidence on the most important predictive qualities of intentions, namely (i) the person’s estimate of the perceived probability of performing a given behavior (ii) memory accessibility, (iii) temporal stability, (iv) polarity, and (v) personal relevance of the behavior (vi) strength of automatic intention activation (Fishbein & Ajzen, 2010). Intentions are conceptualized as continuum variables rather than dichotomous to capture different intention strengths. For example, items to capture intentions ask people how strongly they intend to perform the behavior or how likely they are to do so.

The predictive validity of intentions may decline based on several reasons. First, it will decline if the intention changes after the assessment or if the intention for the specific behavior is generally temporally unstable (Fishbein & Ajzen, 2010). Second, if the intention is activated on the appropriate occasion, it will not predict the behavior. For example, when asked to explain why they failed to act on their intentions, people often mention that they simply forgot or that it slipped their minds (Fishbein & Ajzen, 2010). However, memory accessibility of the intention might not be necessary if the behaviors have been repeated enough to form a habit that activates spontaneously and automatically in a behavior-relevant situation (Ajzen & Fishbein, 2000).

In sum, interventions should ensure that the intention is accessible in working memory for behavior-relevant situation until a habit is formed. Additionally, interventions should aid in reducing changes in intention value and polarity temporarily.

3.2.2 Attitude

An attitude is defined “as a latent disposition or tendency to respond with some degree of favorableness or unfavorableness to a psychological object” (Fishbein & Ajzen, 2010, p. 76). Any discriminable element of an individual’s world can be an attitude object, such as behaviors, cognitions, emotions, or physical objects. The conceptualization of attitudes entails three noteworthy qualities. First, attitudes are an individual’s position on a unitary evaluative dimension ranges from negative to positive through a neutral point related to a psychological object in terms of favor or disfavor, good or bad, like or dislike (Fishbein & Ajzen, 2010). Second, attitudes are latent constructs that can be measured through manifest responses. Third, attitudes are distinct from affect, which is typically conceptualized as a generalized mood state without a well-defined object (e.g., sadness) and qualitatively different emotions (e.g., anger, pride, or fear) (Fishbein & Ajzen, 2010). However, attitudes may be influenced by moods and emotions.

Empirically, two dimensions of an attitude were found to be useful to distinguish: instrumental (also called cognitive; e.g., harmful–beneficial) and experiential (also called affective; e.g., painful–enjoyable) (Fishbein & Ajzen, 2010). Behavior’s perceived instrumentality refers to its anticipated positive or negative consequences, whereas experientiality mirrors the perceived positive or negative experiences associated with performing the behavior (Fishbein & Ajzen, 2010). A third quality of an attitude is its extremity in terms of confidence in one’s attitude, involvement with the attitude object, its centrality or importance, attitudinal ambivalence, the attitude’s accessibility in memory, and its temporal stability (Fishbein & Ajzen, 2010).

The attitudes toward an object or behavior origin from beliefs about the object (Fishbein & Ajzen, 2010). Based on the expectancy-value model, TPB posits that beliefs about an object are formed, strengthen, weakened or forgotten throughout life by having direct or indirect (e.g., from friends, teachers or media) experiences with objects or self-generated experiences with objects, and by associating the object with various characteristics, qualities, and attributes (Fishbein & Ajzen, 2010). More specifically, a belief was defined as “*the subjective probability that an object has a certain attribute*” (Fishbein & Ajzen, 2010, p. 96). Beliefs may or may not accurately reflect reality. Belief strength is often assessed on a seven-point Likert scale with endpoints, such as agree–disagree, likely–unlikely, or

definitely true–definitely false (Fishbein & Ajzen, 2010). Presumably, people have experiences with the object which trigger the activation of preexisting attributes that become linked to the object. Consequently, depending on the subjective probability that an object has a certain attribute, different strong and weak beliefs are formed about the object, and an automatic and inevitable process of belief summation produces attitudes towards an object (Fishbein & Ajzen, 2010). As a result, people have favorable attitudes toward objects they associate with positively valued attributes, unfavorable attitudes toward objects they associate with negatively valued attributes or ambivalent attitudes toward objects they associate with positively and negatively valued attributes (Fishbein & Ajzen, 2010). However, supposedly, only a small number of attributes and beliefs that have high accessibility in working memory should be most predictive of the actual attitude at any given moment because the capacity of the working memory is limited to five to nine items of information at one moment (Cowan, 2010; Fishbein & Ajzen, 2010). As a result, the first five to nine beliefs listed by people are likely to serve as the primary determinants of attitudes toward the behavior of interest. Therefore, respondents are often asked to list the advantages and disadvantages of their performing the specific behavior. Depending on time and motivation, people can actively retrieve additional beliefs from memory which may influence the attitude then.

3.2.3 Subjective Norm

Decades of social science show that the social environment can wield a strong influence on people's intentions and behaviors. Most frequently, social influence is captured in the strongly examined concept of the subjective norm, which refers to what behaviors are acceptable, permissible, encouraged, or discouraged in a group or society. However, TPB defines norms more narrowly as perceived social pressure to perform (or not to perform) a given behavior even when no rewards or punishments are anticipated (Fishbein & Ajzen, 2010).

A conceptual distinction between two norms is commonly found useful. On the one hand, injunctive norms refer to perceptions related to what should be done concerning performing a given behavior and, on the other hand, descriptive norms refer to perceptions that others are or are not performing the behavior in question (Fishbein & Ajzen, 2010).

Descriptive norms may influence behavioral intention and behavior because they provide indirect social evidence on what behaviors might be effective and adaptive (Cialdini & Goldstein, 2004). If most others are performing a given behavior, it may be the most sensible thing to do under the given circumstances, especially if these others are experts concerning the behavior in question (Cialdini & Goldstein, 2004).

Injunctive norms may influence behavioral intention and behavior because they expect the social agent to have the ability and motivation to reward them for their behavioral compliance and to punish them for their behavioral refusal (e.g., police officer), the right to request the behavior (e.g., supervisor), the expertise to recommend the behavior (e.g., doctor), and to be a person that they want to be liked by (e.g., romantic partner).

Injunctive normative beliefs are subjective probabilities that a particular reference group prescribes or proscribes the performance of specific behaviors, whereas descriptive normative beliefs are subjective probabilities that particular reference group is or is not performing the specific behaviors (Fishbein & Ajzen, 2010).

3.2.4 Perceived Behavioral Control

Decades of social science show that individual differences in perceived control have a strong influence on people's intentions and behaviors. The common feature of different conceptualization of perceived control is a fundamental and stable expectation that internal factors, such as competence, willpower, and determination, are responsible for behaviors, outcomes, and events in a person's life and one has the personal competence or perceived ability to influence events across behaviors (Fishbein & Ajzen, 2010).

Perceived behavioral control has been defined as "*people's general expectations regarding the degree to which they are capable of performing a given behavior, the extent to which they have the requisite resources and believe they can overcome whatever obstacles they may encounter*" (Fishbein & Ajzen, 2010, p. 169). Perceived behavioral control is assumed to be the function of believing to have the resources in terms of time, financial and social capital, and personal skills to exploit behavioral opportunities and overcome behavioral barriers required to perform the behavior (Fishbein & Ajzen, 2010). Whether the resources and obstacles are internal or external to the person is not relevant.

TPB proposes that two factors are best to predict perceived behavioral control: perceived capacity and perceived autonomy. Perceived capacity refers to the perceived difficulty or ease of performing a behavior, whereas perceived autonomy refers to the perceived control over performing a behavior.

Readily accessible beliefs regarding these control factors are assumed to determine the overall level of perceived behavioral control based on past experiences, indirect observations, and second-hand information. Control beliefs involve the subjective probabilities that particular factors that can facilitate or impede the performance of the behavior will be present. In sum, perceived control over their performance of the behavior would be the highest if individuals possess more of the required resources and opportunities, and anticipate manageable obstacles.

Having achieved a more robust and detailed understanding of the model and its key MoA-constructs, the next step is to understand the key behavior(s) of the study that these concepts should be applied to. Consequently, previous conceptualizations in studies about parental mediation of marketing are summarized and discussed next.

3.3 Parental Mediation of Influencer Marketing

TPB recommends that the behavior of interest should be specified in terms of its Target, Action, Context, and Time (TACT) and the principle of compatibility which requires all other constructs (attitude, subjective norm, perceived behavioral control, and intention) to be defined in terms of the same elements (Ajzen, 2006b). While each of the behavior should contain the four TACT elements, the selected levels of generality or specificity are based on the reasoning of the researcher and, consequently, “*defining the TACT elements is somewhat arbitrary*” (Ajzen, 2006b, p. 2).

Parental mediation of marketing has been conceptualized on different levels of abstraction. Importantly, ‘parental mediation of marketing’ is a behavioral category that contains all the behaviors that parents theoretically could do and are actually doing to mediate their child(ren)’s engagement with marketing. Consequently, the first step is to identify a limited set of the most promising behaviors that should be targeted. However, the identification is challenging because empirical evidence is problematic for multiple reasons.

First, studies about influencer marketing, advergames, and social media games created evidence for the link between parental mediation of media use behaviors and marketing outcomes instead of evidence for the link between parental mediation of marketing behaviors and marketing outcomes (Evans, 2014; Lin et al., 2019; Lou & Kim, 2019; Vanwesenbeeck et al., 2016). The studies are built on the evidence and theory-lacking assumption that parental mediation of media use behaviors is somehow related to marketing constructs. As a result, these studies do not pass the principle of construct compatibility and have low informative value.

Second, the evidence for the link between parental mediation of marketing behaviors and marketing outcomes is based only on a few inconclusive studies (see the review of evidence in section 2.2.2). As a result, it is unclear what parental mediation of marketing behaviors lead to the strongest decrease unfairness and to increase fairness in outcomes and processes related to the marketing interactions their children encounter daily. More specifically, there is no robust guidance on which parental mediation of marketing behaviors are most important for the improvement of young consumers' (i) recognition of disclosure, sponsored content, the real source of the marketing message, persuasive intent, selling intent, brand presence, brand or product references as marketing messages, (ii) facilitate informed evaluations of the ethicality of the marketing encounter in terms of transparency, deception, truthfulness of the message, authenticity of the marketer, respect for the young consumer, equity of the persuasive appeal, and social responsibility (what does it contribute to the common good), and (iii) decrease risk of harmful marketing outcomes, such as increased high-sugar foods intake. The main reason why no guidance can be derived lies in the methodology the previous studies used. In particular, it is caused by use of three hierarchical levels of behavior: (1) highest order factor 'parental mediation of marketing', (2) active and passive parental mediation of marketing as two sub-factors or facets, and (3) five behavior for each of the sub-factors as lowest level analytical units (Buijzen & Valkenburg, 2005). The subfactor distinction was established because a previous factor analysis found that specific parental mediation of marketing behaviors appear to be clustered around the two factors (Buijzen & Valkenburg, 2005). Since then, studies focused on the effects of the subfactors instead of the effects of specific behaviors for the desired outcomes.

Third, the small collected evidence for the link between parental mediation of marketing behaviors and marketing outcomes is problematic to cross-link because of studies focused mostly on TV advertising and only one study on product placements and one on mobile and internet (Buijzen, 2009; Buijzen & Valkenburg, 2005; Hindin et al., 2004; Hudders & Cauberghe, 2018; Naderer et al., 2018; Pearce & Baran, 2018; Robertson et al., 2016; Shin, 2017).

The most recent studies rely on the same or similar ten parental mediation of marketing behaviors that were selected “based on previous studies” or theoretical reasons without one study ever collecting evidence on their actual comparative empirical effectiveness for the desired outcomes (Buijzen & Valkenburg, 2005; Wiman, 1983). Studies only compared the averaged effects of the aggregated factors on desired outcomes (active vs. passive) which is problematic as one of the five behaviors could have a disproportionally large effect. In contrast, another one could have a small disproportional effect on the outcomes masking a piece of highly important information for behavioral change intervention studies. Table 1 shows the specific factors and behaviors used to measure parental mediation of marketing and advertising and media use.

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Table 1. Factors of parental mediation of marketing

Author	Factor	Items
Naderer et al. 2018	(Advertising) Restrictive mediation Active mediation	How often do you tell your child(ren) ...? 1. To turn off the television when (s)he is watching commercials? 2. That (s)he should not watch television advertising at all? 3. To watch specific networks that broadcast relatively few commercials. 1. That advertising depicts products as better than they really are? 2. That advertising does not always tell the truth? 3. That the purpose of advertising is to sell products? 4. That not all advertised products are of good quality? 5. That some advertised products are not good for children?
Hudders & Cauberghe 2018	(Advertising) Active mediation Restrictive mediation	How often do you tell your child ...? 1. that integrated advertising in movies and programs depicts products as better than they really are? 2. that integrated advertising in movies and programs does not always tell the truth? 3. that the purpose of integrated advertising in movies and programs is to sell products? 4. that not all advertised products are of good quality? 5. that some products that are integrated as advertising in programs and movies are not good for children? 1. that (s)he should watch another program when s(he) watches a program or movie with integrated advertising? 2. that (s)he should not watch commercial networks because they broadcast too many programs and movies with integrated advertising? 3. to switch to a channel that broadcasts fewer programs and movies with integrated advertising? 4. that (s)he should not watch programs and movies with integrated advertising at all? 5. to watch specific networks that broadcast relatively few programs and movies with integrated advertising?
Shin 2017	Active mediation of (TV, internet, mobile) advertising	1. I tell my child that (TV, internet, mobile) advertising depicts products as better than they really are. 2. I tell my child that (TV, internet, mobile) advertising does not always tell the truth. 3. I tell my child that the purpose of (TV, internet, mobile) advertising is to sell products. 4. – I tell my child that not all advertised products on (TV, internet, mobile) are of good quality.
Robertson et al. 2016	Instructive mediation	How often do you talk to your preschooler about the purpose of advertising?
Buijzen & Valkenburg 2005	(Advertising) Active mediation scale Restrictive mediation	How often do you tell your child ...? 1. That advertising depicts products as better than they really are? 2. That advertising does not always tell the truth? 3. That the purpose of advertising is to sell products? 4. That not all advertised products are of good quality? 5. That some advertised products are not good for children? 1. To turn off the television when (s)he is watching commercials? 2. That (s)he should not watch commercial networks because they broadcast too many commercials? 3. To switch to a channel that broadcasts fewer commercials? 4. That (s)he should not watch television advertising at all?

	<p>Concept-oriented communication</p> <p>Socio-oriented communication</p>	<p>5. To watch specific networks that broadcast relatively few commercials?</p> <p>1. That every member of your family should have some say in family purchase decisions?</p> <p>2. To give his/her opinion when discussing family purchases?</p> <p>3. To give his/her opinion about products and brands?</p> <p>4. That you respect his/her expertise on certain products and brands?</p> <p>5. That you consider his/her preferences when making a purchase?</p> <p>6. To consider the advantages and disadvantages of products and</p> <p>7. That (s)he can co-decide when you make purchases for him/her?</p> <p>1. That you know which products are best for him/her?</p> <p>2. Not to argue with you when you say no to their product requests?</p> <p>3. That you expect him/her to accept your decisions about product purchases?</p> <p>4. Which products are or are not purchased for the family?</p> <p>5. Which products (s)he should or should not buy?</p> <p>6. That you have strict and clear rules when it comes to product purchases?</p> <p>7. That (s)he is not allowed to ask for products?</p>
(Valkenburg et al., 1999)	<p>(Media Use)</p> <p>Instructive Mediation</p> <p>Restrictive Mediation</p> <p>Social Coviewing</p>	<p>How often do you...</p> <p>1. ...try to help the child understand what s/he sees on TV?</p> <p>2. ...point out why some things actors do are good?</p> <p>3. ...point out why some things actors do are bad?</p> <p>4. ...explain the motives of TV characters?</p> <p>5. ...explain what something on TV really means?</p> <p>1. ...say to your child to turn off TV when s/he is watching an unsuitable program?</p> <p>2. ...set specific viewing hours for your child?</p> <p>3. ...forbid your child to watch certain programs?</p> <p>4. ...restrict the amount of child viewing?</p> <p>5. ... specify in advance the programs that may be watched?</p> <p>1. ... watch together because you both like a program?</p> <p>2. ... watch together because of a common interest in a program?</p> <p>3. ... watch together just for the fun?</p> <p>4. ... do you watch your favorite program together?</p> <p>5. ... do you laugh with your child about the things you see on TV?</p>
(Bijmolt et al., 1998)	<p>Recognition of Commercial-Programme Difference</p> <p>Comprehension of Advertising Intent</p>	<p>1. Commercials try to sell or make money</p> <p>2. Commercials show things you can buy</p> <p>3. Programmes are entertainment</p> <p>1. Tries to make people buy products</p> <p>2. Informs about products, shows products you can buy</p>
(Wiman, 1983)	(TV advertising) Parent-child interaction	<p>About how many times you remember it happening in the past month.</p> <p>1. You and (child's name) talked about whether an individual in a TV ad was a real person or an actor.</p> <p>2. You got into a discussion with () about what advertising is and why TV programs have commercials</p> <p>3. You talked with () regarding what is good and bad about television advertising.</p> <p>4. While watching TV with (), you discussed some commercial you had both just seen.</p>

		<p>5. In using a product that you had seen advertised on TV, you and () talked about whether or not it does everything the ad said it would.</p> <p>6. () asked you to watch a commercial that he/she had seen on TV.</p> <p>7. You and () talked about how many commercials TV shows have.</p> <p>8. You told () not to believe everything he/she sees in a TV commercial.</p> <p>9. Have any other discussions about television advertising and commercials, such as these, taken place between you and () in the past month?: yes__ no __</p> <p>9.a. If yes, what? __ How often? __</p>
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Based on the current evidence, behavioral change intervention studies have multiple options: (1) target all the ten identified behaviors, (2) target a subset of these behaviors, (3) target a combination of these behaviors and novel ones, or (4) target only novel behaviors.

As recommended, TPB-informed behavioral change intervention studies commonly focus on one behavior, such as binge drinking (Norman et al., 2018), pre-drinking alcohol consumption (Caudwell et al., 2018), condom use (Montanaro et al., 2018), and smoking (Zhao et al., 2019). However, an important distinction has to be made between these health behaviors and educative communication behaviors, such as parental mediation of marketing. The performance of health behavior is associated with the desired health outcomes, whereas this is not the case for persuasive communications because merely communicating is not enough to have an effect as communications are situated on an effectiveness continuum ranging from negative over zero to positive. For example, a parent may aim to decrease the child's consumption of soft drinks by forbidding the child to watch soft drink marketing, yet this could lead the child to want to do the forbidden behavior more often as a psychological reactance response (Brehm & Brehm, 2013). In other words, not only the communication quantity matters but also the communication quality to achieve the desired outcomes. Indeed, the communication quality and the communication type could explain the inconclusive evidence found for the outcomes of parental mediation of marketing. However, while these fine-grained questions on communicative effectiveness are important, they need to be examined separately from the collection of evidence on how to increase the frequency of parental mediation of marketing behaviors.

Because the focus of this study is on the behavioral frequency and the evidence on behavioral effectiveness is insufficient, the selected conceptualization of the behavior was chosen to be very broad. Similar to previous studies, the study uses the distinction between active parental

mediation of marketing and restrictive parental mediation of marketing (Buijzen & Valkenburg, 2005). However, only one behavior is chosen for each of these to make all the items compatible. Active parental mediation of influencer marketing will refer to discussion about why and how influencer promotes products to children why it might be harmful and how to recognize it. In contrast, restrictive parental mediation of influencer marketing will refer to suggestions to the child on why and how to avoid influencer marketing. The underlying assumption is that these behaviors over time should increase the process and outcome fairness for the children. However, this link is assumed and will not be tested; instead, the focus is on how to increase the frequency of these behaviors.

