

Is my kid that naive? Parents' perceptions of their children's attitudes towards advertising on smartphones in Chile

Beatriz Feijoo^a and Charo Sádaba^b

^aCommunication Department, International University of La Rioja, Spain

^bMarketing and Media Management Department, University of Navarra, Spain

Beatriz Feijoo

Communication Department

School of Business and Communication, International University of La Rioja

Av. de la Paz, 137

26006 Logroño, La Rioja, Spain

beatriz.feijoo@unir.net

@Beu1987

Charo Sádaba

Marketing and Media Management Department

School of Communication, University of Navarra

Campus Universitario s/n

31080 Pamplona, Navarra, Spain

csadaba@unav.es

@csadaba

Funding details

This work was supported by the National Commission for Scientific and Technological Research (CONICYT) of the Government of Chile under Grant number Fondecyt Initiation project No. 11170336.

Impact Summary

Prior State of Knowledge: Researchers agree on the limitations of the conceptual knowledge of a message's persuasive intention for children to process commercial content. However, the potential impact of the advertising children deal with through digital media, and their parents' awareness of it, is under-researched.

Novel Contributions: There are important differences in the perception of children and parents regarding mobile advertising and the way children interact with it. Parents are not aware of how their children trust the commercial messages they see while using their mobile phones.

Practical Implications: Differences in perceptions between children and their parents are of interest to parental mediation researchers. From a methodological perspective, this article shows that parent-child dyad research is highly relevant, because it can reveal nuances in children's media use and media literacy.

Authors' Bio

Beatriz Feijoo, Ph.D. is an Associate Professor of Advertising and Marketing at the School of Business and Communication, International University of La Rioja (Spain). Her research focuses on communication and children, the use and consume of screens in new generations, and more recently on the relationship between minors and advertising through the mobile devices.

Charo Sádaba, Ph.D. is an Associate Professor of Advertising and Marketing at the School of Communication of the University of Navarra (Spain). Her research has been focused on the impact of digitalization on children and teenagers, their behaviour, attitudes and opinions towards technology, particularly in Spain and Latin American countries. More recently she has started a project on the impact of technology in emerging adulthoods.

Is my kid that naive? Parents' perceptions of their children's attitudes towards advertising on smartphones in Chile

This research reflects on the perception parents have of their children who, as active users of mobile devices, are recipients of advertising via such media. A comparison was drawn between parent and child responses to corroborate the level of consistency between adult perception and what children stated regarding their attitude towards the advertising to which they were exposed.

The results obtained from a survey applied in dyads in 501 households in the Metropolitan Area of Santiago de Chile showed that parents and guardians tend to underestimate the trust that children place in the advertising appearing on the channels they watch most on their mobile devices (YouTube, WhatsApp, online games). This paper aims to ground a solid starting point to enable subsequent research on childcare, content supervision and parental and social mediation.

Keywords: children; advertising; mobile; attitude; dyads; parents; advertising literacy.

Introduction

Youth aspirations in terms of independence, mobility, instant peer connection and entertainment have turned mobile phones into a highly desired object for early teens, and a must for teens and young adults (Oksman & Rautiainen, 2002; Campbell, 2016). Once in their hands, mobile phones are used intensively (Ling & Haddon, 2008). Such intense use has raised some concerns, mainly with regard to the sheer amount of time devoted to screens (Chassiakos, Radesky, Christakis, Moreno & Cross, 2016), while more recently the potential negative effect of screen time on youngsters' wellbeing has also been addressed (Orben & Przybylski, 2019).

Following Blum-Ross and Livingstone's proposal (2016, 2018), what young people do while enjoying themselves using these screens rather than the amount of time spent on them seems most relevant for the purposes of analysis. Besides music, sports scores and statistics, jokes, or images and messages via social media, advertising is another constant feature in the digital space (Bart, Stephen & Sarvary, 2014). Are young people prepared to cope with the intensity of commercial content they encounter online? Is their understanding of the persuasive nature of advertising being uniquely affected by the highly personal nature of mobile phones? Are parents, the main purveyors of mobile phones for young people, aware of the amount of online advertising to which their children are exposed?

It is striking that while adult society has long been trying to regulate the exposure to commercial messages to this age group (Gunter, Oates & Blades, 2005), children and teenagers are now using and consuming content saturated with endless forms of advertising (De Jans & Hudders, 2020). However, when asked about how their children are affected by advertising, parents mainly point to television (Oates, Newman & Tziortzi, 2014) and seem less aware of other modes of advertising present in their

children's lives. Oates et. al (2014) also note that the new screens involve individual consumption, a trait that entails less parental awareness of the type of content to which their children are being exposed.

This article aims to understand the perceptions that parents and teenagers have about the advertising content they encounter while using their mobile devices. In addition to potentially improving parenting practices, the conclusions could shed light on how to improve and update advertising literacy programs by taking into account the nature of mobile phone content consumption and aspects of commercial messages in digital media.

Two assumptions underpin this article. First, the ability to recognise advertising is a requirement for the development of a critical attitude towards advertising (An, Jin & Park, 2014). And, second, when questioning a persuasive message, trust in and the attitude towards an advertisement influence children's handling of criteria and resources (Rozendaal, Slot, van Reijmersdal & Buijzen, 2013).

The online advertising processing. Basic principles

De Jans, Van de Sompel, Hudders and Cauberghe's (2017) review of 10 years of research (2006-2016) revealed the need for more studies focusing on online advertising. That children and teenagers are heavy smartphone users (Ling & Haddon, 2008) and that advertising is highly present in the digital arena are widely acknowledged. This advertising is sometimes disguised as entertainment or informative content, thereby obscuring its identification and, as a result, hindering the user's critical reaction to its persuasive intent.

According to Rozendaal et al. (2013), persuasion knowledge, also known as advertising literacy, involves two dimensions: a conceptual one which involves recognition of advertising's commercial source and understanding its persuasive intent;

and an attitudinal dimension, which is associated with critical attitudes toward advertising. Similarly, Hudders, De Pauw, Cauberghe, Panic, Zarouali and Rozendaal (2017) draw a distinction between dispositional advertising literacy and situational advertising literacy, that is, the (cognitive, moral and affective) knowledge exhibited by the consumer of advertising phenomena that must be triggered by exposure to advertising so as to identify its persuasive intent and critically reflect on the message delivered.

Various research projects on new digital advertising formats have shown that having conceptual knowledge of the persuasive intention of advertising is necessary but not sufficient for children to duly process such messaging (An et al., 2014; Rozendaal et al., 2013; Van Wesenbeeck, Walrave & Ponnet, 2017; Van Reijmersdal, Rozendaal, Smink, Van Noort & Buijzen, 2017; Livingstone & Helsper 2006).

This study analyses the attitude of children (10 to 14 years old) towards the advertising messages they receive on their mobile phones. Experiencing advertising via these devices is distinctive due to the personal associations of the device (Oates et al., 2014), as well as the pervasive and blurred nature of commercial content in the digital field. The young audience demands formats which blur the boundaries between advertising, entertainment and information and draw users into immersive, highly involving and entertaining environments (Van Wesenbeeck et al., 2017; Van Reijmersdal et al., 2017). At the same time, these new formats resort more to emotional and entertaining strategies than to rational argumentation (Oates et al., 2014).

In this scenario, parents have both the opportunity and the responsibility to mediate the content children receive from both content and advertising by teaching them to differentiate what is real from what is fiction and by promoting healthy consumption values (Saraf, Jain & Singhai, 2013). Parental attitudes and concern seem

to be more relevant than children's age (Condeza, Herrada-Hidalgo & Barros-Friz, 2019; Shin, 2017), which underscores the significance of the role of parents.

This study aims to understand if there is a gap between parents and children by studying both parental perceptions of their children's behaviour in relation to advertising on mobile devices and children's responses about their self-declared ability to detect advertising and their attitude and level of trust in it.

Chile, an informative case study

Chile is an interesting case study as regards internet access and consumption. According to the Ninth Survey on Internet Access and Uses promoted by the Sub-secretariat of Telecommunications in Chile (Subtel, 2017), 87.4% of Chilean households have their own paid access to the Internet, with mobile connection being the main mode of access within the home (29.6%), followed by landline broadband (28.9%). Homes with both types of connection account for 27.2% of the total. The Mobile Study in Latin America developed by IMS (Internet Media Services) and Comscore (2017) shows that regionally Chile is the country with the highest level of internet service penetration across its population, followed by Argentina, Mexico and Brazil.