3.4 Hypotheses

The study will advance our knowledge of the relationships between the TPB-based constructs, cognitions, and behaviors for the specific new context of parents discussing influencer marketing with their child(ren).

First, two hypotheses will test, if the TPB-informed MoA-MoA correlative links as basic correlative assumptions between the four TPB-based constructs are significant for this new context:

H1: Attitude, subjective norm, PBC and behavioral intention related to discussing influencer marketing are correlated with each other

H2: Attitude, subjective norm, PBC and behavioral intention related to discussing influencer marketing are correlated with past self-reported cognitions and behaviors

Second, one hypothesis will test, if the TPB-informed MoA-MoA regression model assumptions between the three base TPB-based constructs and intentions are significant for this new context:

H3: Attitudes, subjective norms and PBC and behavioral intentions are predictors of intentions

Third, nine hypotheses will test the different TPB-informed BCIs-MoA associations, similar to previous studies (Montanaro et al., 2018; Steinmetz et al., 2016). The hypotheses are

informed by the dismantling approach in which single components and complex combinations of components proposed by a theory are targeted to dismantle whether one component is especially effective or whether some combinations of components are more effective (Shadish et al., 2002). More specifically, the study contains multiple BCIs which contain multiple BCTs to target each of the four TPB-based MoAs to identify whether it was possible to target only one construct at a time or whether spill-over effects of the construct-targeted interventions occurred, and to examine whether any of the construct-targeted interventions might be sufficient alone to increase behavioral intentions (Ajzen, 2006a; Fishbein & Ajzen, 2010; Michie et al., 2013). Consequently, the BCIs can be differentiated into single MoA-targeted BCIs, multiple MoA-targeted BCIs, and one all MoA-targeted BCI.

As for the BCIs designed to target one TPB-based MoA, four hypotheses will be tested:

H4: The BCI designed to target the attitudes as a MoA will result in stronger favorable attitudes towards discussing influencer marketing compared to the control condition

H5: The BCI designed to target the subjective norms as a MoA will result in stronger subjective norms for discussing influencer marketing compared to the control condition

H6: The BCI designed to target the PBC as a MoA will result in higher PBC over discussing influencer marketing compared to the control condition

H7: The BCI designed to target the behavioral intentions as a MoA will result in stronger intentions to engage in discussing influencer marketing compared to the control condition

As for the BCIs designed to target multiple TPB-based MoA, five hypotheses will be tested:

H8 The BCI designed to target the three base TPB-based MoAs (attitude, subjective norms, and PBC) will result in stronger intentions to engage in discussing influencer marketing compared to the control condition

H9: The BCI designed to target the three base TPB-based MoAs (attitude, subjective norms, and PBC) will result in stronger intentions to engage in discussing influencer marketing compared to the four single-targeted BCIs

H10: The BCI designed to target the four TPB-based MoAs (attitude, subjective norms, and PBC, intentions) will result in a stronger intention to engage in discussing influencer marketing compared to the control condition

H11: The BCI designed to target the four TPB-based MoAs (attitude, subjective norms, and PBC, intentions) will result in stronger intentions to engage in discussing influencer marketing compared to the four single-targeted BCIs.

H12: The BCI designed to target the four TPB-based MoAs (attitude, subjective norms, and PBC, intentions) will result in stronger intentions to engage in discussing influencer marketing compared to the BCI targeting three MoA.

Lastly, it is assumed that the age of children might moderate the effect of the BCIs on the TPB-based MoAs because parents might perceive the mediation behaviors of influencer marketing as less relevant when children are older. As children age, the children enter the workforce and obtain other responsibilities which lead to them spending less of their waking hours with media. Additionally, as children move beyond adolescents, they form relatively stable personality traits and attitudes. Both developments should decrease the expected value of discussions about influencer marketing for parents and lead to the intervention being less relevant. However, the upper age boundary was set to 25 not 18 because young adults living with their parents until they completed their apprenticeship or high education degree would still be influenced by their parents to a certain extent. Additionally, moderation analysis enables future interventions to make a more informed sampling decision regarding the choice of the specific type of parent to study further. Therefore, two explorative hypotheses test, if there is a significant difference between those groups of parents.

H13: Parents who reported to have children between 6-18 will have stronger intentions to engage in discussing influencer marketing compared to parents who have children between the age of 19-25 with and without exposure to BCIs

H14 Parents who reported to have children between 6-18 will have stronger intentions to engage in discussing influencer marketing compared to parents who have children between the age of 19-25 with exposure to BCIs

By testing these hypotheses, the study aims to collect foundational experimental evidence on how evidence-based BCIs impact TPB-based MoAs and how they influence parental mediation of influencer marketing. Dismantling the relationships between BCIs, TPB-based MoAs and behavioral outcomes for specific behaviors is highly important because meta-analyses and reviews consistently find that the targeted behavioral context moderates the impact of the intervention and the importance of the TPB-based MoAs to achieve more frequent behavioral (Fishbein & Ajzen, 2010; Sheeran et al., 2016; Steinmetz et al., 2016). In other words, the dismantling approach is vital to advance our theoretical understanding in terms of behavioral context-sensitivity by examining which behavioral change techniques target the specific behavioral constructs effectively and which combinations are necessary and/or sufficient to change the specific behavior (Holtforth et al., 2004). As a result, more effective and cost-effective interventions could be designed, which is one important goal of intervention science as resources are limited (Beecham et al., 2019).

In the next section, the methodology used to test the hypotheses is summarized and discussed.

4 Methodology

To deepen our understanding of the BCIs-MoA-Behavior links for parental mediation of influencer marketing, the study employed an experimental approach. The experimental design was chosen to answer the research questions and test the hypotheses because correlational studies cannot prove causal hypotheses as alternative explanations for a relationship between two variables cannot be ruled out (Altman & Krzywinski, 2015). Similar to many previous intervention studies, an online computer-based experimental design was chosen because of the many advantages it provides, such as faster recruitment of participants, the potential for less biased samples and easy scalability of the interventions online if they are effective (Muñoz et al., 2016; Rempel et al., 2019; Spokesman et al., 2016). The methodology section contains descriptions and discussions of the sample selection, the design of the BCIs and BCTs, the measures, the experimental procedure, pre-test findings, and the data analysis procedures.

4.1 Data Collection

4.1.1 Sample

A power analysis using the GPower computer program (Erdfelder et al. 1996) indicated that a total sample of 126 participants with 18 participants per condition would be needed to detect medium effects ($d = .8$, as reported in Cohen 1977) with 80% power using a Pearson's correlation with alpha at .05. The final sample size was 196; therefore, the study arguably has sufficient power to detect significant correlations and effects.

The online crowdsourcing website *Prolific* was used to recruit the participants. An online crowdsourcing sample was chosen because they are more diverse than the college-student samples and previous studies published in marketing journals used crowdsourcing samples to obtain reliable results with a low rate of errors (K. Kim & Ahn, 2017; Yang & Wang, 2015). Similarly, online crowdsourcing samples are used in other social sciences to recruit diverse and high-quality samples of participants (e.g., Aruguete et al., 2019b; Chandler et al., 2019). Recently, Kees et al. (2017) found the data quality of MTurk, another popular crowdsourcing website, to outperform two professional panels: Qualtrics or Lightspeed. Additionally, crowdsourcing services allow researchers to conduct high-quality experiments

at higher speed and lower costs (Buhrmester et al., 2011; Paolacci et al., 2010). Ultimately, online crowdsourcing services draw on participants that are similar to the typical influencer followers, namely participants who are technically advanced and open to use new technology. For example, the age range of MTurk participants in the USA is considered to align with that of internet users who are the targeted population of this study (Hara et al., 2019).

To obtain highly valid data, specific inclusion and exclusion criteria were used. To reduce geographical data noise, only Prolific workers who were U.S. residents were allowed to participate (Peer et al., 2014). The goal of the study is to prototype and pilot the behavior change intervention with the group of parents who presumably would have a moderate to high expected value from performing the behavior. Only after the intervention shows promise for this group, it is reasonable to the extent it to the general population of parents. This approach is most pragmatic because if the intervention was not effective with moderate to high expected-value parents, then it is certainly not suitable for an untailed representative sample of parents, and it has to be redesigned and piloted again.

To achieve a minimum level of moderate to high expected value from performing the behavior of influencer marketing discussion, three inclusion criteria have been chosen: (1) the child(ren) had to be six or older, (2) the child(ren) had to be younger than 26, and (3) the child(ren) had to engage in influencer content more than once a month.

As for the lower age boundary, it was used to ensure that the parents had children of a certain developmental age with whom cognitive demanding discussions were perceived to be valuable in terms of having a non-trivial likelihood of changing the child(ren)'s cognitions, emotions, and behaviors related to influencer marketing in a desirable direction. In other words, if children cannot comprehend and engage in the discussions, the expected value in terms of potential change or learning due to discussion appears to be unlikely to occur or be sustained. Similarly, the higher age boundary was chosen to account for the age-based decreased engagement with media and the developmental-based decrease in the effectiveness of parental influence, which both should decrease the expected value of discussion about influencer marketing. As children age, the children enter the workforce and obtain other responsibilities which lead to them spending less of their waking hours with media. Additionally, as children move beyond adolescents, they form relatively stable

personality traits and attitudes. Both developments should decrease the expected value of discussions about influencer marketing for parents and lead to the intervention being less relevant. However, the upper age boundary was set to 25 not 18 because young adults living with their parents until they completed their apprenticeship or high education degree would still be influenced by their parents to a certain extent. Additionally, this enabled to test if there is a significant difference in parent's responses to the intervention if their children were between 6 and 18 compared to if their children would be between 19 and 25. As a result, future interventions could make a more informed sampling choice. Lastly, parents might have children that fall into the age range but do for various reasons not engage with influencer content, which makes the discussion of influencer marketing have a very low expected value. In contrast, parents whose children regularly engage with influencer content should be exposed to substantial influencer marketing and, therefore, have high potential to be negatively affected by it. As a result, the discussion would be perceived of high expected value to diminish the potential negative effects.

The characteristics of the sample for all groups can be seen in Table 2 **Error! Reference source not found.** The description focuses on the distribution of the characteristics of the entire sample. The participants were balanced in terms of sex (52.8% female). The majority of the participants had either children in one age range, namely 6 to 18 (51.5%), or in two age ranges, namely children aged 0-5 and 6-18 (25.5%) or 6-18 and 19-25 (11.2%). The average number of children each participant had was two while being, on average, 42 years old. According to the reports of the parents, the majority of children were exposed to influencer content once a day (33.9%) or multiple times a day (54.6%). The majority of participants had a higher educational degree (72.4%): 11.7% with an associate degree in college, 38.8% with a Bachelor's degree, and 21.9% with a Master's degree. The ethnic background participants identified with was primarily white (82.1%) with a minority of Black or African American (6.6%) and Hispanic or Latino (5.6%). The majority of the participants were working as paid employees (70.9%) and the second-largest group reported to be working in a self-employment context (11.2%). As for marital status, the majority reported being married (74.5%), while the second and third largest groups reported to have never married (12.2%) or to be divorced (9.2%). Lastly, the political orientation was predominantly split between three groups: democrats (42.3%), republican (28.1%), and independent (23.5%).

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Table 2 Sample characteristics by groups

Variables	Values	Entire Sample		Control Group		Attitude Group		Subjective norms Group		PBC Group		Intention Group		Three-component Group		Full-component Group	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Sex	Male	92	47.2%	13	38.2%	16	64.0%	17	56.7%	9	36.0%	15	55.6%	12	41.4%	10	40.0%
	Female	103	52.8%	21	61.8%	9	36.0%	13	43.3%	16	64.0%	12	44.4%	17	58.6%	15	60.0%
Age of Children	0-5 and 6-18	50	25.5%	9	25.7%	10	40.0%	5	16.7%	8	32.0%	5	18.5%	9	31.0%	4	16.0%
	0-5 and 6-18 and 19-25	1	0.5%							1	4.0%						
	6-18	101	51.5%	14	40.0%	10	40.0%	19	63.3%	12	48.0%	14	51.9%	16	55.2%	16	64.0%
	6-18 and 19-25	22	11.2%	7	20.0%	1	4.0%	4	13.3%	1	4.0%	3	11.1%	2	6.9%	4	16.0%
	6-18 and 19-25 and more than 25	3	1.5%	1	2.9%			2	6.7%								
	19-25	9	4.6%	4	11.4%	1	4.0%					2	7.4%	1	3.4%	1	4.0%
	19-25 and more than 25	10	5.1%			3	12.0%			3	12.0%	3	11.1%	1	3.4%		
Children Exposure to Influencer Content	More than once a month	1	0.6%													1	4.3%
	Once a week	7	4.0%	1	3.3%	1	4.3%			1	4.3%	2	8.0%			2	8.7%
	Multiple times a week	11	6.3%	1	3.3%			3	11.5%	4	17.4%	2	8.0%	1	4.2%		
	Once a day	59	33.9%	13	43.3%	14	60.9%	4	15.4%	6	26.1%	8	32.0%	9	37.5%	5	21.7%
	Multiple times a day	95	54.6%	15	50.0%	8	34.8%	19	73.1%	12	52.2%	12	48.0%	14	58.3%	15	65.2%
	Don't know	1	0.6%									1	4.0%				
Educational Background	Less than high school degree	1	0.5%											1	3.4%		
	High school graduate (high school diploma or equivalent including GED)	8	4.1%			1	4.0%			1	4.0%	3	11.1%	3	10.3%		

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	Some college but no degree	34	17.3%	7	20.0%	2	8.0%	7	23.3%	3	12.0%	4	14.8%	5	17.2%	6	24.0%
	Associate degree in college (2-year)	23	11.7%	5	14.3%	4	16.0%	3	10.0%	3	12.0%	2	7.4%	4	13.8%	2	8.0%
	Bachelor's degree in college (4-year)	76	38.8%	13	37.1%	9	36.0%	13	43.3%	8	32.0%	12	44.4%	10	34.5%	11	44.0%
	Master's degree	43	21.9%	9	25.7%	7	28.0%	5	16.7%	6	24.0%	6	22.2%	5	17.2%	5	20.0%
	Doctoral degree	6	3.1%			2	8.0%	2	6.7%	2	8.0%						
	Professional degree (JD, MD)	4	2.0%	1	2.9%					1	4.0%			1	3.4%	1	4.0%
	Other (please specific):	1	0.5%							1	4.0%						
Ethnical Background	White	161	82.1%	28	80.0%	22	88.0%	28	93.3%	23	92.0%	19	70.4%	22	75.9%	19	76.0%
	Black or African American	13	6.6%	3	8.6%	1	4.0%	1	3.3%			2	7.4%	1	3.4%	5	20.0%
	American Indian or Alaska Native	5	2.6%	1	2.9%							2	7.4%	2	6.9%		
	Asian	4	2.0%					1	3.3%			1	3.7%	1	3.4%	1	4.0%
	Native Hawaiian or Pacific Islander																
	Hispanic or Latino	11	5.6%	2	5.7%	2	8.0%			2	8.0%	3	11.1%	2	6.9%		
	Other	2	1.0%	1	2.9%									1	3.4%		
Employment Status	Working (paid employee)	139	70.9%	26	74.3%	19	76.0%	25	83.3%	12	48.0%	20	74.1%	19	65.5%	18	72.0%
	Working (self-employed)	22	11.2%	4	11.4%	1	4.0%			5	20.0%	5	18.5%	4	13.8%	3	12.0%
	Not working (temporary layoff from a job)	5	2.6%	1	2.9%			1	3.3%	1	4.0%			1	3.4%	1	4.0%
	Not working (looking for work)	7	3.6%			1	4.0%	1	3.3%	1	4.0%	1	3.7%	2	6.9%	1	4.0%

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	Not working (retired)	1	0.5%			1	4.0%										
	Not working (disabled)	3	1.5%	1	2.9%	1	4.0%			1	4.0%						
	Not working (other)	11	5.6%	2	5.7%			2	6.7%	3	12.0%	1	3.7%	2	6.9%	1	4.0%
	Student	4	2.0%	1	2.9%	1	4.0%			1	4.0%					1	4.0%
	Homemaker	4	2.0%			1	4.0%	1	3.3%	1	4.0%			1	3.4%		
Marital Status	Married	146	74.5%	23	65.7%	20	80.0%	24	80.0%	21	84.0%	16	59.3%	23	79.3%	19	76.0%
	Widowed	3	1.5%									1	3.7%	1	3.4%	1	4.0%
	Divorced	18	9.2%	5	14.3%	1	4.0%	5	16.7%	1	4.0%	2	7.4%	3	10.3%	1	4.0%
	Separated	4	2.0%	2	5.7%					1	4.0%					1	4.0%
	Never Married	24	12.2%	5	14.3%	4	16.0%	1	3.3%	2	8.0%	7	25.9%	2	6.9%	3	12.0%
	Prefer not to answer	1	0.5%									1	3.7%				
Political Orientation	Republican	55	28.1%	13	37.1%	8	32.0%	9	30.0%	6	24.0%	6	22.2%	5	17.2%	8	32.0%
	Democrat	83	42.3%	13	37.1%	10	40.0%	13	43.3%	12	48.0%	11	40.7%	14	48.3%	10	40.0%
	Independent	46	23.5%	8	22.9%	5	20.0%	8	26.7%	5	20.0%	8	29.6%	6	20.7%	6	24.0%
	Other (please specific):	2	1.0%			1	4.0%			1	4.0%						
	No preference	9	4.6%	1	2.9%	1	4.0%			1	4.0%	1	3.7%	4	13.8%	1	4.0%
	Prefer not to answer	1	0.5%									1	3.7%				
		M		M		M		M		M		M		M		M	
Age of Parent		42.14		42.06		41.83		42.63		43.28		43.93		38.86		42.68	
Number of Children		2.28		2.34		2.04		2.20		2.24		2.11		2.03		3.00	

4.1.2 Intervention Procedure

TBD-informed BCIs have been designed to change many behaviors, such as abuse of various substances (Steinmetz et al., 2016). However, as TBD-informed BCIs are not all designed equally, it is useful to differentiate them according to the important moderating design variables which are: (1) modes of delivery, such as one-to-one delivery (e.g., clinical interview and consulting) and group delivery (e.g., group discussion and situational simulations), (2) location of intervention (i.e., private, public or online setting), (3) types of educational materials (e.g., audio-visual material – videos, visual material – pictures, or text-based material – brochures), (4) different delivery frequencies (one session vs. multiple sessions), and (5) used BCTs (Steinmetz et al., 2016; Tyson et al., 2014).

Guided by the research questions, the focus is on manipulating the BCIs and BCTs while holding all other four moderating variables constant. However, intervention studies can choose to apply one or more techniques from the different proposed typologies of BCTs (Abraham & Michie, 2008; Knittle et al., 2020, p. 1; Kok et al., 2016; Michie et al., 2013; Norris et al., 2019). To inform the intervention design, the BCT-typology of Michie et al. (2013) is adopted because many studies have found it highly useful, as indicated by the high citation count. It proposes 93 individual BCTs and 16 high-level clusters of BCTs which are (1) scheduled consequences (2) reward and threat (3) repetition and substitution (4) antecedents, (5) associations, (6) covert learning, (7) natural consequences, (8) feedback and monitoring, (9) goals and planning, (10) social support, (11) comparison of behavior, (12) self-belief, (13) comparison of outcomes, (14) identity, (15) shaping knowledge, and (16) regulation (Michie et al., 2013). Further, the selection of the BCIs and BCTs that should target the TPB-based MoA-constructs is based on two recent studies that grounded the BCT-MoA-links in the links described in published intervention literature and by expert consensus (Carey et al., 2019; Connell et al., 2019). To ensure the validity and effectiveness of BCI conditions, the selected BCTs are all evidence-based in terms of showing significant effects in previous studies to influence TBD-based MoAs and behaviors in other behavioral contexts (Michie et al., 2013; Senkowski et al., 2019; Steinmetz et al., 2016). A comprehensive description of the whole experiment and all BCI conditions is provided in Table 19 in the Annex. The goal was to create BCI conditions that contain the most common BCTs that have been linked to each of the TPB-based MoA-construct.

Seven BCI conditions were used to target the TBD-based BCT-MoA-Behavior links. First, four BCI conditions that target one MoA-construct (i.e., attitudes only, norms only, PBC only, intentions only) were employed to identify whether it was possible to target only one construct at a time or whether spill-over effects of the construct-targeted interventions occurred, and to examine whether any of the construct-targeted interventions might be sufficient alone to increase behavioral intentions. Second, two BCI condition targeted three and four MoA-constructs (full TPB-informed BCT-MoA-Behavior condition). Finally, the control condition was a no-treatment assessment to examine the theoretical constructs without experimental manipulation.

In the next section, the constructed BCI conditions and used BCTs to achieve the behavioral target are discussed (see Table 3).

4.1.2.1 Attitude Change Intervention Condition

The attitude condition is designed based on two broad BCT-clusters: (1) natural consequences and (2) comparison of outcomes (for the exact design, see Table 17 in the Annex). The two selected BCT-clusters were closely linked to the attitude-MoA-construct (Carey et al., 2019; Connell et al., 2019; Fishbein & Ajzen, 2010; Steinmetz et al., 2016).

Present study. To increase the favorable attitude of parents for the mediation of influencer marketing, the BCI condition reconceptualized the two higher-level techniques into three intervention tasks (i.e., writing, watching and reading) composed of six actions. The writing task was composed of two questions: one about the negative and one about the positive consequences of discussing influencer marketing with their child(ren) at least once a week in the forthcoming month. The second audiovisual informative component was consistent of three videos focused on the undesirable consequences of influencer marketing. The first 47-seconds-long video showed a video excerpt of “two highly popular YouTubers ('H3 Podcast') on the fairness and deceptiveness of influencer marketing. The discussed 'music' video was created by the highly popular YouTube-influencer 'Jake Paul' (20 million followers) for the special occasion of Christmas. It encourages his young followers to ask their parents to buy his merchandise (i.e., his own branded clothing) for Christmas.” The second video excerpt (1 minute and 13 seconds long) showed “a short commentary from one of the most followed YouTuber 'PewDiePie' on a recent case of online

gambling promotion to children by YouTube-influencers.” The last video excerpt (1 minute and 22 seconds long) featured “short commentary from the news channel CBS featuring the expert psychologist Dr. Braunstein on influencer marketing and its impact on children, especially self-esteem, unrealistic expectation and food intake.” The last written informative component was made of a brief text containing 265 words about the emotional, personal, and social consequences of behavioral performance based on scientific evidence. More specifically, findings from empirical studies were cited about the potential process, and outcome unfairness of marketing, such as increased materialistic values which are linked to lower wellbeing, young consumers’ difficulties in recognizing and understanding commercial references placed in influencer content because young consumers lack marketing literacy and influencer employ subtle persuasion tactics, and the revenue SMI were able to generate through this marketing activities. For example, “[c]hildren, in contrast to adults, have difficulties in recognizing the selling intent of an influencer and distinguishing between commercial influencer content and non-commercial influencer content. For example, children told researchers, “this is a healthy choice because there’s a picture of fruit on the box” or “because the package is green.”

4.1.2.2 Subjective Norm Change Intervention Condition

To change the Subjective Norms, the intervention condition draws on the two of the three behavioral change techniques clustered under comparison of behavior (for the exact design, see Table 17 in the Annex). These two are information on others’ approval and social comparison (Michie et al., 2013). The selected BCTs were closely linked to the social-norm-MoA-construct (Carey et al., 2019; Connell et al., 2019; Fishbein & Ajzen, 2010; Steinmetz et al., 2016).

Present study. To increase the favorable Subjective Norms of parents for the mediation of influencer marketing, the BCI condition reconceptualized the techniques into three intervention tasks (i.e., estimating, watching, and reading) composed of four actions. First, parents were asked to identify both how much they perform the behaviors and how much they think their peers do. Then, parents are provided with the discrepancies both between their estimates of the subjective norm, a hypothetical “actual” norm, and their reported level of behavior. To ensure that the “actual norm” is motivational, it was reported that parents on average were discussing marketing and advertising (incl. influencer marketing) with their

children at least once a week (modified based on Neighbors et al., 2011). Second, parents watched a video excerpt of an inspirational parent who gave TEDx talk on child-targeted marketing. Third, parents were asked to read a short text containing four quotes from other parents published in a journal article on parental views about marketing and advertising (Ip et al., 2007). For example, “1. Parents perceived television advertising as influencing children’s thinking through a repetitive process. One father summarized the phenomenon: “You are not just getting one McDonald’s ad per advertising block, but you are getting three and it’s a repetition like blocks of three or more that actually helps to sink into the minds.” (father/group 3)”

4.1.2.3 Perceived Behavioral Control Change Intervention Condition

To change the perceived behavioral control, the intervention condition draws on three high-level behavioral change techniques: self-belief, shaping knowledge, and goals and planning (for the exact design, see Table 17 in the Annex). The selected BCTs were closely linked to the PBC-MoA-construct (Carey et al., 2019; Connell et al., 2019; Fishbein & Ajzen, 2010; Steinmetz et al., 2016).

Present study. To increase the perceived behavioral control of parents over the mediation of influencer marketing, the BCI condition reconceptualized the techniques into three intervention tasks (i.e., writing, watching, and reading) composed of seven actions. As for the writing task, participants had to answer four questions. First, participants should identify at least two of the most important obstacles to build the habit of discussing influencer marketing with their child(ren). Second, participants were prompted to list two or more of the most important solutions to overcome the previously identified obstacles. Third, participants were asked to describe one or more past examples of meaningful and enjoyable discussions with your children. Fourth, participants were encouraged to describe at least one imaginary example of how a meaningful and enjoyable discussion about influencer marketing with your child(ren) could unfold. Fifth, participants saw a 1-minute video excerpt with practical tips for parents shared by Josh Golin from the 'campaign for a commercial-free childhood' (CCFC) which is a "national coalition of health care professionals, educators, advocacy groups, parents, and individuals who care about children [and is] the only national organization devoted to limiting the impact of commercial culture on children" (Campaign for Commercial Free Childhood, 2020). Sixth, they were presented with a second 37 seconds

long video excerpt containing "three pragmatic tips for parents shared by the organization called 'Common Sense Media'" which is a "non-profit organization that provides education and advocacy to families to promote safe technology and media for children" (Common Sense Media, 2020). Lastly, parents were presented with a brief informative text (195 words) containing five practical suggestions on how they could approach building knowledge and practicing discussion of influencer marketing with their children, and four online resources to investigate the topic further. For example, they were told that "when parents researched online how novel marketing and advertising formats work (i.e., influencer marketing) and how to best talk about it with their children, they showed fast increases in their own marketing knowledge and their ability to discuss it productively."

4.1.2.3 Behavioral Intention Change Intervention

To decrease the intention-behavior gap, the intention intervention condition draws on one high-level behavioral change techniques (i.e., goals and planning) and two of nine lower-level techniques (i.e., action planning and association) (for the exact design, see Table 17 in the Annex). The selected BCTs were closely linked to the intention-MoA-construct to close the intention-behavior gap (Carey et al., 2019; Connell et al., 2019; Fishbein & Ajzen, 2010; Sheeran et al., 2016; Sheeran & Orbell, 1999; Steinmetz et al., 2016).

Present study. To decrease the intention-behavior gap for parental intention to engage in the mediation of influencer marketing, the BCI condition reconceptualized the techniques into one intervention tasks (i.e., writing) composed of two actions. First, parents were informed about the value of environmental cues and implementation intentions. Second, they were asked to formulate at least one environmental cue and one implementation intention that would help them perform the mediation of influencer marketing. Third, to facilitate sustainable behavioral performance, the participants were provided with a pdf report that contains the informative texts and their answers to the questions (for the exact text, see Table 19 in the Annex). Whenever participants feel that their intention-behavior gap is widening, they were recommended to consult their report to remind themselves about why the behavior is important and how they can increase their performance.

Table 3 Overview of relationships between BCTs and intervention conditions

High-Level BCTs Low level BCTs (Michie et al., 2013) ¹	BCTs present and example tasks related to the TBP-based MoAs/Constructs			
	Attitudes	Subjective norms	PBC	Intentions
	Implementation Examples or Explanations	Implementation Examples or Explanations	Implementation Examples or Explanations	Implementation Examples or Explanations
1. <i>Natural consequences</i>	x			
1.1. Health consequences	Quote from the informative watching task: “According to a study at the university of Liverpool, when children were confronted by a social media influencer who is promoting unhealthy food, their unhealthy food intake drastically increased”			
1.2. Social and environmental consequences	Quote from informative reading task: “Children who frequently watched influencer content containing marketing had more materialistic attitudes (e.g., attaching			

high importance to money and wanting to possess a lot of material things) and unhealthy ideals (e.g., about beauty). Materialistic attitudes and unhealthy ideals are strongly linked with children having lower well-being, less satisfying social relationships and less resilience.”

1.3. Salience of consequences

All tasks

1.4. Emotional consequences

Above reading task examples also contains emotional consequences in terms of well-being

1.5. Self-assessment of affective consequences

Writing task:

“What are two or more positive consequences of discussing influencer marketing with your child(ren) at least once a week in the forthcoming

	month that come to your mind?”	
1.6. Anticipated regret		
2. <i>Comparison of outcomes</i>	x	
2.1. Persuasive argument	Above described reading task	
2.2. Pros and cons	Writing tasks: what positive and negative consequences of discussing influencer marketing with your child(ren) at least once a week in the forthcoming month that come to your mind?	
2.3. Comparative imagining of future outcomes		
3. <i>Comparison of behavior</i>		x
3.1. Modeling of the behavior		

**3.2. Information
about others’
approval**

Reading and watching
task:

“1. Parents perceived
television advertising as
influencing children’s
thinking through a
repetitive process.
One father summarized
the phenomenon:

"You are not just getting
one McDonald’s ad per
advertising block, but
you are getting three and
it’s a repetition like
blocks of three or more
that actually helps to
sink into the
minds." (father/group
3)”

**3.3. Social
comparison**

Quote from estimation
task report:

“In an average month,
you discuss marketing
and advertising (incl.
influencer
marketing) [selected
choice] with your
child(ren) and you think

other parents discuss marketing and advertising (incl. influencer marketing) [selected choice]. On average, parents reported discussing marketing and advertising (incl. influencer marketing) with their children: at least once a week.”

4. *Self-belief*

x

4.1. Mental rehearsal of successful performance

Writing task: “Would you please describe at least one imaginary example of how a meaningful and enjoyable discussion about influencer marketing with your child(ren) could unfold?”

4.2. Self-talk

4.3. Focus on past success

Writing task:

**4.4. Verbal
persuasion to
boost self-
efficacy**

“Could you please
describe one or
more past examples of
meaningful and
enjoyable
discussion with your
children?”

Quote from reading
task: “When parents
researched online
how novel marketing
and advertising formats
work (i.e., influencer
marketing) and how to
best talk about it with
their children, they
showed fast increases in
their own marketing
knowledge and their
ability to discuss it
productively.”

5. Shaping knowledge

5.1. Reattribution

5.2. Antecedents

5.3. Behavioral
experiments

x

**5.4. Instruction on
how to perform
a behavior**

Quote from the reading task: “The recommendation is to use dialogues that combine information and guided questions to enable child(ren) to reach their own conclusion about undesirable consequences, such as asking the child(ren) about how they think marketing influences them.”

6. Goals and planning

x

x

**6.1. Action planning
(including
implementation
intentions)**

Writing task: “Please define at least one if-then statement for the discussion of influencer marketing with your child(ren)”

**6.2. Problem-
solving/coping
planning**

Writing tasks: (1) “could you please list two or more of the most important obstacles that come to your mind?” and (2) “Could you please list two or more

of the most important
solutions to overcome
the previously identified
obstacles that come to
your mind?”

6.3. Commitment

6.4. Goal setting
(outcome)

6.5. Goal setting
(behavior)

6.6. Behavioral
contract

6.7. Discrepancy
between current
behavior and
goal standard

**6.8. Review
behavior goal(s)**

Writing task: “Please
construct at least one
reminder for you.”

6.9. Review of
outcome goal(s)

¹ Definitions for all BCTs can be found in the supplements of the study

4.1.3 Measurement

The survey design followed the design recommendations of Ajzen's (2006) and Fishbein and Ajzen (2010). To ensure measurement validity, the standard theory of planned behavior measures for intention, attitude, Subjective Norm, and perceived behavioral control were used and the wording of the behavioral items were matched (Fishbein and Ajzen 2010). Aside from the TPB-based explained variables, the survey also included control variables (i.e., children's exposure to influencer marketing and demographical information).

4.1.3.1 Independent Variables

Self-reported Past Behaviors. Similar to previously published studies, the study measures the behaviors retrospectively by asking “in the last month, how often did you discuss ...” for the two high-level behaviors and the low-level behaviors for influencer marketing related to active and restrictive mediation in the past one month (1 = never; 2 = once; 3 = twice; 4 = every week; 5 = more than once a week; 6 = almost daily; 7 = daily).

Self-reported Past Cognitions. In addition to behaviors, the number of cognitions related to behaviors were measured to investigate if they were impacted by the intervention and if they could play a moderating role in the performance of the behaviors. Parents were asked to estimate retrospectively: “in the last month, how often did you think about discussing ...” for the two high-level behaviors and the low-level behaviors for influencer marketing related to active and restrictive mediation in the past one month (1 = never; 2 = once; 3 = twice; 4 = every week; 5 = more than once a week; 6 = almost daily; 7 = daily).

4.1.3.2 Dependent Variables

To ensure validity, the outcome measures were selected and designed based on widely acknowledged recommendations and guidelines for TBD-based questionnaires (Ajzen, 2006b). The primary behavioral target of the interventions was “discussing influencer marketing with your child(ren) at least once a week in the forthcoming.” However, as there might be unintended or spillover effects on the general behavioral domain of marketing and advertising and this being a valuable research question to further explore in other future studies, measures were also added to capture this potential under “discussing marketing and

advertising with your child(ren) at least once a week in the forthcoming.” The attitudes, subjective norms, perceived behavioral control, intentions, cognitions, and behaviors were measured for these two behavioral domains.

Moreover, intentions, cognitions, and behaviors were measured on a more granular level by measuring four specific discussion topics related to influencer marketing. This data enables the construction of a more granular understanding of the intervention's impact on influencer marketing discussion behaviors. The four specific discussion topics are composed of one behavior that could be classified as restrictive and three behaviors, which could be classified as active parental mediation (for the specific considerations see. 3.4.1; Buijzen, 2009; Buijzen & Valkenburg, 2005; Hindin et al., 2004; Hudders & Cauberghe, 2018; Naderer et al., 2018; Pearce & Baran, 2018; Robertson et al., 2016; Shin, 2017). As a result, the measured related to cognitions and behaviors can be conceptualized as having one higher-order factor (i.e., intentions, behaviors, and cognitions related to parental mediation of marketing) and two lower-order factors (e.g., intentions, behaviors, and cognitions related to active parental mediation of marketing and behaviors and cognitions related to restrictive parental mediation of marketing). A concise summary of the measures is provided in Table 17 in the Annex.

Attitude. The attitude measure is identical to the recommended attitude measure for TBD questionnaires (Ajzen, 2006b). These measures capture the empirical finding that the overall evaluation often contains two separable components. One component is instrumental and measured by adjective pairs like valuable – worthless, and harmful – beneficial. The other component is an “experiential quality” and is measured by adjective pairs like pleasant – unpleasant and enjoyable – unenjoyable (Ajzen, 2006b). Finally, a good – bad scale tends to capture overall evaluation very accurately. The attitude towards the two behavioral targets was measured on a seven-point bipolar scale with five attributes: harmful vs. beneficial, pleasant vs. unpleasant, good vs. bad, worthless vs. valuable, and enjoyable – unenjoyable. The most negative attribute values were scored with 1, the neutral midpoint with 4, and the most positive with 7. The last item enjoyable – unenjoyable was reversed ordered and coded to check for validity.

Subjective norm. The subjective norm measure included one identical item recommended for injunctive subjective norms and one identical item recommended for descriptive norms

(Ajzen, 2006b). Both items are important because important others may be perceived to approve of the socially desirable behaviors and disapprove of undesirable ones. However, at the same time, they may be perceived to not engage in the behaviors which would weaken the perceived social importance. As for the injunctive subjective norm, parents responded to the statement that “the people in my life whose opinions I value would approve/disapprove of me at least once a week discussing ...”, whereas for descriptive the statement was “many people like me at least once a week discuss ...”. Both norms were measured on a seven-point Likert scale with the strongest positive subjective norm response scored 1, the neutral midpoint 4, and the strongest negative subjective norm 7. The injunctive subjective norm responses were labeled with “strongly disapprove” to “strongly approve,” whereas the descriptive subjective norm responses were labeled with “very unlikely” to “very likely.”

PBC. The purpose of the PBC-measure is to capture the person’s confidence that they are capable of performing the discussion of influencer marketing. The items often measure the difficulty or likelihood that the person can perform the behavior. The PBC measure included one identical recommended item and one additional item for perceived capability, and one identical recommended item for perceived controllability (Ajzen, 2006b). As for perceived capability, parents responded to the statement that “if I wanted to I could at least once a week discuss ... ” and “ I feel prepared to at least once a week discuss ... if I wanted to”, whereas for controllability the statement was “how much control do you believe you have over at least once a week discussing ...”. The two items for perceived capability were measured on a seven-point Likert scale in which the most capable response was scored with 1 (“strongly agree”), the neutral midpoint with 4 (“neither agree or disagree”), and least capable response with 7 (“strongly disagree”). As for perceived controllability, it was measured with a seven-point bipolar scale with the adjective pairs no control – complete control and scored from 1 for the closest point to no control and 7 for the closest point to complete control.

Intention. The intention measure included one identical recommended item (Ajzen, 2006b). Parents responded to the statement that “in the next month, I will try to at least once a week to discuss ...”. The intention to perform the behaviors was measured on a seven-point scale in which the most the response of “strongly disagree” is coded with 1, the neutral midpoint response with 4, and “strongly agree” with 7.

Self-reported one-month post-intervention constructs. All the above constructs were measured again one month after the intervention.

4.1.3.3 Exploratory Variables

The qualifier survey contained various variables that could be used in the exploratory analysis to analyze a more nuanced understanding of factors moderating the relationship between the intervention and the TPB-based constructs as dependent variables.

Demographics. For the demographical background, information regarding the parent's sex, material status, employment status, and the ethnic and educational background were collected.

Child-related variables. Child-related variables were collected to explore more nuanced child-related relationships and their influence on the dependent variables. First, parents were asked how many children they had. Second, parents were asked to estimate "how often does your child(ren) engage with content from influencers on YouTube, Instagram, or any other platform?" (1 = never, 2 = less than once a month, 3 = more than once a month, 4 = once a week, 5 = multiple times a week, 6 = once a day, 7 = multiple times a day). Lastly, parents were asked to report the age range of their child(ren) (0-5 = 1, 6-18 = 2, 19-25 = 3, more than 25 = 4). Following the exclusion criteria, parents who reported that they only had child(ren) between 0-5 and/or more than 25 which "never" or "less than once a month" watch influencer content were not eligible for the follow-up intervention.