In keeping with this data, 84.6% of internet access occurs through a mobile device, generally a smartphone, which amounts to almost 80% of total access (Subtel, 2019). Moreover, smartphone equipment used by the Chilean population is at the same level as European countries, with an average internet consumption of 10 gigabytes per user (Subtel, 2019).

This widespread availability of mobile technology is likewise common to Chilean children. According to data from the latest study on uses, opportunities and risks associated with ICT in Chile carried out by the Kids Online project (Cabello & Claro, 2017), 92% of children and adolescents who use the internet have smartphones,

and their use begins at increasingly younger ages. Although there are significant differences in technological devices depending on socioeconomic stratum (C1-C2, C3, D), smartphone penetration is the most socially prevalent as compared to other screens such as desktop or laptop computers.

Thus, given the socioeconomic profile of Chile and the level of development and penetration of mobile use in the selected age range, the results of the study could be valuable and comparable to other developed regions and countries.

Given that the relationship between children and digital advertising requires new research contributions and approaches, the lack of such analysis is also patent in countries like Chile. At the same time, however, a number of studies that do deal with the consumption of advertising through mobile phones and videogames in similar geographical contexts (Uchoa-Craveiro & Araújo Cysne Ríos, 2013; Feijoo, Sádaba & Bugueño, 2020) ought to be taken into account.

Specifically, this article seeks to compare the perceptions children and their parents have with regard to the former's level of advertising literacy. This perception is measured in terms of recognition, attitude and trust placed in this type of persuasive messages.

In order to meet this objective, the following research questions are proposed:

(1) On children's perceptions:

- RQ1a. What proportion of children recognise the advertising they receive on their mobile phones?
- RQ1b. What actions do children say they have towards the advertising they receive on their mobile devices?

- RQ1c. To what extent do children trust the platforms on which they most commonly encounter advertising?
- (2) On parents' perceptions:
- RQ2a. What proportion of parents do think their children are able to recognize the advertising they receive on their mobiles?
 - RQ2b. What actions do parents think their children have towards this advertising?
 - RQ2c. To what extent do parents rate the children's trust in the platforms where they encounter advertising?
- (3) RQ3. Do parents and children differ in their perceptions of the child's ability to identify and relate to the advertising children receive on mobile phones?

Methodology

A survey was used to address the research questions: specifically, face-to-face questionnaires in which the interviewer uses an electronic device to record the responses. The universe for this study comprised households with children between 10 and 14 years old in the Metropolitan Area of Santiago, Chile.

According to the 2017 Chilean Census, the Metropolitan Area has 373,129 homes with children between 10 and 14 years old distributed by areas as follows: Centre, 47,148 households with 10- to 14-year old children; North, 50,553; East, 69,954; West, 73,877 and South, 131,597 households.

A sample of 501 households was defined, and a resident child in each who fulfilled the research profile and one of their parents or legal guardian were surveyed. Therefore, a total of 501 minors and 501 adults completed the survey.

For the design of the sample, a probabilistic sampling was chosen by geographic areas (Centre, North, East, West and South), assigning the same sample size to each of them (100 cases). The distribution of cases within each area was proportional to the size (according to the number of households with children aged 10 to 14 years old) of the boroughs that make up each area. The selection of the sample was random at the level of block, home and interviewee, the latter if more than one child aged 10 to 14 was living in the home.

Therefore, a representative simple was obtained that includes a margin of error of $\pm 4.4\%$, maximum variance and 95% confidence. The fieldwork took place between the months of May and July 2018.

During the visit to each home, adults and children were interviewed separately. In those cases in which there was more than one minor and adult in the home that met the criteria of the filter, individuals who had birthdays on the date closest to the day the survey was conducted were selected. The same survey format was used for both groups and the same questions were asked to both segments, but with a different approach: the object of investigation in this study is children, so the questionnaire aimed at minors asked about their own habits and experiences with mobile devices and the advertising received, while the version designed for parents/guardians was intended to answer according to the perception that they themselves, as those responsible for minors, had regarding their children's use of the devices and the relationship they have with advertising. In total, 1002 valid responses to the survey were obtained, from both minors and guardian adults. Table 1 summarises the main features of the sample.

[Table 1 near here]

Measures

Given the scant attention that this phenomenon has received so far (De Jans et al., 2017), the approach in this study is exploratory approach and seeks to shed light on the measurement of the young people's ability to recognise and interpret the advertising they receive through their mobile phones.

Advertising literacy is measured using the survey model designed by Rozendaal, Oprea and Buijzen (2016), ALS-C (Advertising Literacy Scale for children) tested on children ages 8 to 12 years old, which includes the analysis of literacy at both conceptual and attitudinal levels. Conceptual advertising literacy is measured by selecting the commercial message recognition variable from this survey, whilst the variables of liking / disliking and scepticism towards such persuasive messages serve to measure advertising literacy at an attitudinal level. A set of mobile consumption questions is also included.

The ALS-C model was designed to measure television advertising literacy, so it was adapted to digital media for the research purposes here (Rozendaal et al., 2016; Zarouali, De Pauw, Ponnet, Walrave, Poels, Cauberghe & Hudders, 2019). Thus, in the construction of the questionnaire, priority was given to differentiating the recognition and the degree of trust placed in advertising per platform, in order to observe whether children respond differently to advertising messages depending on what they are using the mobile phone for.

The following questions were addressed to the child, (and further adapted by incorporating the expression "According to what you know or think does your child...?" when addressed to adults):

- Have you recognised advertising while engaged in activities on your mobile devices? Activities when using WhatsApp, Facebook, Instagram, Twitter,

YouTube, games, mail, phone call, SMS; formulated as a dichotomous question (Yes=1; No=0). In order to create the overall score for the detection variable, all the scores for all nine platforms were averaged for each sample (Adult: $\alpha = .81$, $M = 0.40$, $SD = 0.40$; Minor: $\alpha = .83$, $M = 0.52$, $SD = 0.42$).

- In general, what is your attitude toward the advertising you receive? Four response categories were available, only one option could be checked: (1) I totally ignore it, (2) I close / block it; (3) It simply attracts my attention; (4) It attracts my attention and I click on it. (Adult: $\alpha = .73$, $M = 1.88$, $SD = 0.94$; Minor: $\alpha = .77$, $M = 1.72$, $SD = 0.88$). This question was complemented with an open-ended question: Why do you have that attitude towards advertising?
- On a scale of 1 to 5 in which 1 means “Distrust” and 5 means “Strongly trust”, how trustworthy is the advertising received from the following platforms? SMS, phone calls, emails, WhatsApp, YouTube, Facebook, Twitter, Instagram, games. The nine items formed one reliable scale for each sample (Adult: $\alpha = .91$, $M = 1.90$, $SD = 1.20$; Minor: $\alpha = .86$, $M = 2.11$, $SD = 1.33$).

The measurement of advertising literacy at the dispositional level, which focuses on analysing the possession of knowledge and skills to understand persuasive messages (Zarouali et al., 2019) was contemplated.

Therefore, three variables related to the child's ability to deal with the persuasive effect of advertising were considered: recognition, attitude and degree of trust placed in this type of message.

Children's answers were compared to their parents' perception of their behaviour in relation to advertising messages.

To determine the presence of significant differences between the answers provided by adults and children, the Bonferroni test was applied, given that the N for each sample (adults and minors) was the same.

Results

Children's perceptions of their ability to recognise advertising, attitude and level of trust placed in it

The first step in advertising processing is to identify the phenomenon. Regarding RQ1a, more than 70% of the children in the study sample stated that they are aware of being impacted by advertising while carrying out their most common routines on their mobile phones. However, less than 25% of the minors acknowledged having identified the presence of advertising in phone calls, SMS and email services.

[Table 2 near here]

The answers to RQ1b disclosed that children claimed to “completely ignore” (53.9%) the advertising they receive on their mobile devices. When asked about this attitude, they pointed to such reasons as “not attracting their attention / not caring / not being interested” (48%), simply “not liking” (14.5%), “not finding it entertaining” (11%) or “disliking and/or finding it annoying” (3%). The second attitude children claimed to have when confronted with advertising is "to close or block advertising" (23.2%) for the same reasons as mentioned above. One in five children stated that they "pay attention to advertising" and a small fraction of them (2.6%) said they "pay attention and click on it." The main cause of paying attention and interacting with such a message was that it sparked their curiosity.

[Table 3 near here]

The results related to the reliability variable (RQ1c) underscored the notion that children do not trust the advertising they receive on mobile phones. Confidence was measured as net confidence levels, that is, the difference between the sum of the percentages of the options on the Likert scale relating to “Trust” and “Strongly trust” and the sum of the percentages relating to “Strongly distrust” and “Distrust.” More than 50% of children stated that they do not trust advertisements received via services such as Twitter, SMS, email and Facebook, that is, these functions and platforms evinced the most negative net confidence levels, over -55%. YouTube, WhatsApp and video games had net confidence levels that were closest to 0.