Other variables. The big five personality traits (based on Big Five Inventory–2 extra short version, Soto & John, 2017) and the political orientation were also measured for each participant. However, they were not used in the present study.

4.1.4 Data Validity Considerations

Based on recommendations from the recent methodology literature, the following data validity considerations were integrated to minimize the risk of low seriousness, effort and care responses (Aust et al., 2013; Bowling & Huang, 2018; Huang et al., 2015; Oppenheimer et al., 2009). First, an attention check was integrated (Table 17: 6 Attention Check). Second, a seriousness check was integrated (Table 17: 15 Validity Check). Third, two reverse items

were integrated (Table 18: 11 Attitude). Fourth, participants had to read a brief text on the importance of their effort and confirm their effort (Table 17: 4 Raise Effort). Fifth, only participants accessing the survey from desktops were allowed (Verbree et al., 2019). Lastly, all open text questions required the participants to come up with a response of at least 50 characters, and all video pages required the time one would take to watch the video to end before the next button would appear.

4.1.5 Experimental Procedure

The experimental procedure consisted of two surveys that were posted on *Prolific* and programmed in *Qualtrics*. Both surveys include an introductory text with a consent question and one attention check. The attention check was the same across the surveys, which asked the participants “to show that you are reading these instructions, please leave this question blank.”

Qualifier survey. A qualifier survey was employed to identify Prolific participants that met the inclusion criteria with high confidence (for the detailed screening survey, see Annex Table 18). The screening filters offered by the Prolific platform were used only to show the qualifier survey to participants who reported having United States nationality and had children. Participants saw the title of the survey, which was a “short survey on relationships between personal characteristics,” and a short description of the survey, which was “we are conducting an academic survey on relationships between personal characteristics. You will be presented with information about these and asked related questions. The study should take you around 1 to 3 minutes. However, we may conduct different follow-up surveys, so please be attentive to invitations.” Next, participants were transitioned to the Qualtrics environment. First, they read a more informative introduction text, confirm their consent, and pass the attention check. Second, they were asked to indicate their agreement or disagreement with 15 statements of the Big Five Inventory–2 extra short version (BFI-2-XS; Soto & John, 2017) and respond to six regular demographical questions, such as age, education, and employment, and three more unusual questions to mask the intent of the survey (i.e., being a parent, military veteran and political orientation). The BFI-2-XS was used to support the framing of the purpose of screening questionnaire being about their personality and not their child-related characteristics. Third, only adults who confirmed to have children were asked four child-related questions. Out of the 555 participants who

answered the qualifier survey, 298 (54%) were eligible for the intervention survey, meaning they had children between 6 and 25 that engaged with influencer content more than once a month. Participants were then paid 6£ according to the recommended hourly reward based on the average completion length for the qualifier survey (roughly 2 min 30 seconds; 0,25£).

Experimental survey. The second survey was an experimental survey. To achieve the GPower sample size and roughly equal size of groups, the survey was open to the 298 participants until 196 responses were collected. First, they read a more informative survey introduction text, confirm their consent, and could enter their email to receive a report of their responses. Next, they read a short text that includes six statements like “we need your serious and attentive effort to obtain useful and valuable results” aimed to increase their effort, which they had to approve or disapprove of their commitment. Then, participants had to indicate how often in the last month they engaged in discussing marketing and advertising as well as influencer marketing with their children and how often they thought about doing it (as outlined in 4.1.3.1). After this, they had to pass the attention check. Next, they were randomly assigned to the intervention conditions described in the intervention design section (4.1.2), which was followed by the dependent variables’ measures described in the measurement section (4.1.3.2). To ensure the validity of the previous responses, participants were asked to indicate how serious, motivated, attentive, and interested they were regarding answering this survey and if their response should be used in the analysis of this study. To ensure honest responses, we informed them that they would receive the financial reward regardless of their response here. Lastly, participants were thanked, and the online resources used in all the conditions of the study were provided to make self-directed research more likely. Additionally, participants had another opportunity to provide their email to receive the report of their responses. Participants were then paid 6£ according to the recommended hourly reward based on the average completion length for the assigned experimental condition.

Impact survey. Roughly one month later, the impact survey went online on Prolific. All the previous participants could participate in the impact survey. Of the 196 participants, 166 (85%) did participate. The survey followed the same structure as the experimental survey merely without the intervention conditions.

4.2 Data Analysis

The identical computation procedure was used for all TPB-based low-level items and high-level constructs (i.e., self-reported past cognitions and behaviors, attitudes, subjective norms, PBC, intentions). Similar to other published studies, each of the low- and high-level variables were assumed to be an interval scaled variable (Steinmetz et al., 2016). The analysis will exclusively focus on responses to “discussing influencer marketing with your child(ren) at least once a week in the forthcoming” because it is the primary behavioral target of the intervention. Future studies interested in comparative research questions for behaviors for the general domain of marketing and advertising and the subdomain of influencer marketing could use the data to test hypotheses and construct evidence. However, these comparative questions are not the focus of this study and, therefore, will not be addressed.

All low-level items were scored from 1 (weakest response) to 7 (strongest response), and the high-level construct was computed by summation of the low-level items for the particular construct and division through the number of these low-level items to normalize all of them to adapt a combined value between 1 and 7. For example, each participant had rated five low-level attribute pairs for influencer marketing from 1 to 7. Then, the five responses were added together and then divided by five to create the TPB-based high-level construct of attitude, adopting a value from 1 to 7. To test the hypotheses for the high-level TPB-based constructs across the seven conditions, different nominal variables to indicate group membership were created. For example, one nominal variable was created that contained all conditions (group_n): control condition = 0, the four single-construct intervention conditions = 1, 2, 3, and 4, the three-construct intervention condition = 5, and the four-construct condition = 6.

5 Results

5.1 Randomization-Checks

Randomization-checks were performed for the variables seen in Table 2. Pearson chi-square tests were performed to check for randomization in nominal variables. The results showed no significant difference between the seven conditions with respect to gender, $p = .243$; ethnical background, $p = .408$; political orientation, $p = .778$; employment status, $p = .904$; material status, $p = .437$; age of children, $p = .110$; and educational background, $p = .742$. Independent t-tests were conducted for interval variables. The results show no significant difference between the conditions for age and number of children, $p > .05$, for all tests. Therefore, the randomization can be considered successful.

5.2 Default Results

Mean scores and standard deviations of the control group for the four TPB-constructs, past self-related cognitions and behaviors can be interpreted as the general distribution within the specifically selected population of parents.

TPB constructs. These parents have slightly positive attitudes ($M_{ATT} = 4.90$) with a moderate variance ($SD_{ATT} = 1.06$), slightly positive perceive subjective norms ($M_{SN} = 4.77$) with a high variance ($SD_{SN} = 1.35$), moderately perceived control ($M_{PBC} = 5.94$) with a high variance ($SD_{PBC} = 1.10$), and slightly positive intentions ($M_{INT} = 4.97$) with a high variance ($SD_{INT} = 1.55$) towards discussing influencer marketing.

Self-reported past cognitions and behaviors. Further, on average, parents engaged in discussing influencer marketing with their children once in the last month ($M_{BEH} = 1.98$), and the majority of the responses (67%; $SD_{BEH} = 1.27$) fall between never and twice. However, the mode of the distribution is 1 with a count of 67 parents who never engaged in the behavior which is equal to 34% of the parents. Expectedly, the reported cognitions mirror the behaviors parents had related to the behaviors ($M_{BEHC} = 2.20$; $SD_{BEHC} = 1.40$) (see Table 8).

Duration. The average completion length for the conditions is displayed in Table 7. The shortest condition was the control condition with an average completion time of 10 minutes,

whereas the shortest intervention condition was the subjective norms condition with 12 minutes – only two more minutes on average. However, the longest condition was the four-construct condition, with an average of 35 minutes.

5.3 Descriptive Analysis

Pearson intercorrelation matrixes were calculated and a two-tailed test of significance was used for the two correlative hypotheses. The reporting refers to a correlation between .10 and .29 as weak, .30 and .49 as moderate and .50 to 1 as strong.

H1: The four TPB-based constructs are correlated with each other across all conditions

The four TPB-based constructs (i.e., attitude, subjective norms, PBC, and intentions) related to discussing influencer marketing were two-tailed positively and significantly related to each when analyzed for all conditions, intervention conditions only or control condition only (see Table 4, Table 5, Table 6).

In the all conditions intercorrelation matrix, the lowest correlation coefficients for the TBP-based constructs was a moderate high-point positive correlation coefficient between attitude and subjective norms ($r = .47$) and the highest correlation coefficient was a strong mid-point positive correlation coefficient between intentions and PBC ($r = .64$). As for the intercorrelation intervention groups only matrix, the lowest correlation coefficients for the TBP-based constructs was moderate upper-point positive correlation coefficient, also, between attitude and subjective norms ($r = .45$) and the highest correlation coefficient was a strong mid-point positive correlation coefficient, also, between intentions and PBC ($r = .68$). Lastly, for the control group, the lowest correlation coefficient for the TBP-based constructs was a strong low-point positive correlation coefficient between attitudes and PBC ($r = .40$), and the highest correlation coefficient was a strong mid-point positive correlation coefficient between subjective norms and intentions ($r = .74$).

H2: The four TPB-based constructs are correlated with behaviors and cognitions across all conditions

The four TPB-based constructs were two-tailed positively and significantly (except for PBC and behaviors for the intervention only condition which was marginally non-significant) correlated with self-reported past behaviors and cognitions related to discussing influencer marketing when analyzed for all conditions, intervention conditions only or control condition only (see Table 4, Table 5, Table 6). Past cognitions and past behaviors have a significant strong linear relationship with each other across the three subgroups from $r = .87$ to $.89$.

In the all conditions intercorrelation matrix, the lowest correlation coefficients between TBP-based constructs and behaviors and cognitions was a weak mid-point positive correlation coefficient between behaviors and PBC ($r = .21$) and cognitions and PBC ($r = .19$), and the highest correlation coefficient was a moderate low-point positive correlation coefficient between behaviors and subjective norms ($r = .35$) and cognitions and subjective norms ($r = .30$). As for the intercorrelation intervention groups only matrix, the lowest correlation coefficients between TBP-based constructs and behaviors and cognitions was a weak mid-point positive correlation coefficient, also, between behaviors and PBC ($r = .19$) and cognitions and PBC ($r = .17$), and the highest correlation coefficient was a moderate low-point positive correlation coefficient, also, between behaviors and subjective norms ($r = .30$) and cognitions and subjective norms ($r = .28$). Lastly, for the control group, the lowest correlation coefficients between TBP-based constructs and behaviors and cognitions was a non-significant moderate low-point positive correlation coefficient between behaviors and attitude ($r = .21$) and cognitions and attitude ($r = .10$), and the highest correlation coefficient was a strong low-point positive correlation coefficient between behaviors and intentions ($r = .60$) and cognitions and intentions ($r = .55$).

Table 4 Intercorrelation matrix for influencer marketing for all conditions ($n = 196$)

	1	2	3	4	5	6
Attitudes	1					
Subjective norms	.47**	1				
PBC	.51**	.50**	1			
Intentions	.59**	.58**	.64**	1		
Behaviors	.26**	.35*	.21**	.31**	1	
Cognitions	.25**	.30**	.19**	.30**	.88**	1

PBC: perceived behavioral control

** : Correlation is significant at the 0.01 level (2-tailed).

* : Correlation is significant at the 0.05 level (2-tailed).

Table 5 Intercorrelation matrix for influencer marketing for intervention groups (n = 161)

	1	2	3	4	5	6
Attitudes	1					
Subjective norms	.45**	1				
PBC	.57**	.48**	1			
Intentions	.59**	.53**	.68**	1		
Behaviors	.28**	.30**	.19*	.24**	1	
Cognitions	.27**	.28**	.17*	.24**	.89**	1

PBC: perceived behavioral control

** : Correlation is significant at the 0.01 level (2-tailed).

* : Correlation is significant at the 0.05 level (2-tailed).

Table 6 Intercorrelation matrix for influencer marketing for control group (n = 35)

	1	2	3	4	5	6
Attitudes	1					
Subjective norms	.55**	1				
PBC	.40**	.62**	1			
Intentions	.51**	.74**	.57**	1		
Behaviors	.21	.55**	.32	.60**	1	
Cognitions	.10	.41*	.31	.55**	.87**	1

PBC: perceived behavioral control

** : Correlation is significant at the 0.01 level (2-tailed).

* : Correlation is significant at the 0.05 level (2-tailed).

5.4 Regression Analysis

A linear regression was computed with intention as the dependent variable and attitudes, subjective norms, and PBC as the independent variables and the regression coefficients were tested for two-tailed significance.

H3: The three base constructs significantly predict the variance in intentions across all conditions

The three predictors were significant, and the three-factor model explained .74 of the variance in intentions (see Figure 2). The significant effect on intentions was .35 for attitudes, .30 for subjective norms, and .45 for PBC. The considerably higher effect of PBC on intentions indicates the importance of PBC.

Figure 2 TPB-based regression model for influencer marketing

H4: PBC and intentions predict the variance in behaviors across all conditions

The only intentions as predictor was significant, and the two-factor model explained .39 of the variance in behaviors (see Figure 2). The significant effect of intentions on behaviors was .36, whereas PBC had no significant effect. In sum, PBC does have an indirect effect on behaviors over intentions but no direct effect on behaviors.

Explorative Modelling

A explorative model was used to investigate all the measured constructs at T1 (see Figure 3). The two predictors (i.e., intentions and past behaviors) were significant in the six-factor model. This model explained .59 of the variance in behavior, which is considerably more than the two-factor model. Behavior was affected significantly by intention with .27 and by past behaviors with .50. Therefore, a two-factor model composed of past behavior and intentions appears to be the most parsimonious model to predict future parental mediation of influencer marketing.

Figure 3 TPB-based explorative regression model for influencer marketing

5.5 Effect Size Analysis

Two-tailed analysis of covariance (ANCOVAs) was conducted to test the statistical significance of the condition-related hypotheses concerning the mean differences in the TPB-based constructs, cognitions, and behaviors. In particular, the means were compared using independent-sample two-tailed t-tests. As measures of difference, Table 7 displays the four construct's means (M) and standard deviations (SD) for the seven conditions.

H4-H7: The single-construct conditions should have significant higher means for the TPB-targeted constructs compared to the control condition

Out of the four single TPB-targeted intervention conditions the two-tailed independent-sample t-tests showed only a significant difference for the attitude condition compared to the control condition (see Table 9). More specifically, the attitude condition produced a significant impact on the targeted construct (attitudes: $M_{ATT} - M_{CON} = 5.91 - 4.90 = 1.01$; $p = .000$). Additionally, explorative hypotheses testing found a significant impact on attitudes for norms condition (attitude: $M_{SN} - M_{CON} = 5.43 - 4.90 = .53$; $p = .037$) and PBC condition (attitude: $M_{PBC} - M_{CON} = 5.73 - 4.97 = .76$; $p = .005$), and on intentions for the attitude

condition (intentions: $M_{ATT} - M_{CON} = 5.77 - 4.97 = .80$; $p = .028$) compared to the control group.

H8-H11: The three-construct and four-construct conditions should have significant higher means for intentions compared to the control condition and the combined single-construct conditions

Out of the two multi-construct conditions the two-tailed independent-sample t-tests showed a significant mean difference for intentions for the three-construct (intention: $M_{ANP} - M_{CON} = 5.77 - 4.97 = .80$; $p = .036$) and four-construct condition (attitude: $M_{ANPI} - M_{CON} = 6.14 - 4.97 = 1.17$; $p = .002$) compared to the control group (see Table 10). Additionally, explorative hypotheses testing found a significant impact on attitudes for the three-construct (attitude: $M_{ANP} - M_{CON} = 5.52 - 4.90 = .62$; $p = .026$), and four-construct (attitude: $M_{ANPI} - M_{CON} = 6.01 - 4.90 = 1.10$; $p = .000$), and on subjective norms for four-construct only (subjective norms: $M_{ANPI} - M_{CON} = 5.64 - 4.77 = .87$; $p = .009$).

However, the two-tailed independent-sample t-tests for the comparison with the combined single-construct conditions showed only a significant mean difference for intentions for the four-construct condition (intention: $M_{ANPI} - M_{SING} = 6.14 - 5.45 = .69$; $p = .012$) but not the three-construct (see **Error! Reference source not found.**). Additionally, explorative hypotheses testing found a significant impact for the four-construct condition on attitudes (attitude: $M_{ANPI} - M_{SING} = 6.01 - 5.52 = .49$; $p = .036$) and subjective norms (subjective norms: $M_{ANPI} - M_{SING} = 5.64 - 4.83 = .81$; $p = .002$) compared to the combined single-construct conditions.

H12: The four-construct condition should have significant higher means for intentions compared to the three-construct condition

The two-tailed independent-sample t-tests showed a non-significant mean intention difference for the comparison of the three-construct and four-construct conditions (see Table 11).

H14-15: Each intervention condition should have significant higher means for post-intervention behavior compared to the control condition

There was no significant mean difference between pre-intervention and post-intervention parental mediation of influencer marketing behaviors for the attitude, norms, PBC, intention condition compared to the control condition. However, there was a marginally non-significant difference for interaction term in the three-construct (.060) and a significant difference for the four-construct condition (.012).

H26-21: Parents with children aged 6 to 18 have stronger intentions and behaviors than parents with children aged 19-25 across all conditions

Two hypotheses were formulated to test if it might be more beneficial to target specific types of parents based on the range of age of their children. The difference in intention means between parents with at least one child aged 6 to 18, and those with no child aged 6 to 18 were not significant across all conditions (see Table 13). As a result, no support was found for the hypotheses. Similarly, no support was found for the effect of children's age on behavioral change (Table 14)

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Table 7 Characteristics of the seven conditions for influencer marketing

Groups	Means and standard deviations by condition for all constructs									
	Attitudes				Subjective norms		PBC		Intentions	
	n	M (Min)	M	SD	M	SD	M	SD	M	SD
Control only	35	10	4.90	1.06	4.77	1.35	5.94	1.10	4.97	1.55
Attitude only	25	20	5.91	.72	5.26	1.10	5.92	1.12	5.77	1.02
Subjective norms only	30	12	5.43	.92	4.88	1.26	5.81	1.29	5.42	1.30
PBC only	25	23	5.73	1.10	4.56	1.06	5.61	.95	5.24	1.44
Intention only	27	17	5.06	1.26	4.61	1.20	5.65	.97	5.40	1.24
Three-construct condition	29	33	5.52	1.12	5.16	1.20	5.92	1.24	5.77	1.43
Four-construct condition	25	35	6.01	.90	5.64	1.01	6.12	.78	6.14	1.06
PBC: perceived behavioral control										
Maximum value										
Minimum value										

Table 8 Characteristics of cognitions and behaviors for influencer marketing

Groups	Means, standard deviations, median, mode and mode count										
	Cognitions*						Behaviors*				
	n	Mean	SD	Median	Mode	Mode n	Mean	SD	Median	Mode	Mode n
All Groups	196	2.20	1.40	1.60	1.00	67	2.02	1.23	1.60	1.00	70
Control only	35	2.02	1.16	1.80	1.00	9	1.98	1.27	1.60	1.00	11
Attitude only	25	2.41	1.59	1.60	1.00	7	2.33	1.42	2.00	1.00	8
Subjective norms only	30	2.48	1.50	2.20	1.00	9	2.22	1.33	2.00	1.00	8
PBC only	25	1.87	1.21	1.40	1.00	11	1.59	0.82	1.40	1.00	10
Intention only	27	2.20	1.29	1.60	1.00	9	2.04	1.25	1.60	1.00	10
Three-construct condition	29	2.43	1.60	1.60	1.00	11	2.19	1.34	1.80	1.00	11
Four-construct condition	25	1.99	1.44	1.20	1.00	11	1.66	.94	1.20	1.00	12

*pre-intervention values

PBC: perceived behavioral control

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Table 9 Differences between the control condition and single-construct conditions for influencer marketing

Groups	TPB-construct means and standard deviations by conditions								
	Attitudes		Subjective norms		PBC		Intentions		
	n	M	SD	M	SD	M	SD	M	SD
Control only	35	4.90	1.06	4.77	1.35	5.94	1.10	4.97	1.55
Attitude only	25	5.91	.72						
Subjective norms only	30			4.88	1.26				
PBC only	25					5.61	.95		
Intention only	27							5.40	1.24
Mean difference		1.01**		.11		-.33		.43	
Sig. two-tailed (equal variance)		p = .000		p = .733		p = .232		p = .238	

PBC: perceived behavioral control

** : Correlation is significant at the 0.01 level (2-tailed)

Table 10 Differences between the control condition and multi-construct conditions for influencer marketing

Groups	TPB-construct means and standard deviations by conditions								
		Attitudes		Subjective norms		PBC		Intentions	
	n	M	SD	M	SD	M	SD	M	SD
Control only	35	4.90	1.06	4.77	1.35	5.94	1.10	4.97	1.55
Three-construct condition	29	5.52	1.12	5.16	1.20	5.92	1.24	5.77	1.43
Mean difference		.62*		.38		-.02		.80*	
Sig. two-tailed (equal variance)		p = .026		p = .240		p = .937		p = .036	
Control only	35	4.90	1.06	4.77	1.35	5.94	1.10	4.97	1.55
Four-construct condition	25	6.01	.90	5.64	1.01	6.12	.78	6.14	1.06
Mean difference		1.11**		.87**		.18		1.17**	
Sig. two-tailed (equal variance)		p = .000		p = .009		p = .493		p = .002	

** : Correlation is significant at the 0.01 level (2-tailed)

* : Correlation is significant at the 0.05 level (2-tailed).

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Table 11 Differences between the single-construct conditions and multi-construct conditions for influencer marketing

Groups	TPB-construct means and standard deviations by conditions								
	Attitudes		Subjective norms		PBC		Intentions		
	n	M	SD	M	SD	M	SD	M	SD
Single-construct conditions	107	5.52	1.06	4.83	1.18	5.75	1.09	5.45	1.26
Three-construct condition	29	5.52	1.12	5.16	1.20	5.92	1.24	5.77	1.43
Mean difference		.00		.33		.17		.32	
Sig. two-tailed (equal variance)		p = .998		p = .189		p = .475		p = .242	
Single-construct conditions	107	5.52	1.06	4.83	1.18	5.75	1.09	5.45	1.26
Four-construct condition	25	6.01	.90	5.64	1.01	6.12	.78	6.14	1.06
Mean difference		.49*		.81**		.37		.69*	
Sig. two-tailed (equal variance)		p = .034		p = .002		p = .113		p = .012	
Three-construct conditions	29	5.52	1.12	5.16	1.20	5.92	1.24	5.77	1.43
Four-construct condition	25	6.01	.90	5.64	1.01	6.12	.78	6.14	1.06
Mean difference		.49		.48		.20		.37	
Sig. two-tailed (equal variance)		p = .084		p = .118		p = .489		p = .290	
*: Correlation is significant at the 0.05 level (2-tailed).									
**: Correlation is significant at the 0.01 level (2-tailed)									

Table 12 Differences between the intervention conditions and control conditions for influencer marketing

Groups	TPB-construct means and standard deviations by conditions					
	Pre-Intervention Behavior (T1)		Post-Intervention Behavior (T2)		Time * Condition (T2 – T1)	
	n	M ₁	SD ₁	M ₂	SD ₂	M ₂ – M ₁
Control condition	28	2.05	1.31	2.24	1.51	.19
Attitude only condition	21	2.06	1.14	2.34	1.25	.28
Mean difference (intervention – control)						.09
Sig. two-tailed (equal variance)						P = .761
Control condition	28	2.05	1.31	2.24	1.51	.19
Norms only condition	24	2.06	1.13	2.10	.91	.04

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Mean difference (intervention – control)						-.15
Sig. two-tailed (equal variance)						p = .601
Control condition	28	2.05	1.31	2.24	1.51	.19
PBC only condition	24	1.61	.83	1.79	.98	.18
Mean difference (intervention – control)						-.01
Sig. two-tailed (equal variance)						p = .971
Control condition	28	2.05	1.31	2.24	1.51	.19
Intention only condition	23	2.14	1.31	2.38	1.30	.24
Mean difference (intervention – control)						.05
Sig. two-tailed (equal variance)						p = .859
Control condition	28	2.05	1.31	2.24	1.51	.19
Three-construct condition	22	1.92	1.14	2.75	1.56	.83
Mean difference (intervention – control)						.64
Sig. two-tailed (equal variance)						p = .060
Control condition	28	2.05	1.31	2.24	1.51	.19
Four-construct condition	24	1.69	.95	2.74	1.23	1.05
Mean difference (intervention – control)						0.86*
Sig. two-tailed (equal variance)						p = .012

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Table 13 Differences in intention by the range of age of children for influencer marketing

Groups	Intention means and standard deviations by the range of age of children		
	Intention of intention-targeted conditions only		
	n	M	SD
At least one child aged 6 to 18	177	5.51	1.37
No child aged 6 to 18 (19 to 25 or older)	19	5.41	1.23
Mean difference		.10	
Sig. two-tailed (equal variance)		p = .757	

Table 14 Differences in behavior by the range of age of children for influencer marketing all groups

Groups	Behavior means and standard deviations by time					
	Pre-Intervention Behavior (T1)		Post-Intervention Behavior (T2)		Time * Condition (T2 – T1)	
	n	M ₁	SD ₁	M ₂	SD ₂	M ₂ – M ₁
At least one child aged 6 to 18	149	1.89	1.09	2.33	1.29	.44
No child aged 6 to 18 (19 to 25 or older)	17	2.27	1.39	2.30	1.34	.03
Mean difference						-.41
Sig. two-tailed (equal variance)						p = .186

Table 15 Summary of support for hypotheses related to influencer marketing

Hypothesis	Supported	Not supported
<i>Correlation between Constructs</i>		
H1. Attitudes, subjective norms, PBC and intentions related to discussing influencer marketing will be significantly correlated with each other in all seven conditions	x	
H2. Attitudes, subjective norms, PBC and intentions related to discussing influencer marketing will be significantly correlated with past cognitions and behaviors in all seven condition	x	
<i>Regression between Constructs</i>		
H3. Attitudes, subjective norms, and PBC and intentions are significant predictors of parental intentions to engage in discussing influencer marketing with their children	x	
H4. PBC and intentions predict the variance in behaviors across all conditions		(x)
<i>Single-construct interventions</i>		
H5. The attitude intervention will result in stronger favorable attitudes towards discussing influencer marketing compared to the control condition	x	
H6. The subjective norm intervention will result in stronger perceived subjective norms for discussing influencer marketing compared to the control condition		x
H7. The PBC intervention will result in higher PBC over discussing influencer marketing compared to the control condition		x
H8. The intention intervention will result in stronger intentions to engage in discussing influencer marketing compared to the control condition		x
<i>Three-construct intervention (i.e., attitude, subjective norms, PBC)</i>		
H9. The three-component intervention will result in stronger intentions to engage in discussing influencer marketing compared to the control condition	x	
H10. The three-component intervention will result in stronger intentions to engage in discussing influencer marketing compared to the four single-construct conditions		x
<i>Four-construct intervention (i.e., attitude, subjective norms, PBC, intention)</i>		
H11. The four-component intervention will result in a stronger intention to engage in discussing influencer marketing compared to the control condition	x	
H12. The four-component intervention (i.e., attitude, subjective norms, PBC, intentions) will result in stronger intentions to engage in discussing influencer marketing compared to the four single-construct conditions	x	
H13. The four-component intervention (i.e., attitude, subjective norms, PBC, intentions) will result in stronger intentions to engage in discussing influencer marketing compared to the three-construct condition		x
<i>Range of Age of Children</i>		
H14. Parents who reported to have at least one child 6-18 will have changed their intentions more strongly compared to parents who have children aged 19-25 and older		x
H15. Parents who reported to have at least one child between 6-18 will have changed their behavior more strongly compared to parents who have children aged 19-25 and older		x
<i>Intervention conditions vs. control condition by self-reported behavior</i>		
H16. Attitude condition should have higher self-reported behaviors compared to the control group after one month		x
H17. Subjective norms condition should have higher self-reported behaviors compared to the control group after one month		x

H18. PBC condition should have higher self-reported behaviors compared to the control group after one month	x
H19. Intention condition should have higher self-reported behaviors compared to the control group after one month	x
H20. Three-construct condition should have higher self-reported behaviors compared to the control group after one month	(x)
H21. Four-construct condition should have higher self-reported behaviors compared to the control group after one month	x

6 Discussion

6.1 Contribution

The research goal was to contribute to the advancement of knowledge about behavior change interventions aimed at increasing parental intention to discuss influencer marketing with their child(ren) more frequently. In particular, the first research question was whether an intervention could increase parental intentions for mediation of influencer marketing effectively? The answer is that relatively brief (20, 33 and 35 minutes) online interventions can significantly increase the intention of parents to engage in discussing influencer marketing at least once in the forthcoming month. The second question was concerned with what factors and relationships play a role in the effectiveness of an intervention targeted at increasing parental intention to discuss influencer marketing with their child(ren)? To this end, an experimental research design was chosen to test 14 hypotheses of practical and theoretical relevance. The research goal was accomplished as the support and not support for different hypotheses advances the knowledge on the important and unimportant factors and relationships.

From a broader perspective, the study provides multiple contributions to the research on TPB-based intervention research in particular and intervention research in general. In particular, the study advanced our knowledge of the BCI-MoA-Behavior links for parental mediation of marketing in particular but also TPB-based interventions in general because the TPB-based dismantling approach to interventions advances the theoretical understanding in terms of behavioral context-sensitivity by enabling the comparison between BCTs, MoAs, and behaviors for specific types of behaviors (Holtforth et al., 2004). As a result, theories on intervention moderators can become more accurate and, thereby, the selection and design of more effective and cost-effective interventions which is highly important because resources are limited (Beecham et al., 2019).

Overall, the evidence indicates that TPB is also valuable to inform the design of effective interventions and understand the relationships underlying the design of effective interventions in the new context of parents discussing influencer marketing with their children.

First, the proposed relationships between the four TPB constructs with each other and past cognitions and behaviors are significant in the new context of parents discussing influencer marketing with their children. The evidence is important because it enlarges the behavioral scope of the theory by providing additional empirical support for the theoretical relationships. More specifically, the correlative evidence showed a significant moderate to strong positive relationship between the four TPB-based constructs with each other and a significant weak positive correlation with self-reported past cognitions and behavior. In other words, the factors positively influence each other and, thereby, it is useful to target the increase in one or more of these constructs because they are associated with an increase in the other constructs as well. Further, it is reasonable that the present relationships between the four TBP-based constructs are not only linked to self-reported past cognitions and behaviors but also may be linked to future behaviors and cognitions in the context of parents discussing influencer marketing with their children. As a result, changes in present relationships appear to be a promising lead to changes in future cognitions and behaviors. Notably, the present parental intention to engage in the behaviors was moderately strong correlated in the control group with past self-reported cognitions and behaviors but only weakly in intervention group which provides evidence for the effectiveness of TPB-based interventions. More specifically, it indicates that the association between the present intention to engage in the behavior has been decoupled effectively from the past self-reported cognitions and behaviors for the intervention group.

Second, the evidence demonstrates that the model proposed by the TPB to explain intentions has strong predictive properties. More specifically, the three base factors could significantly explain the majority of the variation (74%) in parental intentions to discuss influencer marketing with their children for intentions. Thereby, the TPB model becomes highly valuable because intentions are, in turn, one of the strongest predictors of the actual behavioral performance (Steinmetz et al., 2016).

Third, the evidence contributes to inform the design of more evidence-based interventions. In particular, it shows the important TPB factors and relationships underlying the design of effective interventions in the new context of parents discussing influencer marketing with their children. Attitude, subjective norms, PBC, and intentions showed significant differences or responsiveness to different intervention designs. The discussion of the results will be enriched by integrating and comparing relevant similarities and differences in results with the study of Montanaro et al. (2018), who used a similar experimental dismantling TPB-based computer-based design with seven conditions to increase condom use intentions and behaviors among college students.

PBC. A complex relationship between PBC and intentions was found. In the regression model, PBC had a larger effect on intentions than attitudes (.10 more) and norms (.15 more), which could lead to the conclusion that it is a more important target for interventions. However, this might not be the appropriate conclusion because the reported PBC distribution was not significantly impacted by the different interventions compared to the control group. The average PBC of parents in the control group appears to be moderately high over discussing influencer marketing with their children and remains on a similar level even after the interventions. In other words, the evidence indicates that parental PBC over discussing influencer marketing with their children appears to be a low susceptible target-MoA of the TPB to intervention. A theoretical explanation could be that the average PBC of parents is actually at a level that is so high that further increases are difficult to achieve. However, if this was the main reason, the condom use study with a roughly 1.5 points lower PBC distribution for all groups should not have reported low susceptibility of PBC to the intervention – but it did (see Table 16). Despite the different PBC distribution, the inability to produce a significant increase in PBC with TBP-based interventions was similar for both studies. As a result, the PBC distribution might be not the most accurate theoretical explanation for low susceptibility of PBC to the interventions, but other explanations are needed. Three other theoretical explanations could be: (1) characteristics of the design based on TPB and associated BCTs, (2) the characteristics of the particular behaviors, or (3) characteristics of the average population of high-interest parents. To clarify this, further studies are needed to develop a more robust theoretical understanding of PBC's susceptibility to interventions. In the context of the parental discussion of influencer marketing, the high regression coefficient for PBC is evidence for the high practical value

of answering the questions concerning PBC's susceptibility. As a result, future studies may choose to focus on PBC exclusively and test various hypotheses based on the outlined theoretical mechanism. For example, a valuable start could be to research the susceptibility of parents that have lower than average PBC related to discussions of influencer marketing. Additionally, the 1.5 points difference in the PBC distributions indicates that an important theoretical difference is present. An apparent theoretical moderator and explanation for the PBC distributions could be the emotional context when the behavior is performed. Less strong emotions appear to be involved in a situation where parents would discuss marketing with their children compared to the situation where condom use is relevant. A meta-analytical approach could test if this is an accurate theoretical explanation for the difference. In sum, the PBC construct has theoretical and practical value, but based on the evidence appears not to be recommended for interventions related to parental mediation of influencer marketing to explicitly target PBC as an MoA, at least for the average population of parents.

Attitude. In contrast to PBC, parental attitudes showed higher susceptibility to the present interventions. Based on the control condition responses, the average attitude of parents appears to be slightly positive towards discussing influencer marketing with their children. However, the slightly positive average attitude was significantly increased to a moderately positive attitude when exposed to the attitude only, PBC only, three-construct, and four-construct intervention. Based on this evidence, parental attitudes toward discussing influencer marketing with their children could be understood as a high low-effort susceptible target-MoA of the TPB. From a practical perspective, the evidence indicates that parental attitude is the most important target-MoA of the three base components to drive change in intentions and subsequent behaviors. From a theoretical perspective, the difference in the effect size between attitude intervention in the context of influencer marketing compared to condom use is relevant (see Table 16). In the case of condom use, the interventions did not produce a significant impact on attitudes and the attitude only intervention had no significant impact on intentions. The theoretical explanation for the difference might be that parents are normally not aware of the negative consequences of influencer marketing and the positive consequences of performing the behavior because it is not a prominent topic in the mainstream parental discourse. In contrast, the negative and positive consequences of condom use appear to be more present in the mainstream discourse of the general population and the specific target population (i.e., college student).

Subjective norms. The middle position between PBC and attitudes is taken by subjective norms, which are, on average, similar to attitudes, slightly positive towards discussing influencer marketing with their children. As with attitudes, the difference between the control group and the highest intervention group (four-constructs) is one scale point, which is an increase from slightly to moderately, which was also statistically significant. However, subjective norms appear to be more difficult to influence as only the four-construct intervention could achieve a significant effect. Based on this evidence, subjective norms toward discussing influencer marketing with their children could be understood as a susceptible high-effort target-MoA of TPB. From a practical perspective, the evidence indicates that parental subjective norms are a valid target-MoA of the three base components when sufficient resources and time are given. From a theoretical perspective, the difference in the effect size between control groups in the context of influencer marketing compared to condom use is relevant (see Table 16). In the case of condom use, the control group perceived the behavior to be a considerably stronger subjective norm than the parental discussion of influencer marketing with their children. The subjective norms evidence gives further support for the culture-based theoretical explanation of low parental awareness and importance presented for the attitude difference. More specifically, parents report not only to perceive the social incentives to engage in discussions of influencer marketing with their children to be low for themselves but also for other parents. In contrast, distinctly stronger subjective norms concerning the importance of condom use have been reported. Consequently, the evidence supports further the theoretical explanation that the topic is not sufficiently covered in the mainstream parental or cultural discourse.

Intentions. On average, similar to attitudes and subjective norms, intentions were slightly positive toward discussing influencer marketing with their children once a week in the forthcoming month for the control group. This result could be understood that a slightly positive attitude would translate most likely to a frequency of the self-reported cognitions and behaviors between never and twice in the last month. In this light, the evidence for a significant effect on intentions for the attitude, three-construct, and four-construct intervention of .80 and 1.17 would considerably increase the frequency of cognitions and behaviors to at least once a month, which is a highly relevant practical increase. Even more importantly, when considering the length of the interventions (20 minutes for attitude, 32 for three-construct and 35 four four-construct), the intervention is highly cost- and time-

effective. Based on this evidence, parental intentions to discuss influencer marketing with their children could be considered a highly susceptible low-effort target-MoA. The evidence indicates that the most cost-effective intervention is to target attitudes solely, but the most effective is to target all four TPB-based constructs. From a theoretical perspective, this is relevant because the attitude component can be complemented by other components. Unfortunately, it is not robustly clear which of the components added to the attitude component produced the additional change. Because the three-component condition had a similar effect as the attitude condition, the intention component could be the driving force. Additionally, the condom use study showed the same effect hierarchy between the three-construct and four-construct condition (see Table 16). However, more research is certainly needed to draw a robust theoretical conclusion on the importance or unimportance of the intention BCTs role.

Ultimately, cultural underexposure and associated ordinary low awareness and perceived importance would explain why the high-interest parents indicate a slightly positive attitude, subjective norms, and intentions, as well as moderately strong perceived behavioral control over discussing advertising and marketing as well as influencer marketing at least once a week in the forthcoming month when asked, but in practice did not do any or very few related behaviors.