[Table 4 near here]

When the data were analysed according to the gender, age and socioeconomic background of the children surveyed, some significant differences ($p < 0.05$) were observed in the advertising recognition variable and the level of trust placed in such messaging:

- In the recognition of persuasive messages, age was the variable showing the most significant differences. Thus, a higher proportion of children aged 13 and 14 years old confirmed they could recognise advertising on Facebook, Twitter, email and SMS, as compared with those aged 10 to 12. Gender showed significant differences in relation to YouTube, where boys tended to recognise advertising more than girls, whilst socioeconomic status revealed no significant differences.
- The lowest confidence level (“no confidence”) evinced significant age-related differences. Children aged 10 to 12 showed higher percentages of “no confidence” than those aged 13 to 14 for commercial messages received by email, Twitter and Instagram. There were also differences as regards gender,

with girls showing a higher rate of mistrust than boys for advertising received via Facebook and video games. Children of socioeconomic status D expressed more mistrust than children of other backgrounds to advertising received by email, YouTube and Instagram.

Adults' perceptions of children's ability to recognise advertising, attitude and level of trust placed in it

Regarding the responses to RQ2a, in general the proportion of adults who thought that children recognise advertising is lower than what minors indicated. Adults believed that children recognise advertising messages to a greater extent on social networks compared to other platforms, namely on YouTube (69.8%), Facebook (59.9%) and Instagram (51.9%). Although playing games was a prevalent part of the children's online routines, less than 50% of parents felt that their child was able to recognise advertising in them.

Similarly, 15.7% of adults estimated that children recognised commercial messages on WhatsApp, one of the most commonly downloaded apps among the children surveyed. In the same way, less than 10% of adults thought that their child was able to recognise advertising via SMS (7.8%), phone calls (7.2%) or email (4.6%).

Responses to RQ2b revealed that, in general, the parental perception was that their children's main attitude towards advertising was to ignore it (42.8%) or close / block it (23.7%). The main reasons stated by parents for having this attitude were that advertising did not appeal to their children or it did not seem entertaining. Almost 5% of adults stated that children did pay attention to the ads and click on them mainly because they had sparked their curiosity.

Net confidence data in relation to RQ2c showed that adults estimated that children did not trust the advertising they may have received on different platforms via

their mobile phones. Parents believed that their children were more suspicious of advertising received via email (-62.3%), Twitter (-61.7%), SMS (-55.7%), Instagram (-54.1%) and Facebook (-53.9%), with the last two apps those most frequently used among the minors surveyed.

Segmentation of the responses provided by adults by age, gender and socioeconomic level, disclosed significant differences ($p < 0.05$) in the advertising recognition variable:

- Gender-related differences among adults associated with the recognition of advertising received via Facebook and messaging showed a higher proportion of men reporting that children recognised persuasive content. Age evinced no significant differences, whilst the socioeconomic level revealed differences with regard to the recognition of advertising on YouTube. Adults classified as C1 and C2 indicated that minors recognised advertising on this platform to a greater extent than those belonging to socioeconomic status D. Likewise, the adults classified in the lowest socioeconomic class felt that their children did not detect advertising in phone calls and messaging to the same extent as those in the middle class.

Comparison between the perceptions of minors and adults on the ability of the former to understand mobile advertising

As regards RQ3, adults and their children agreed on the platforms where they most often recognised persuasive messages. However, in all cases there were statistically significant differences ($p < 0.05$) between the responses provided by children and adults: the detection percentages declared by parents were significantly lower than those stated by children.

Regarding the attitude to advertising variable, in general, parents reported the same reasons as to why their children ignored advertising, albeit in slightly different proportions. The adults gave another reason why minors may ignore advertising: "to continue watching the video or playing" (5.4%). On the reasons for closing or blocking ads, once again, the parents' answers essentially mirrored their children's, with an additional reason rarely very rarely cited by their, the fact that "parents do not allow it" (8.7%).

It should be noted that a higher proportion of adults (4.9%) asserted that children paid attention and clicked on advertising on mobile devices.