It appears to be difficult to design TPB-based interventions that produce a significant effect on one single TPB-construct compared to the control group, such as the single interventions in the present study were not able to produce significant effects for subjective norms, PBC, and intentions. However, in contrast to Montanaro's et al. (2018) study, where all of the single-construct interventions did not have a significant effect compared to the control group, this study provides evidence that the idea of a single-construct intervention to produce a significant impact on the specific targeted TPB-based construct is not only a theoretical but also practical possibility (i.e., the present attitude intervention). The finding has substantial broader practical and theoretical relevance because it provides a rationale for researchers to reject the claim that it is wasteful to construct and test single-construct interventions. In contrast, the evidence indicates that the dismantling design is highly valuable because the attitude intervention is undoubtedly more cost-effective than the four-construct interventions (0.80 difference in 20 minutes vs. 1.17 difference in 35 minutes). Likewise, if theoretical

explanations for the conditions under which a single-construct can have significant effects could be developed, intervention science would have achieved a substantial step toward the design of more consistently cost-effective interventions.

Moreover, the study shows the potential of brief online interventions informed by the TPB and BCT literature to produce a significant and high impact on intention in general and on parental intentions to discuss influencer marketing with their children in particular. To contextualize the effect size, a recent meta-analysis of 123 TPB-based intervention across 82 peer-reviewed articles from various disciplines confirmed a mean effect size of .50 for changes in behavior and effect sizes ranging from .14 to .68 for changes in antecedent variables (i.e., attitude, subjective norm, perceived behavioral control, and intention) (Steinmetz et al., 2016 and see Table 17). Therefore, the significant effect size for intention found is considerably larger than reported in the meta-analysis. As a result, the study has not only high practical relevance but also theoretical because at least one relevant theoretical moderator must be present. Multiple theoretical explanations might be possible: (1) particular characteristics related to the design of the TPB-based intervention (i.e., strong BCT-MoA-link), (2) particular characteristics related to the targeted behavior (i.e., the antecedent variables for parental intentions to discuss influencer marketing with their children being especially susceptible to change), or (3) a combination of both. Based on the previous reasoning, it appears reasonable to assume that a combination of both could be the theoretical explanation for the highly relevant practical effect size difference. It appears reasonable to assume that intervention studies explicitly combining the TPB and BCT-MoA-link literature, such as the present, could be more effective than previous studies exclusively informed by TPB without any evidence-based framework for the selection of appropriate BCTs. However, the evidence also indicates that the underexposure of the targeted behavior in the mainstream cultural discourse and associated ordinary awareness could have led to an increased effect size. To this end, future meta-analysis should investigate the role of these theoretical explanations and test the associated study-level variables.

Behavior. Of the three conditions that had a significant effect on intentions, only the four-construct condition also showed a significant effect on behaviors. However, the three-construct condition was marginally non-significant. The first noteworthy finding is that, counterintuitively, the attitude condition did not have a significant effect on behavior even

though the attitude and three-construct condition shared an identical intention level. One theoretical explanation could be related to the time spent between those conditions, which was 10 minutes for the attitude condition and 33 and 35 for the multiple-construct conditions. As a result, longer and more elaborate confrontation with the topic might have led to a better memory accessibility that might have helped to bridge the intention-behavior gap.

The second relevant find is that both multiple-construct conditions had almost identical behavioral means after one month, but because of the baseline level being lower in the four-construct condition, it showed a significant effect. For the multiple-construct conditions, the interventions shifted the parental mediation of influencer marketing from never and once to almost twice in the last month. This might indicate that there might be a ceiling effect at twice for a brief online TPB-based intervention. Consequently, it might be worthwhile to examine if a longer singular intervention or multiple intervention could increase the frequency and break through the ceiling.

Table 16 Differences between control group and intervention groups from Montanaro et al. (2018) for condom use and this study

Groups	Time, Means and SDs by condition for all constructs													
	Time		Attitudes			Subjective norms			PBC			Intentions		
	Montanaro et al., 2018	Present study	Montanaro et al., 2018	Present study	$M_{M1} - M_2$	Montanaro et al., 2018	Present study	$M_{M1} - M_2$	Montanaro et al., 2018	Present study	$M_{M1} - M_2$	Montanaro et al., 2018	Present study	$M_{M1} - M_2$
	Min	Min	M_1 (SD)	M_2 (SD)		M_1 (SD)	M_2 (SD)		M_1 (SD)	M_2 (SD)		M_1 (SD)	M_2 (SD)	
Control only	31	10	5.82 (1.30)	4.90 (1.06)	.92	5.59 (.92)	4.77 (1.35)	.82	4.16 (.60)	5.94 (1.10)	-1.78	4.49 (2.12)	4.97 (1.55)	-.48
Attitude only	40	20	5.47 (1.34)	5.91 (.72)	-.44	5.90 (1.14)	5.26 (1.10)	.64	4.38 (.58)	5.92 (1.12)	-1.54	4.22 (1.89)	5.77 (1.02)	-1.55
Subjective norms only	51	12	5.71 (1.13)	5.43 (.92)	.28	5.53 (.99)	4.88 (1.26)	.65	4.14 (.57)	5.81 (1.29)	-1.67	4.66 (1.82)	5.42 (1.30)	-.76
PBC only	52	23	5.34 (1.34)	5.73 (1.10)	-.39	5.25 (1.03)	4.56 (1.06)	.69	4.31 (.61)	5.61 (.95)	-1.30	4.57 (1.84)	5.24 (1.44)	-.67
Intention only	30	17	4.99 (1.56)	5.06 (1.26)	-.07	5.17 (1.12)	4.61 (1.20)	.56	4.24 (.67)	5.65 (.97)	-1.41	3.80 (1.98)	5.40 (1.24)	-1.60
Three-construct condition	64	33	5.89 (1.17)	5.52 (1.12)	.37	5.77 (1.06)	5.16 (1.20)	.61	4.40 (.56)	5.92 (1.24)	-1.52	5.12 (1.67)	5.77 (1.43)	-.65
Four-construct condition	68	35	5.84 (1.20)	6.01 (.90)	-.17	5.63 (1.05)	5.64 (1.01)	-.01	4.26 (.58)	6.12 (.78)	-1.86	5.51 (1.38)	6.14 (1.06)	-.63
Minimum group			4.99	4.90	.09	5.17	4.56	.61	4.14	5.61	-1.47	3.80	4.97	-1.17
Maximum group			5.89	6.01	-.12	5.90	5.64	.26	4.40	6.12	-1.72	5.51	6.14	-.63
Mean difference			.90	1.11	-.21	.73	1.08	-.35	.26	.51	-.25	1.71	1.17	.54
Control group			5.82	4.90	.92	5.59	4.77	.82	4.16	5.94	-1.78	4.49	4.97	-.48
Maximum group			5.89	6.01	-.12	5.90	5.64	.26	4.40	6.12	-1.72	5.51	6.14	-.63
Mean difference			.07	1.11	-1.04	.31	.87	-.56	.24	.18	.06	1.02	1.17	-.15
PBC: perceived behavioral control														
Maximum value														
Minimum value														

Table 17 Results of the three-level meta-analyses: main effects of TPB Interventions (Steinmetz et al. 2016)

	<i>k</i> (ES)	<i>N</i>	$\hat{\delta}$	95% CI		<i>Q(df)</i>	T^2_W (I^2_W)	T^2_B (I^2_B)
Behavioral beliefs	11 (14)	2,902	0.39	−0.08	0.86	120.76 (13)*	.00 (.00)	.58 (.96)
Normative beliefs	12 (17)	3,962	0.54*	0.05	1.03	130.64 (16)*	.00 (.00)	.71 (.97)
Control beliefs	6 (6)	1,053	0.68*	0.00	1.36	59.43 (5)*	–	.68 (.96)
Attitude	70 (101)	21,374	0.24*	0.15	0.34	397.80 (100)*	.00 (.01)	.13 (.84)
Subjective norm	61 (85)	15,711	0.14*	0.08	0.19	157.77 (84)*	.00 (.00)	.02 (.49)
PBC	80 (113)	24,897	0.26*	0.16	0.35	623.12 (114)*	.01 (.05)	.15 (.84)
Intention	72 (108)	22,030	0.34*	0.24	0.45	650.21 (107)*	.02 (.10)	.16 (.76)
Behavior	40 (51)	9,395	0.50*	0.24	0.75	445.80 (50)*	.00 (.00)	.65 (.96)

Notes. *k* = Number of studies; ES = number of effect sizes; *N* = sample size; $\hat{\delta}$ = weighted average effect size; 95% CI = confidence interval; *Q(df)* = *Q* test for homogeneity and degrees of freedom; T^2_W = estimated systematic variance within studies, I^2_W = percentage of true variance within studies of the overall observed variance; T^2_B = estimated systematic variance across studies; I^2_B = percentage of true variance across studies of the overall variance. **p* < .05.

6.2 Limitations

The study has several limitations that should be taken into account in future research. First, the study intentionally focused on a selected subset of high-interest parents from the U.S., which limits the generalizability of the intervention effects on the specific subgroup of parents. Second, the sample has biases towards certain participants' characteristics, which may also limit the generalizability to this specific group of parents. In particular, there are biases concerning ethnicity (82.2% were white). Third, the study did not test the actual effect of the intervention on behavior, which could not be aligned with the theoretical expectation grounded in a substantial body of empirical evidence. Fourth, the study assumes that the increased engagement of parents in the mediation of marketing would decrease process unfairness, such as improved recognition of selling intent, and outcome unfairness, such as less consumption of unhealthy products or less materialistic attitudes, but further evidence is needed that this is indeed the case. Fifth, the intervention design used videos from publicly available sources to inform parents, which made the study more feasible, but also created variance because the researcher did not create the videos and it was not possible to identify an equal number of sufficiently distinct publicly available videos for each of the TPB-based conditions. Additionally, the videos were edited to make important arguments related to the TPB-construct in the least amount of time which lead to conditions having videos of different length and some of the videos were discussing marketing and advertising in general and not influencer marketing in particular which could cause additional variance. Sixth, the conditions employed showed different completion lengths and, therefore, it cannot be ruled out that the different completion lengths could cause parts of the effect differences. Seventh, because the study was exploratory, the sample size was adjusted to find moderate to large effects. However, it is possible and likely that not all significant effects were detected as the findings indicate that various smaller effect sizes are converging towards significance with a higher sample size. Eighth, the study targeted and combined the scores to the very broad behavior of “discussing,” which may limit the understanding of interesting differences on a more granular level. Lastly, although the study very carefully and deliberately selected TPB as the guiding theory and adjusted the BCTs to the theoretical MoAs, the possibility cannot be ruled out that other BCTs or BCT combinations targeting other MoAs based on other behavior change theories could be more effective.

6.3 Implications

6.3.1 Research Implications

From a broad intervention science perspective, the present study provides further evidence for the importance of developing a theoretical framework that can be used to explain and inform relationships between BCIs, BCTs, and TBP-based MoA reliably and accurately. Currently, researchers can only draw on theoretical work that reports how researchers have linked or advocate linking BCIs and BCTs to MoAs (Carey et al., 2019; Connell et al., 2019; Michie et al., 2018). While this is the most informative work available to design interventions, it does not ensure that the BCIs and BCTs to MoAs links are, indeed, effective or cost-effective. More nuanced theoretical work is needed. To this end, the study provides numerous valuable theoretical ideas that could be explored in further research to establish a deeper theoretical understanding.

First, a valuable theoretical implication is to focus theoretical and empirical work on understanding (under-)exposure or representation of given behaviors in the mainstream cultural discourse and the attitudes, subjective norms, PBC, and intentions. The theoretical hypotheses would be that cultural underexposure to a given behavior that could reasonably be argued to have severe negative consequences could moderate the impact of TPB-based interventions. One research approach to test this could be to calculate a reasonable variable for cultural exposure to a given behavior test its explanatory power on preexisting TPB-based meta-analytical data. Additionally, two other related theoretical hypotheses would be worth exploring: self-reported ordinary awareness of a specific behavior in the average target population and its perceived importance are positively related to cultural exposure.

Second, a theoretical framework is needed that could predict and explain the distribution of PBC in a given population, the likelihood to change it, and the effective means to change it. Based on this study, valuable theoretical hypotheses to test are related to the role of the emotional context, the average PBC level for a specific behavior in a specific population, and of specific BCIs and their combination of BCTs. To this end, a meta-analytical approach might also be useful, but also a piece of theoretical work that synthesizes the empirical evidence on PBC and proposes testable hypotheses to understand the relationship between TPB, PBC, BCIs and BCTs would be of high value. Moreover, studies are needed in the

context of parental mediation of influencer marketing to confirm the hypotheses of low susceptibility on the average population of high-interest parents and, second, to build a theory on the existence of important empirical conditions which increase the susceptibility (e.g., other population of parents or other BCIs).

Third, the results show that a single-construct intervention can produce a significant effect. While this is an important theoretical and practical finding, the theory to explain the conditions for when an effect is going to occur is not existing. The study proposes that the relevant theoretical mechanism that moderates the effect of attitude interventions could be underexposure to the severe negative consequences of the non-performance of the behavior. To this end, further studies could test the theoretical explanation or hypotheses.

Lastly, the theoretical and research implication is the presence of an emergent effect of the four-construct that lacks nuanced and detailed theoretical understanding. Based on current evidence, the emergent effect could be derived from the intention component because the three-construct intervention had a similar effect as the attitude intervention. To this end, further empirical studies need to explore if this effect is also present for other behaviors beyond parental mediation of influencer marketing and condom use. Additionally, empirical and theoretical research could use a qualitative approach by interviewing participants from different intervention conditions to understand the relationship underlying the emergent effect.

6.3.2 Practical Implications

The study has two main practical implications for governmental and non-governmental organizations concerned with the impact of marketing on children.

First, large-scale and small-scale campaigns should spend most of their efforts on influencing parental attitudes by increasing the communication frequency of messages focused on the negative consequences of young consumer marketing and the importance of parental mediation in important media outlets for parents. As a result, over time, it could become a mainstream topic in the parental discourse, which leads to high ordinary awareness of the behaviors and high perceived importance of discussing the topic. Additionally, this would most directly influence also positive subjective norms toward the behavior.

Second, until the average level of awareness and perceived importance of parental mediation of marketing is not high, it appears that parents do not strongly benefit from specific advice on how to discuss marketing with their children. However, the importance might change when it becomes a mainstream topic in the parental discourse, and parents perform it more often.

7 Conclusion

Young consumer marketing is a topic of high theoretical, ethical, cultural, political, and social importance. From a research perspective, it is a lens into fundamental relationships between children, parents, society, culture, politics, and economy. From a practical perspective, it has produced problems, such as undesirable outcomes and process unfairness, that are of strong concern (Buijzen & Valkenburg, 2005; De Jans et al., 2017; De Pauw et al., 2019). It is not likely that the problems associated with young consumer marketing will disappear in the near future because corporations have little internal incentive or external pressure to stop it. In particular, the motivation of policymakers has been low to entirely ban or strictly regulate it.

Indeed, the internal incentives for economic agents (i.e., corporations or marketers) to engage in effective young consumer marketing are high because of their demonstrated impact on parental buying decisions and their role as future adult consumers (Calvert, 2008). In light of recent communication and media developments, economic agents have not only increased their efforts to target young consumers but also do so more frequently in questionable ways (e.g., disguised marketing) (Wojdyski & Evans, 2019). Recent research shows that young consumers are less likely than adult consumers to understand the commercial nature of the new and covert online marketing formats for various reasons, such as their marketing-related knowledge and skills (e.g., understanding the selling intent of an ad) being not sufficiently developed (Boerman & Van Reijmersdal, 2020; Rozendaal et al., 2016). However, from the economic perspective, this evidence may not indicate a vulnerable state that needs special protection or care but a highly impressionable state that should be used to influence their future beliefs and attitudes in a way that increases their life-long consumption. Indeed, the reinforcing relationship between children's exposure to marketing and advertising, and their beliefs and attitudes has been demonstrated in numerous studies (Buijzen & Valkenburg, 2005; De Jans et al., 2017; De Pauw et al., 2019).

With the awareness of the current development in young consumer marketing, primarily non-economical stakeholders (i.e., parents, NGOs or researchers) have raised concerns on the problematic social and ethical implication of online and social media marketing, but the reaction of the policymakers or corporations have been limited (De Veirman et al., 2019; FTC, 2017; Gürkaynak et al., 2018; Riefa & Clausen, 2019). The largest recent improvement was the establishment of online marketing disclosure policies to address process unfairness, such as not understanding the selling intent of certain media (Buijzen & Valkenburg, 2005; De Jans et al., 2017; De Pauw et al., 2019). While they have their merits, it is clear that to only increase process fairness (i.e., awareness of the selling intent) is not enough to diminish undesirable outcomes because young consumers also need the knowledge and the skills to counter the effects of young consumer marketing that lead to undesirable outcomes (De Pauw et al., 2019; Isaac & Grayson, 2019; Jung & Heo, 2019; Youn & Shin, 2019). In the latter area, there also have been recent activities. In particular, school-based interventions have been conducted and researched to increase the children's marketing-related knowledge and skills (De Jans et al., 2019; Nelson, 2016; O'Rourke et al., 2019; Truman & Elliott, 2019). However, school-based interventions have a few vital shortcomings. First, they are very costly to scale. Second, they compete with other important school-based educational activities. Lastly, they might not be frequent enough to produce a lasting change.

In contrast, parent-targeted interventions might be considerably more cost-effective for policymakers to support than school-based marketing literacy interventions. First, as primary agents of children's socialization, parents are vital in the process through which children acquire and develop social attitudes and behaviors (Maccoby, 2007). Second, parents strongly influence the child's media diet and media use (Chen & Shi, 2019). Lastly, once motivated, parents have more opportunities and time to intervene and educate their children with higher frequency and higher child-relevant context-specificity by targeting the SMI media and marketing the child actually watches daily compared to schools or teachers (De Pauw et al., 2019; Hudders & Cauberghe, 2018; Lin et al., 2019; Nelson et al., 2017; Pearce & Baran, 2018). As a result, the research on interventions for parental mediation of new forms of marketing might be the most important one to address the important theoretical, ethical, cultural, political, and social questions.

The present research makes multiple theoretical and practical contributions to the subfield of marketing scholarship on parental mediation of marketing and advertising in general and influencer marketing in particular. The most important high-level research contribution is a model research design for marketing intervention studies that produces not only practical implications but also important theoretical implications for the specific behavioral marketing domain but also for the whole field of behavioral science. This specific research contribution appears to be very relevant because the four other intervention studies on parental mediation of marketing show low comparability and theoretical contributions (Austin et al., 2018; Hindin et al., 2004; Pearce & Baran, 2018; Powell & Gross, 2018). The most important high-level practical contribution is a case study of interventions that not only demonstrates the possibility to change parental intention to engage in the mediation of marketing in general and influencer marketing in particular but also of the possibility that interventions can achieve relatively effective and even cost-effective change in the behavioral domain (20 to 35 minutes interventions). Based on the evidence for the pathway between intention and behavior (Steinmetz et al., 2016), the demonstrated increase in intention will considerably increase parental behaviors related to the mediation of influencer marketing. As noted previously, if parents engage in the mediation of marketing, the impact on important child-related outcomes will be substantial. Overall, from a long-term time horizon, the parent-targeted intervention should lead to an increasing improvement in process fairness (e.g., improved recognition of the commercial intent) and outcome fairness (e.g., lower susceptibility to deceptive marketing and clearly harmful products or services, such as high-sugar drinks or online gambling). Indeed, the empirical evidence shows that parental mediation of marketing can reduce materialism (Buijzen, 2009; Buijzen & Valkenburg, 2003a, 2003b, 2005; Lou & Kim, 2019). Indeed, the reduction in materialism is highly relevant because materialism has been associated with various undesirable outcomes across ages, such as unhappiness (Van Boven, 2005). Lastly, a more motivated parent population could facilitate improvements on a society-wide scale by engaging with the legislative, executive, and judicial levels to further and continuously reduce process and outcome unfairness in the rapidly changing digital age (Riefa & Clausen, 2019; Rowthorn, 2019).

Further intervention research is highly important to improve the theoretical frameworks that facilitate the design of highly effective and cost-effective interventions that aim to increase parental mediation of marketing and advertising in general but also the most relevant specific

subtypes, such as influencer marketing. In particular, more research on interventions for the novel marketing subtypes is valuable because parents appear to have low awareness of them and their potential negative consequences on their children. One especially valuable research approach might be to remain focused on the exploration of the pathways between attitudes, norms, PBC, intentions, and behaviors. Ultimately, a better understanding of the interconnectedness, necessity, and sufficiency of each construct for parent-targeted intervention for parental mediation of marketing has the potential not only to facilitate the reduction of one important large-scale societal problem (e.g., obesity) but also many others (e.g., fragile beauty-related self-esteem).

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9 Annex

A. Tables

Table 18 Screener Survey

<p style="text-align: center;"><i>1. Prolific Introduction</i></p> <p>Platform-based Filters: (1) U.S. Nationality (2) having children</p> <p>Title: Short survey on relationships between personal characteristics</p> <p>Text: We are conducting an academic survey on relationships between personal characteristics. You will be presented with information about these and asked related questions.</p> <p>The study should take you around 1 to 3 minutes. However, we may conduct different follow-up surveys; so please be attentive to invitations.</p> <p>→ Qualtrics</p>
<p style="text-align: center;"><i>2. Qualtrics Introduction</i></p> <p>lease be assured that your responses will be kept completely confidential. The study should take you around 1 to 3 minutes. However, we may conduct different follow-up surveys; so please be attentive to invitations. At the end of the survey, you will be redirected to Prolific.</p> <p>We are interested in understanding how different personal characteristics are related to each other. You will be presented with information about these and asked related questions. Please honestly and seriously think about the responses to the questions and describe</p>

your thoughts with as much detail as possible.

*Your participation in this research is **voluntary**. Do not hesitate to ask any questions or mention concerns about the study either before, during, or after your participation by contacting the principal investigator under p.rohde@zeppelin-university.net*

*By clicking the button below, you acknowledge that your participation in the study is voluntary, you are **18 years of age or older**, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.*

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

Thank you for taking the time to participate in our study!

☐ I consent, begin the study

☐ I do not consent, I do not wish to participate -> exit

3. Attention Check

I read instructions carefully. To show that you are reading these instructions, please leave this question blank.

4. Personality (BFI-2-XS)

Please indicate honestly and openly to which extent you agree or disagree with those statements.

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others?

I am someone who ...

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	Disagree strongly (1)	Disagree a little (2)	Neutral; no opinion (3)	Agree a little (4)	Agree strongly (5)
Tends to be quiet (1)					
Is compassionate, has a soft heart (2)					
Tends to be disorganized (3)					
Worries a lot (4)					
Is dominant, acts as a leader (6)					
Is sometimes rude to others (7)					
Has difficulty getting started on tasks (8)					
Is fascinated by art, music, or literature (5)					
Tends to feel depressed, blue (9)					
Has little interest in abstract ideas (10)					
Is full of energy (11)					
Assumes the best about people (12)					
Is reliable, can always be counted on (13)					
Is emotionally stable, not easily upset (14)					
Is original, comes up with new ideas (15)					

5. Demographical Characteristics		
Question (Variable)	Response (Value)	Skip Rule
Q1. What is the highest level of school you have completed or the highest degree you have received (EDU)	Less than high school degree (1) High school graduate (high school diploma or equivalent including GED) (2) Some college but no degree (3) Associate degree in college (2-year) (4) Bachelor's degree in college (4-year) (5) Master's degree (6) Doctoral degree (7) Professional degree (JD, MD) (8) Other (please specific): (9, txt) _____ Prefer not to answer (10)	
Q2. Choose one or more ethnic groups that you consider yourself to be in: (ETH)	White (1) Black or African American (2) American Indian or Alaska Native (3) Asian (4) Native Hawaiian or Pacific Islander (5) Hispanic or Latino (6) Other (please specific): (7, text) _____ Prefer not to answer (8)	
Q3. What is your sex? (SEX)	Male (1) Female (2) Prefer not to answer (4)	

Q4. Are you now married, widowed, divorced, separated or never married? (MS)	Married (1) Widowed (2) Divorced (3) Separated (4) Never Married (5) Prefer not to answer (6)	
Q5. Which statement best describes your current employment status? (ES)	Working (paid employee) (1) Working (self-employed) (2) Not working (temporary layoff from a job) (3) Not working (looking for work) (4) Not working (retired) (5) Not working (disabled) (6) Not working (other) (7, txt) _____ Prefer not to answer (8) Student (9) Retraining (10) Homemaker (11)	
Q6. What is your year of birth? (BIRTHYEAR)	_____ (integer)	
Q7. Do you have children? (D_CH)	Yes (1) No (2)	If Q = 2, → not eligible for child-related characteristics

Q8. Have you ever served on active duty in the US Armed Forces? (D_USF)	Yes (1) No (2)	
Q9. Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else? (POL)	Republican (1) Democrat (2) Independent (3) No preference (5) Other (please specific): (4, txt) _____ Prefer not to answer (6)	
6. Child-related Characteristics (only if Q7 = 1)		
Q10. How many children do you have? (CH_NUM_SQ)	_____ (integer)	
Q11. What age range are your children in? (can choose multiple) (ChildAge_N)	0-5 (1) 6-18 (2) 19-25 (3) More than 25 (4)	If Q = 1 and/or 4 only → not eligible

Q12. Do your child(ren) watch content of influencers on YouTube, Instagram or any other online platform? (CH_IC_YESNO_SQ)	Yes (1) No (2) Don't know (99)	If Q = 2 or 99 → not eligible
Q13. How often do your child(ren) engage with content from influencer on YouTube, Instagram or any other platform? (CH_FREQ)	Less than once a month (1) More than once a month (2) Once a week (3) Multiple times a week (4) Once a day (5) Multiple times a day (6) Don't know (99)	If Q = 1 or 99 → not eligible
<p style="text-align: center;">7. Qualtrics Outro</p> <p>This is the end of our survey. Thank you for your participation.</p> <p>Please click on the next button to submit your responses and to be redirected to Prolific.</p> <p>We may conduct different follow-up surveys; so please be attentive to invitations. If you have any questions or comments, please contact the principal investigator in the study at p.rohde@zeppelin-university.net.</p>		

Table 19 Experimental Survey

<p style="text-align: center;">1. Prolific Introduction</p> <p>Platform-based Filters: (1) U.S. Nationality (2) having children (3) on the whitelist (n = 298)</p> <p>Title: Influencers, Marketing and Parenthood 1</p> <p>Text: We are interested in understanding influencers, marketing, and parenthood.</p> <p>You will be presented with information about these and asked related questions.</p> <p>The study should take you around 10 to 30 minutes depending on your randomly assigned questionnaire. Depending on the questionnaire you will receive the appropriate bonus.</p> <p>→ Qualtrics</p>
<p style="text-align: center;">2. Qualtrics Introduction</p> <p>Welcome to the research study!</p> <p>Thank you for taking our previous survey.</p> <p>You have been qualified for this study on influencers, marketing, and parenthood. You will be presented with information about these and asked related questions.</p> <p>The study should take you around 10 to 30 minutes, depending on the randomly assigned questionnaire. However, to make the compensation fair, you will receive the appropriate bonus according to the assigned questionnaire. At the end of the survey, you will be redirected to Prolific.</p> <p>The term 'influencer' refers to a person who has more than a million followers on one or more online platforms, such as YouTube, Instagram, or personal blogs. In contrast to traditional celebrities, influencers are 'regular people' who have become celebrities online by creating content on social media, such as 'Michelle Phan' who creates makeup videos on YouTube or other influencers who create content in areas like health, travel, food or lifestyle. As a result, influencers can attract large audiences comparable to those of TV</p>

programs. For example, the YouTube-based influencer ‘PewDiePie’ attracted over 322 million views on YouTube in February 2020 across all his uploaded videos which is comparable to all citizens of Switzerland watching him every day. Consequently, marketing executives increasingly use influencers to market their products.

Influencer marketing is a form of social media marketing involving endorsements and product placements from influencers. Influencer marketing takes the idea of celebrity endorsement and places it into a modern-day social media marketing content. For example, the company DeeMuesli collaborated with an influencer. Via the Instagram account, the influencer posted an original recipe with attractive pictures that required DeeMuesli as a primary ingredient.

Please note, that you can earn additional compensation if you enter your email below to let us provide you with a notification for the **follow-up survey next month** which will take **less than two minutes**. Please note that your email will only be used for research purposes and not for commercial purposes. It will only be accessible by the study team (Paul Rohde, Patrícia Dias & Rui Gaspar).

Your participation in this research is **voluntary**, and your responses will be kept completely **confidential**. Do not hesitate to ask any questions or mention concerns about the study either before, during, or after your participation by contacting the principal investigator under p.rohde@zeppelin-university.net

By clicking the button below, you acknowledge that your participation in the study is voluntary, you are **18 years of age or older**, and

that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

Thank you for taking the time to participate in our study!

☐ I consent, begin the study

☐ I do not consent, I do not wish to participate

(VAR: SI_CON)

3. Email

What is your email address? (optional)

Please type in the email that you most frequently use. Please also make sure that the email is correct. You will receive a follow-up survey in one month, and you will receive a PDF-report of your study responses.

(VAR: EML1)

4. Raising Effort

Please note that:

- We need your **serious** and **attentive** effort to obtain useful and valuable results
- We need your answers to the questions to be very **honest** and **sincere**
- You might potentially be asked to watch **videos**, so please make sure your environment is appropriate
- We encourage you to **take your time** to understand the questions of the survey
- Your high-quality opinion will help us to produce high-quality research to the **benefit of society**
- If you do not have much time now to read the questions carefully and respond thoughtfully, or if you are in a situation which makes it difficult to concentrate properly, then **come back at a more adequate moment** to complete the survey, please.
- The reward you will get will be **proportional to your efforts**

☐ I have read the text carefully and I understand the importance of my answers for the survey, therefore I commit myself to answer the best I can

[] No, I do not want to commit myself (VAR: I_EFF)		
5. Baseline Cognitions and Behaviors		
Question(s)/Item(s)	Responses	Code
(M_BEH_BL) <i>Please respond honestly, openly and attentively</i>	never	1
	once	2
	twice	3
In the last month, how often did you discuss ...	every week	4
... marketing and advertising general with your child(ren)	More than once per	5
(VAR: M_BEH_BL_MA_1)	week	6
... influencer marketing in particular with my child(ren)	almost daily	7
(VAR: M_BEH_BL_IM_2)	daily	
(Active parental mediation communication of influencer marketing)		
... why and how influencers promote products to children		
... why influencer marketing might be harmful to them		
... how to recognize influencer marketing		
(VAR: M_BEH_BL_IM_3; M_BEH_BL_IM_4; M_BEH_BL_IM_5)		
(Restrictive parental mediation communication of influencer marketing)		
... why and how to avoid influencer marketing		
(VAR: M_BEH_BL_IM_6)		
<i>Please respond honestly, openly and attentively</i>	never	1
	once	2
	twice	3
In the last month, how often did you think about discussing ...	every week	4
... marketing and advertising general with your child(ren)	More than once per	5
(VAR: M_BEHC_BL_MA_1)	week	6
... influencer marketing in particular with my child(ren)	almost daily	7
(VAR: M_BEHC_BL_IM_2)	daily	

(Active parental mediation communication of influencer marketing) ... why and how influencers promote products to children ... why influencer marketing might be harmful to them ... how to recognize influencer marketing (VAR: M_BEHC_BL_IM_3; M_BEHC_BL_IM_4; M_BEHC_BL_IM_5) (Restrictive parental mediation communication of influencer marketing) ... why and how to avoid influencer marketing (VAR: M_BEHC_BL_IM_6)		
<p style="text-align: center;">6. Attention Check</p> <p>I read instructions carefully. To show that you are reading these instructions, please leave this question blank.</p> <hr/> <p>(VAR: C_A)</p>		
<p style="text-align: center;">7. Attitude Change Intervention</p>		
<p>A. Reflective Questions</p> <p><i>Please answer honestly, openly and seriously</i></p> <p>1) What are two or more negative consequences of discussing influencer marketing with your child(ren) at least once a week in the forthcoming month that come to your mind? The important negative consequences of discussing influencer marketing with my children at least once a week in the forthcoming month that come to mind are ...</p> <hr/> <p>2) What are two or more positive consequences of discussing influencer marketing with your child(ren) at least once a week in the forthcoming month that come to your mind? The important positive consequences of discussing influencer marketing with my children at least once a week in the forthcoming month that come to mind are ...</p> <hr/>		

- 3) Is there anything else you associate with **discussing influencer marketing** at least once a week in the forthcoming month with your children?
-

(VAR: I_ATT1; Q1, I_ATT2;_Q1, I_ATT1_Q3)

B. Informative Videos

Next, three views on influencer marketing are presented in short video excerpts.

Please pay attention as you might be asked related questions.

<page break>

Please read the video description and then watch the video

View 1

In the first video excerpt below, you see a commentary of two highly popular YouTubers ('H3 Podcast') on the fairness and deceptiveness of influencer marketing.

The discussed 'music' video was created by the highly popular YouTube-influencer 'Jake Paul' (20 million followers) for the special occasion of Christmas. It encourages his young followers to ask their parents to buy his merchandise (i.e. his own branded clothing) for Christmas.

<video excerpt> (49 seconds)

Excerpt link: https://drive.google.com/file/d/1OxryUOZII1o2ors2cO01DfZ95_M8S_7e/view?usp=sharing

Full video link: <https://www.youtube.com/watch?v=hOLCEvGO-SU> (also, appears at the survey end)

<page break>

Please read the video description and then watch the video

View 2

In the second video excerpt below, you see a short commentary from one of the most followed YouTuber 'PewDiePie' on a recent case of online gambling promotion to children by YouTube-influencers.

<video excerpt> (1 minute and 14 seconds)

Excerpt link: <https://drive.google.com/file/d/1zgNDe2lOJ6WGnKic1RjydFCKKmAWpuEO/view?usp=sharing>

Full video link: https://www.youtube.com/watch?v=b_gitOw1TZU (also, appears at the survey end)

<page break>

Please read the video description and then watch the video

View 3

In the last video excerpt below, you see a short commentary from the news channel CBS featuring the expert psychologist Dr. Braunstein on influencer marketing and its impact on children, especially self-esteem, unrealistic expectation and food intake.

<video excerpt> (1 minute and 22 seconds)

Excerpt link: https://drive.google.com/file/d/1YwwB_vdzTWuixI244A0pJgZB3he690iF/view?usp=sharing

Full video link: <https://www.youtube.com/watch?v=TfECiHfAInI> (also, appears at the survey end)

C. Informative Text

Please read the following brief summary attentively and carefully

Scientific studies discovered the following things about influencers, marketing, and parenthood.

Influencers report embedding marketing into content has become a **highly important** and **frequent activity** because it can generate personal revenue in terms of thousands and millions of dollars per year.

Some influencers promote products to children with **highly negative consequences**, such as marijuana, online gambling, or unhealthy foods. As a result, this could potentially cause **life-long addiction**, as studies found that addiction started in adolescents are the most difficult to change.

Children, in contrast to adults, have **difficulties** in recognizing the selling intent of an influencer and distinguishing between commercial influencer content and non-commercial influencer content. For example, children told researchers, "this is a healthy choice because there's a picture of fruit on the box" or "because the package is green."

Children who frequently watched influencer content containing marketing had **more materialistic attitudes** (e.g., attaching high importance to money and wanting to possess a lot of material things) and **unhealthy ideals** (e.g., about beauty). Materialistic attitudes and unhealthy ideals are strongly linked with children having **lower well-being**, less satisfying **social relationships** and **less resilience**.

Children whose parents had the habit of discussing influencer marketing showed **higher recognition abilities**, **more desirable attitudes**, and **less consumption of undesirable products**.

Parents who took a serious interest in their children's marketing literacy talked more often with other parents about it and, consequently, **inspired them to take similar actions**.

Parents found, after an initial effortful phase, the discussions about marketing with their child(ren) to become **increasingly natural**, **important**, and **enjoyable**.

8. Subjective Norm Change Intervention

Question	Response	Code
A. Personalized Feedback	Never	1
<i>Please indicate openly and honestly</i>	Less than once a month	2
	More than once a month	3
In an average month, how often do you and your child(ren)	Once a week	4
	More than once a week	5
... discuss marketing and advertising (incl. influencer marketing)?	Once a day	6
(VAR: I_SN1_Q1)	More than once a day	7

<p><i>Please indicate openly and honestly</i></p> <p>In an average month, how often do you think other parents and their child(ren) ... discuss marketing and advertising (incl. influencer marketing)? (VAR: I_SN2_Q2)</p>	<p>Never</p> <p>Less than once a month</p> <p>More than once a month</p> <p>Once a week</p> <p>More than once a week</p> <p>Once a day</p> <p>More than once a day</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p>
<p>In an average month, you discuss marketing and advertising (incl. influencer marketing) X with your child(ren) and you think other parents discuss marketing and advertising (incl. influencer marketing) X. On average, parents reported discussing marketing and advertising (incl. influencer marketing) with their children: at least once a week.</p>		
<p>B. Informative Video</p> <p>Please read the video description and then watch the video</p> <p>Parental View</p> <p>In this video excerpt from a TEDx talk below, you see a commentary of Anna Lappe who is a parent, public figure, and project director of the Food MythBusters.</p> <p><video excerpt> (57 seconds) Excerpt link: https://drive.google.com/file/d/1dIZKdMMwWssiRcf2Bn0EK9U57FwZ9l5g/view?usp=sharing</p> <p>Full video link: https://www.youtube.com/watch?v=0bop3D7-dDM (also, appears at the survey end)</p>		
<p>C. Informative Text</p> <p>Researchers have moderated group discussions with parents to understand their views on marketing and advertising.</p> <p>In this short text, four views from parents are described.</p> <p>1. Parents perceived television advertising as influencing children's thinking through a repetitive process. One father summarized the phenomenon:</p>		

"You are not just getting one McDonald's ad per advertising block, but you are getting three and it's a repetition like blocks of three or more that actually helps to sink into the minds." (father/group 3)

2. Some parents questioned the truthfulness of messages, for example, nutrition or quality claims in advertisements.

For instance:

". . . like the Nutella ad, that was so clever, because it says 50% less fat than peanut butter and 50% less salt than Vegemite and 80% less sugar than jam and it is all those things. But, Vegemite has no fat or sugar, jam has no fat and peanut butter has no sugars. And Nutella has all of those things. It might have less than those other products but it has them all in there, so, it's no healthier." (mother, group 2)

3. Ethics in advertising also emerged as an important issue. Some parents objected to the use of high-profile personalities to promote unhealthy foods (e.g. high-sugar breakfast cereals or high-fat spreads):

"Don't they [personality] have a conscience? They must know, these sports people, they must know it's crap." (mother/group 3)

4. Also, the topic of values and beauty ideals concerned parents strongly:

"Advertising promotes unhealthy values in all of us and I think kids aren't equipped to understand how they are being manipulated or how distorted the images are." (father/group 1)

9. Perceived Behavioral Control Intervention Condition

A. Reflective Questions Component

Please answer attentively and seriously

(1/4) When people identified the obstacles to perform a behavior or build a habit, then they achieved it more frequently.

To build the habit of discussing influencer marketing with your child(ren), could you please list two or more of the **most important obstacles** that come to your mind?