In comparing responses from adults and minors regarding the level of trust placed in advertising received via a variety of mobile platforms, net trust data showed that both groups evinced high negative percentages of trust attributed to ads. However, significant differences ($p < 0.05$) in the highest confidence values ("trust" and "strongly trust") were observed for both adults and minors in relation to YouTube, WhatsApp and games platforms, with children expressing greater confidence. Significant differences ($p < 0.05$) were also present in lower confidence values ("strongly distrust" and "distrust") for SMS, email and Twitter services, which disclosed a higher percentage of mistrust among children than adults.

Discussion

Three key aspects of these results may be highlighted: they corroborate previous studies on the need to guide advertising literacy of young people towards a more attitudinal approach; the degree of use and consumption of the platform via which advertising is distributed seems to influence the degree of trust expressed by children towards advertising; and there are significant differences in perception between children and adults regarding the relationship of the former with the commercial messages they

receive via mobile phones.

In line with An et al. (2014), advertising recognition is undoubtedly a first step towards adequate digital literacy. In this study, the children showed a high percentage of advertising recognition, especially on the platforms they use most often in their digital routines (social networks and games). Regarding the attitude expressed towards such mobile advertising, more than half of the children surveyed expressed indifference. The others acknowledged some kind of interaction, even if it was simply to close the ads. Children report sensation or emotional processing ("it does not appeal to me", "I do not like it", "it is not entertaining") as the causes motivating their interaction, rather than rational advertising literacy. As described by the advertising processing model (PCMC model) designed by Buijzen, van Reijmersdal and Owen (2010), the results from this study confirm that children opt for low-effort cognitive processing when faced with new digital advertising formats and do not seem to activate their conceptual knowledge of advertising as such. Indeed, the children surveyed accounted for non-interaction with advertising by resorting to appetite reasons, which seems to indicate that the attitudinal dimension of advertising literacy is much more effective than the conceptual dimension in achieving a processing exercise in children, very much in line with what was concluded by previous research (Rozendaal et al., 2013; An et al., 2014; Van Wesenbeeck et al., 2017; Van Reijmersdal, et al., 2017).

Regarding the analysis of the level of trust placed in advertising, the net confidence data shows that children are generally suspicious of platforms in their role as advertising supports. However, YouTube, WhatsApp, videogames and Instagram are rated as the most reliable platforms by children. Children trust these platforms and show higher trust toward any kind of messages they may receive there, both because of the

mastery level they have acquired in their use and their familiarity with the platforms, as noted by Rozendaal et al. (2013).

Likewise, it is necessary to highlight that among children, age is the variable that yields the most significant differences both in the recognition of advertising and in the level of trust placed in it. As other scholars have previously pointed out (Hudders et al., 2017), the child's level of maturity plays a fundamental role in the processing of advertising. Hence, the literacy process must be age driven.

The results also show differences among parental and child perceptions of advertising on mobile phones. Specifically, two of the three variables analysed showed significant differences between the perceptions of parents and children: recognition ability and trust in advertising. The fact that mobile devices involve individual consumption, and thus interfere with parental supervision, may be a cause of these statistically significant discrepancies (Oates et al., 2014). The lack of statistically significant differences stated attitudes to advertising between adults and children may be mediated by a shared attitude towards advertising in general (Kuster, Ruiz & Damian, 2017).

The statistically significant differences detected between adults and children in the confidence indicators “Trust” and “Strongly trust” for YouTube, WhatsApp, games and Instagram seem to indicate that parents do not accurately perceive the level of trust that children place in the advertising received via the platforms they use the most.

The fact that parents do not perceive the mobile phone to be an advertising medium comparable to television (Oates et al. 2014), in addition to the fact that the mobile phone entails individual consumption, may also account for the percentage of non-response from adults in the study variables. One of the great limitations of the research method is that the statistical results are based on perceptions that the different

samples have about their own (children) or their child's (adults) ability to understand advertising on their mobile phones. The tool does not enable us to discern if children overestimate their own abilities, or if the parents underestimate them. However, the results obtained do confirm the presence of differences between the perceptions of parents and children regarding their ability to receive and interpret advertising on their mobile devices. Likewise, this study defines variables (recognition, attitude and confidence) to analyse the child's ability to interpret the advertising received via mobile phone based on previous research. However, there is no prior experience of their use in this way, which might also be regarded as a limitation for the investigation. For this reason, the development of a scale to measure advertising literacy in new media requires further research.