The most important obstacles that come to my mind on building a habit of discussing influencer marketing with your child(ren) ...

(2/4) When people identified solutions to identified obstacles, then they were more successful.

Could you please list two or more of the **most important solutions** to overcome the previously identified obstacles that come to your mind?

The most important solutions that come to my mind to overcome the previously identified obstacles are ...

(3/4) When people identified and described past successes related to a specific behavior or similar other behaviors, they were more motivated and excited.

Could you please describe one or more **past examples of meaningful and enjoyable discussion** with your children?

(4/4) When people described imaginary examples of how they successfully performed a behavior or established a habit, then they were more persistent and enthusiastic.

Would you please describe at least one **imaginary example** of how a meaningful and enjoyable discussion about influencer marketing with your child(ren) could unfold?

(VAR: I_PBC1_Q1; I_PBC1_Q2; I_PBC1_Q3; I_PBC1_Q4)

B. Informative Videos

Next, two views on concrete and practical actions for parents are presented in short video excerpts. Please pay attention as you might be asked questions about them.

<page break>

Please read the video description and then watch the video

View 1

In the first video excerpt below, you see practical tips for parents shared by Josh Golin from the organization 'campaign for a commercial-free childhood' (CCFC).

The CCFC is a "national coalition of health care professionals, educators, advocacy groups, parents, and individuals who care about children [and is] the only national organization devoted to limiting the impact of commercial culture on children."

<video excerpt> (1 minute and 4 seconds)

Excerpt link: https://drive.google.com/file/d/1pr5wTLzceDzZ_sR48ZG2JUjAwhoaLkbD/view?usp=sharing

Full video link: https://www.youtube.com/watch?v=hGN1ZEABk_Y (also, appears at the survey end)

Please read the video description and then watch the video

View 2

In the second video excerpt below, you see three pragmatic tips for parents shared by the organization called 'Common Sense Media'.

Common Sense Media is a "non-profit organization that provides education and advocacy to families to promote safe technology and media for children."

<video excerpt> (37 seconds)

Excerpt link: https://drive.google.com/file/d/1J9vcM5KY1Vx9c_cy2y1jxpfg5p7EyBhE/view?usp=sharing

Full video link: <https://www.youtube.com/watch?v=5ahMQwxN9Js> (also, appears at the survey end)

C. Informative Text

Please read the following brief summary attentively

Scientific studies discovered the following things about influencers, marketing, and parenthood.

When parents researched online how **novel marketing and advertising formats work** (i.e., influencer marketing) and how to best **talk about it with their children**, they showed fast increases in their own marketing knowledge and their ability to discuss it productively.

Indeed, these parents had **more confidence** and found it **easier** to facilitate their child(ren)'s development of marketing knowledge. After an initial effortful phase, parents reported finding the discussions about marketing with their child(ren) **to be natural and very important**, and some found them **even to be pleasant and enjoyable**.

Overall, parents who open-mindedly experimented with discussing marketing found it to be **simpler and more satisfying than initially expected**.

Here you see advice from one of the resources you can find online (from "Dealing with Marketing: What Parents can do"; links provided below and the end of the survey; might be useful to bookmark)

| Educate your kids about advertising and how marketers target young people

- Help kids understand that the main goal of advertising is to make them buy things—often things they don't need, and didn't even know they wanted until they've seen the ad.
- Explain that advertising is big business, one of the largest businesses in the world.
- Using the Advertising Strategies handout in the [Advertising all Around Us](#) lesson plan, talk about the techniques marketers use to target kids.
- Using the Rules For Advertising To Kids handout in the [You've Gotta Have a Gimmick](#) lesson plan, discuss what advertisers are not allowed to do when producing ads for kids. Examine commercials and print ads to see if they follow the rules.
- Using the [Talking to Kids About Advertising](#) tip sheet, start to integrate media literacy questions into the conversations you have with your kids about advertising.
- Using the Can You Spot the Ad? handout in the [Can You Spot the Ad?](#) lesson, help your children understand that branded characters are a kind of advertising even if they're not delivering a particular advertising message.
- Play the game [Co-Co's Adversmarts](#) with your children to help them recognize commercialized online environments and understand the tricks that they use to build brand loyalty and make you come back.

Lastly, parents are recommended to **not use monologues for too long** because this might evoke a feeling of inferiority and, as a result, resistance against helpful advice or even rebellion in doing the exact opposite, such as buying the unhealthy products promoted in an influencer video.

In contrast, the recommendation is to **use dialogues that combine information and guided questions** to enable child(ren) to reach their own conclusion about undesirable consequences, such as asking the child(ren) about how they think marketing influences them.

Parents rated the four following online resources to be the most valuable and interesting (also appears at the end)

1. "Dealing with Marketing: What Parents can do": <https://mediasmarts.ca/tipsheet/dealing-marketing-what-parents-can-do>
2. "How to talk to your kids about marketing": <https://www.heartandstroke.ca/articles/how-to-talk-to-your-kids-about-marketing>
3. "Advertising: how it influences children and teenagers": <https://raisingchildren.net.au/toddlers/play-learning/screen-time-media/advertising-children>
4. "Marketing to Kids": <https://www.common sense media.org/marketing-to-kids>

10. Intention Intervention Condition
<p>Please answer attentively and seriously</p> <p>(1/2) Parents who used reminders were likely to talk about the targeted topic with their child(ren).</p> <p>Reminder consist of three components: a type of note, a place and a written message.</p> <p>For example, parents used post-it notes in their bedroom, alarm notes on their phone or desktop notes on their computer.</p> <p>Please construct at least one reminder for you</p> <ul style="list-style-type: none">a) what type of note would you use? (i.e., physical, phone-based or computer-based)b) where would you place it? (which room or digital placement; high daily visibility is highly important)c) what would you write on it? (keep it simple, formulate one action or the most important reason for mediating the influence of marketing on your child/ren)
<hr/> <p>Please answer attentively and seriously</p> <p>(2/2) Parents who formulated implementation intentions (or if-then statements) were more likely to talk about the targeted topics with their child(ren).</p> <p>These statements are composed of an if-component (e.g., if X occurs) and a then-component (e.g., then I will do Y).</p> <p>As for the if-component, it should define at least one environmental trigger event (e.g., seeing your child watch influencer content) or internal trigger event (e.g., feelings, emotions or thoughts about influencer marketing).</p> <p>As for the then-component, it should define a specific action, such as I will ask my child(ren) if they saw any marketing in the influencer content and discuss their observations with them.</p>

<p>Please define at least one if-then statement for the discussion of influencer marketing with your child(ren)</p> <p>a) what trigger would you use? (i.e., external and/or internal)</p> <p>b) what action would you perform?</p> <hr/> <p>(VAR: I_INT_Q1; I_INT_Q2)</p>		
11. Attitudes		
Question/Item	Responses	Code
<p>A. Attitudes</p> <p><i>Please respond honestly, openly and attentively</i></p> <p>(1) Discussing influencer marketing in particular at least once a week with my child(ren) would be ...</p> <p>(2) Discussing marketing and advertising in general at least once a week with my child(ren) would be ...</p> <p>(VAR: M_ATT1; M_ATT2)</p>	<p>Harmful – Beneficial</p> <p>Pleasant – Unpleasant</p> <p>Good – Bad</p> <p>Worthless – Valuable</p> <p>Enjoyable – Unenjoyable</p>	<p>1 (most left point)</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7 (most right point)</p>
<p>B. Belief about control over changing behavior-related outcomes</p> <p>Please indicate honestly and openly</p> <p>I believe that discussing marketing and advertising with my child(ren) at least once a week in the forthcoming month could ...</p> <p>... <i>reduce materialistic attitudes</i></p> <p>... <i>improve recognition of marketing and advertising</i></p> <p>... <i>increase their well-being</i></p> <p>... <i>become enjoyable</i></p>	<p>strongly disagree</p> <p>moderately disagree</p> <p>slightly disagree</p> <p>neither disagree or agree</p> <p>slightly agree</p> <p>moderately agree</p> <p>strongly agree</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p>

... stabilize their self-esteem ... decrease the consumption of undesirable products ... become valuable ... increase critical thinking ... foster healthy values and norms (VAR: M ATT EXP 1; ...; M ATT EXP 9)		
C. Belief about value of changing behavior-related outcomes Please indicate honestly and openly I believe that to ... is ... reduce materialistic attitudes ... improve recognition of marketing and advertising ... increase their well-being ... become enjoyable ... stabilize their self-esteem ... decrease the consumption of undesirable products ... become valuable ... increase critical thinking ... foster healthy values and norms (VAR: M ATT VAL 1; ...; M ATT VAL 9)	Very unimportant moderately unimportant slightly unimportant neutral slightly important moderately important highly important	1 2 3 4 5 6 7
12. Subjective Norms		
Question/Item	Responses	Code
Please respond honestly, openly and attentively Injunctive Norm Most people who are important to you would approve/disapprove of you at least once a week discussing... ... influencer marketing in particular with their child(ren) ... marketing and advertising in general with their child(ren)	strongly disagree moderately disagree slightly disagree neither disagree or agree	1 2 3 4 5 6 7

<p>(VAR: M_SN_INJ_1; M_SN_INJ_2)</p> <p>Descriptive Norm</p> <p>Most people who are important to you and have children do least once a week discuss ...</p> <p>... influencer marketing in particular with their child(ren)</p> <p>... marketing and advertising in general with their child(ren)</p> <p>(VAR: M_SN_DES_1; M_SN_DES_2)</p>	<p>slightly agree</p> <p>moderately agree</p> <p>strongly agree</p>	
<p>13. Perceived Behavioral Control</p>		
Question/Item	Responses	Code
<p><i>Please respond honestly, openly and attentively</i></p> <p>(Self-Efficacy)</p> <p>If I wanted to I could at least once a week discuss ...</p> <p>... influencer marketing in particular with their child(ren) in the forthcoming month</p> <p>... marketing and advertising in general with their child(ren) in the forthcoming month</p> <p>(VAR: M_PBC_SE1_1; M_PBC_SE1_2)</p> <p>I feel prepared to at least once a week discuss ... if I wanted to</p> <p>... influencer marketing in particular with their child(ren) in the forthcoming month</p> <p>... marketing and advertising in general with their child(ren) in the forthcoming month</p> <p>(VAR: M_PBC_SE2_1; M_PBC_SE2_2)</p>	<p>strongly disagree</p> <p>moderately disagree</p> <p>slightly disagree</p> <p>neither disagree or agree</p> <p>slightly agree</p> <p>moderately agree</p> <p>strongly agree</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p>
<p>(Controllability)</p> <p>How much control do you believe you have over at least once a week discussing ...</p> <p>... influencer marketing in particular with their child(ren) in the forthcoming month</p> <p>... marketing and advertising in general with their child(ren) in the forthcoming month</p> <p>(VAR: M_PBC_CON1_1; M_PBC_CON1_2)</p>	<p>No control</p> <p>Complete control</p>	<p>1 (most left point)</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p>

		7 (most right point)
14. Intentions		
Question/Item	Responses	Code
Please respond honestly, openly and attentively	strongly disagree	1
	moderately disagree slightly	2
In the next month, I will try to at least once a week to discuss ...	disagree	3
	neither disagree or agree	4
In the last month, how often did you discuss ...	slightly agree	5
... marketing and advertising general with your child(ren)	moderately agree	6
(VAR: M_INT_MA_1)	strongly agree	7
... influencer marketing in particular with my child(ren)		
(VAR: M_INT_IM_2)		
(Active parental mediation communication of influencer marketing)		
... why and how influencers promote products to children		
... why influencer marketing might be harmful to them		
... how to recognize influencer marketing		
(VAR: M_INT_IM_3; M_INT_IM_4; M_INT_IM_5)		
(Restrictive parental mediation communication of influencer marketing)		
... why and how to avoid influencer marketing		
(VAR: M_INT_IM_6)		
15. Validity Check		
A. Seriousness Check	0 to 100	integer
It would be very helpful if you could tell us at this point how serious, motivated, attentive and interested were you regarding answering this survey?		
(Do not worry, this will not affect your payment, you will receive the payment code either way.)		
Seriousness (VAR: C_VAL1_1)		
Motivation (VAR: C_VAL1_2)		

Attentiveness (VAR: C_VAL1_3) Interestingness (VAR: C_VAL1_4)		
B. General Check In your honest opinion, should we use your data in our analysis in this study? (Do not worry, this will not affect your payment, you will receive the payment code either way.) (VAR: C_VAL2)	Yes No Not sure	1 2 3
<p style="text-align: center;">16. Qualtrics Outro</p> <p>This is the end of our survey.</p> <p>Thank you for your participation.</p> <p>Please click on the next button to submit your responses and to be redirected to Prolific.</p> <p>To save the important thoughts that you created today, you have the opportunity to receive the report of your responses to your email. You could remodel the report to print, share and remind yourself, your partner, or your child(ren) about the most important insights. You can share your email below if you did not do so earlier.</p> <p>The online resources highly rated and often bookmarked by parents can be found at:</p> <ol style="list-style-type: none"> 1. Dealing with Marketing: What Parents can do: https://mediasmarts.ca/tipsheet/dealing-marketing-what-parents-can-do 2. How to talk to your kids about marketing: https://www.heartandstroke.ca/articles/how-to-talk-to-your-kids-about-marketing 3. Advertising: how it influences children and teenagers: https://raisingchildren.net.au/toddlers/play-learning/screen-time-media/advertising-children 4. Marketing to Kids: https://www.common sense media.org/marketing-to-kids <p>The referenced videos can be found at:</p> <ol style="list-style-type: none"> 1. H3 Podcast #45 - Jake & Logan Paul's Predatory Merch Machine: https://www.youtube.com/watch?v=hOLCEvGO-SU 2. Jake Paul & Ricegum SCAM Mystery unbox ? / Ninja New Years Cringe / PEW NEWS: https://www.youtube.com/watch?v=b_gitOwlTZU (7:45) 3. Social Media Influencers Having Bigger Impact On Children Than Parents: https://www.youtube.com/watch?v=TfECiHfAIhI 		

4. Marketing food to children | Anna Lappe | TEDxManhattan: <https://www.youtube.com/watch?v=0bop3D7-dDM>
5. Junk Food Ads and Kids: <https://www.youtube.com/watch?v=5ahMQwxN9Js>
6. How Advertising Rewires Kids' Brains: https://www.youtube.com/watch?v=hGN1ZEABk_Y&t

If you have any questions or comments, please contact the principal investigator at p.rohde@zeppelin-university.net.

17. Report

Dear Participant,

thank you for your investment in our study!

First, you can find the report below. In the **day-to-day busyness**, we forget important intentions and thoughts. Consequently, we encourage you to **remodel the report** and, then, **print** it as a reminder for yourself and share it with your partner or your child(ren) to create additional motivation and attention.

Second, we would contact you in a month for a short follow-up survey.

Third, the resources parents found highly valuable and interesting and often bookmarked:

- "Dealing with Marketing: What Parents can do" <https://mediasmarts.ca/tipsheet/dealing-marketing-what-parents-can-do>
- How to talk to your kids about Marketing": <https://www.heartandstroke.ca/articles/how-to-talk-to-your-kids-about-marketing>
- "Advertising: how it influences children and Teenagers": <https://raisingchildren.net.au/toddlers/play-learning/screen-time-media/advertising-children>
- "Marketing to Kids": <https://www.commonsensemedia.org/marketing-to-kids>

Last, the referenced videos can be found at:

- H3 Podcast #45 - Jake & Logan Paul's Predatory Merch Machine: <https://www.youtube.com/watch?v=hOLCEvGO-SU>
- Jake Paul & Ricegum SCAM Mystery unbox ? / Ninja New Years Cringe / PEW NEWS: https://www.youtube.com/watch?v=b_gitOw1TZU (7:45)
- Social Media Influencers Having Bigger Impact On Children Than Parents: <https://www.youtube.com/watch?v=TfECiHfAIhI>
- Marketing food to children | Anna Lappe | TEDxManhattan: <https://www.youtube.com/watch?v=0bop3D7-dDM>
- Junk Food Ads and Kids: <https://www.youtube.com/watch?v=5ahMQwxN9Js>

- How Advertising Rewires Kids' Brains: https://www.youtube.com/watch?v=hGN1ZEABk_Y&t

If you have any questions or comments, please contact the principal investigator in the study at p.rohde@zeppelin-university.net.

Kind wishes
The study team

1) Summary of Findings from Studies about Influencers, Marketing, and Parenthood

Influencers report embedding marketing into content has become a **highly important and frequent** activity because it can generate personal revenue in terms of thousands and millions of dollars per year. Some influencers promote products to children with highly **negative consequences**, such as marijuana, online gambling, or unhealthy foods.

In contrast to adults, children have **difficulties in recognizing** the selling intent of an influencer and **distinguishing** between commercial influencer content and non-commercial influencer content. For example, children told researchers, 'this is a healthy choice because there's a picture of fruit on the box, or because the package is green.' Children who frequently watched influencer content containing marketing had **more materialistic attitudes** (e.g., attaching high importance to money and wanting to possess a lot of material things) and **unhealthy ideals** (e.g., about beauty). Materialistic attitudes and unhealthy ideals are strongly linked with **lower well-being, resilience, and social functioning**. Children whose parents had the habit of discussing influencer marketing showed **higher recognition abilities, more desirable attitudes, and less consumption of undesirable products**.

When parents researched online **how novel marketing and advertising formats work** (i.e., influencer marketing) and **how to best talk about it with their children**, they showed fast increases in their own **marketing knowledge** and their **ability to discuss it productively**. Indeed, these parents had **more confidence** and found it **easier to facilitate** their child(ren)'s development of marketing knowledge. After an initial effortful phase, parents reported finding the discussions about marketing with their child(ren) to be **natural** and **very important**, and some found them even to be **pleasant** and **enjoyable**. Overall, parents who **open-mindedly experimented** with discussing marketing found it to be **simpler** and **more satisfying** than **initially expected**. Additionally, parents who took a serious interest in their children's marketing literacy talked more often with other parents about it and **inspired** them to take similar actions.

Here you see advice from one of the resources you can find online (from "Dealing with Marketing: What Parents can do"; links are

provided above)

| Educate your kids about advertising and how marketers target young people

- Help kids understand that the main goal of advertising is to make them buy things—often things they don't need, and didn't even know they wanted until they've seen the ad.
- Explain that advertising is big business, one of the largest businesses in the world.
- Using the Advertising Strategies handout in the [Advertising all Around Us](#) lesson plan, talk about the techniques marketers use to target kids.
- Using the Rules For Advertising To Kids handout in the [You've Gotta Have a Gimmick](#) lesson plan, discuss what advertisers are not allowed to do when producing ads for kids. Examine commercials and print ads to see if they follow the rules.
- Using the [Talking to Kids About Advertising](#) tip sheet, start to integrate media literacy questions into the conversations you have with your kids about advertising.
- Using the Can You Spot the Ad? handout in the [Can You Spot the Ad?](#) lesson, help your children understand that branded characters are a kind of advertising even if they're not delivering a particular advertising message.
- Play the game [Co-Co's Adversmarts](#) with your children to help them recognize commercialized online environments and understand the tricks that they use to build brand loyalty and make you come back.

Lastly, parents are recommended to not use **long-form monologues** because this might evoke a feeling of **inferiority** and, as a result, resistance against helpful advice or even rebellion in doing the exact opposite, such as buying the unhealthy products promoted in an influencer video. In contrast, the recommendation is to use **dialogues** that combine **information and guided questions** to enable child(ren) to reach their **own conclusion** about undesirable consequences, such as asking the child(ren) about how they think marketing influences them.

2) Response Report

<responses>