With the aim of contributing to increasing media literacy, the authors propose exploring the creation of shared spaces between parents and children for two purposes: to promote the exchange of views, so as to contribute to full mutual knowledge of what each believes and does, and in doing so, to establish a climate of trust between parents and children to facilitate future lines of inquiry.

Conclusions

Therefore, it may be concluded that there is a significant gap between parental perception and their children's assertions with regard to attitudes towards advertising the latter encounter on mobile devices.

Further studies are required on the level of awareness that the main social agents (parents and educators) have of the child as a consumer and as a recipient of advertising messages via mobile devices.

Funding

This research work is indebted to the Fondecyt Initiation project No. 11170336, entitled “Minors as Consumers. Analysis of the Advertising Received by Users aged 10 to 14 through Mobile Devices”, funded by the National Commission for Scientific and Technological Research (CONICYT) of the Government of Chile.

References

- An, S., Jin, H. S., & Park, E. H. (2014). Children's advertising literacy for advergaming: Perception of the game as advertising. *Journal of Advertising*, 43(1), 63-72. <https://doi.org/10.1080/00913367.2013.795123>
- Bart, Y., Stephen, A. T., & Sarvary, M. (2014). Which Products Are Best Suited to Mobile Advertising? A Field Study of Mobile Display Advertising Effects on Consumer Attitudes and Intentions. *Journal of Marketing Research*, 51(3), 270-285. <https://doi.org/10.1509/jmr.13.0503>
- Blum-Ross, A., & Livingstone, S. (2016). Families and Screen Time: Current Advice and Emerging Research. In S. P. Gangadharan (Ed.), *Media Policy Project Policy Brief Series* (Vol. 17). London School of Economics.
- Blum-Ross, A., & Livingstone, S. (2018). The Trouble with “Screen Time” Rules. In G. Mascheroni, C. Ponte, & A. Jorge (Eds.), *Digital Parenting. The Challenges for Families in the Digital Age* (pp. 179-187). Nordicom.
- Buijzen, M., van Reijmersdal, E. A., & Owen, L. H. (2010). Introducing the PCMC Model: An Investigative Framework for Young People's Processing of Commercialized Media Content. *Communication Theory*, 20(4), 427–50. <https://doi.org/10.1111/j.1468-2885.2010.01370.x>
- Cabello, P., & Claro, M. (2017). *Presentación de datos preliminares. Encuesta Kids Online Chile* [Presentation of preliminary data. Chile Kids Online Survey]. Santiago: Kids Online Chile/ PUCV.
- Campbell R. (2006). Teenage Girls and Cellular Phones: Discourses of Independence, Safety and ‘Rebellion’. *Journal of Youth Studies*, 9(2), 195-212. <https://doi.org/10.1080/13676260600635649>

- Chassiakos, Y. L., Radesky, J., Christakis, D., Moreno, M. A., & Cross, C. (2016). Children and adolescents and digital media. *Pediatrics*, *138*(5), e20162593. <https://doi.org/10.1542/peds.2016-2593>
- Condeza, R., Herrada-Hidalgo, N., & Barros-Friz, C. (2019). Nuevos roles parentales de mediación: percepciones de los padres sobre la relación de sus hijos con múltiples pantallas [New parental mediation roles: Parents' perceptions of their children's relationship with multiple screens]. *El profesional de la información*, *28*(4), e280402. <https://doi.org/10.3145/epi.2019.jul.02>
- De Jans, S., & Hudders, L. (2020). Disclosure of Vlog Advertising Targeted to Children. *Journal of Interactive Marketing*, *52*, 1-19. <https://doi.org/10.1016/j.intmar.2020.03.003>
- De Jans, S., Van de Sompel, D., Hudders, L., & Cauberghe, V. (2017). Advertising targeting young children: an overview of 10 years of research (2006–2016). *International Journal of Advertising*, *38*(2), 1-34. <https://doi.org/10.1080/02650487.2017.1411056>
- Feijoo, B., Sádaba, C., & Bugueño, S. (2020). ¿Nivel experto o ingenuo? Detección y confianza de los niños en la publicidad que reciben a través de sus dispositivos móviles. Perfiles de usuario [Expert or naive level? Detection and confidence by children of the advertising they receive through their mobile devices. User Profiles]. *Zer: Revista de estudios de comunicación*, *25*(48), 227-244. <https://doi.org/10.1387/zer.21520>
- Gunter, B., Oates, C., & Blades, M. (2005). *Advertising to Children on TV: Content, Impact, and Regulation*. Mahwah, NJ: Lawrence Erlbaum.
- Hudders, L., De Pauw, P., Cauberghe, V., Panic, K., Zarouali, B., & Rozendaal, E. (2017). Shedding new light on how advertising literacy can affect children's processing of embedded advertising formats: a future research agenda. *Journal of Advertising*, *46*(2), 333-349. <https://doi.org/10.1080/00913367.2016.1269303>
- IMS & Comscore (2017). *IMS Mobile in Latam Study, 2nd Edition*. <https://www.imscombine.com/news/Estudios-comScore/IMS-Mobile-Study-Septiembre2016.pdf>
- Kuster, B., Ruiz, M., & Damian, C. (2017). ¿Es efectiva la publicidad móvil? [Is mobile advertising effective?] *Revista de Ciencias Sociales*, *23*(1), 22-33.

- Ling, R., & Haddon, L. (2008). Children, youth and the mobile phone. In K. Drotner & S. Livingstone (Eds.), *The International Handbook of Children, Media and Culture* (pp. 137-151). SAGE Publications Ltd.
- Livingstone, S., & Helsper, E. J. (2006). Does Advertising Literacy Mediate the Effects of Advertising on Children? A Critical Examination of Two Linked Research Literatures in Relation to Obesity and Food Choice. *Journal of Communication*, 56(3), 560–84. <https://doi.org/10.1111/j.1460-2466.2006.00301.x>
- Oates, C., Newman, N., & Tziortzi, A. (2014). Parent's beliefs about, and attitudes towards, marketing to children. In M. Blades, C. Oates, F. Blumberg & B. Gunter (Eds.), *Advertising to children: New directions, new media* (pp.115-136). Springer.
- Oksman, V., & Rautiainen, P. (2002). "Perhaps it is a body part": How the mobile telephone became an organic part of the everyday lives of Finnish children and teenagers. In J.E. Katz (Ed.), *Machines that Become Us: the Social Context of Personal Communication Technology* (pp. 293-308). Transaction Publishers.
- Orben, A., & Przybylski, A.K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3, 173–182. <https://doi.org/10.1038/s41562-018-0506-1>
- Rozendaal, E., Oprea, S. J., & Buijzen, M. (2016). Development and validation of a survey instrument to measure children's advertising literacy. *Media Psychology*, 19(1), 72-100. <https://doi.org/10.1080/15213269.2014.885843>
- Rozendaal, E., Slot, N., van Reijmersdal, E. A., & Buijzen, M. (2013). Children's responses to advertising in social games. *Journal of Advertising*, 42(2-3), 142-154. <http://dx.doi.org/10.1080/00913367.2013.774588>
- Saraf, V., Jain, N.C., & Singhai, M. (2013). Children and parents' interest in tv advertisements: Elucidating the persuasive intent of advertisements. *Indian Journal of Marketing*, 43 (7), 30-43, <https://doi.org/10.17010/ijom/2013/v43/i7/34016>
- Shin, W. (2017). Active mediation of television, internet and mobile advertising, *Young Consumers*, 18 (4), 378-392, <https://doi.org/10.1108/YC-06-2017-00700>
- Subtel (2017). *IX Encuesta de Acceso y Usos de Internet* [IX Survey on Internet Access and Uses]. https://www.subtel.gob.cl/wp-content/uploads/2018/07/Informe_Final_IX_Encuesta_Acceso_y_Usos_Internet_2017.pdf

- Subtel (2019). *Estadísticas Sectoriales – Primer Semestre 2019* [Sectorial Statistics-First Half 2019]. <https://www.subtel.gob.cl/usuarios-de-internet-movil-consumen-10-gb-en-promedio-al-mes-y-numero-de-telefonos-moviles-sube-a-26-millones/>
- Uchoa-Craveiro, P. S., & Araújo Cysne Ríos, J. R. (2013). Publicidad y juegos digitales en el cotidiano de niños españoles y brasileños: un análisis de la recepción infantil [Advertising and digital games in the daily life of Brazilian and Spanish children: an analysis of the children's reception]. *Estudios Sobre El Mensaje Periodístico*, 19, 501-509. https://doi.org/10.5209/rev_ESMP.2013.v19.42136
- Van Reijmersdal, E. A., Rozendaal, E., Smink, N., Van Noort, G., & Buijzen, M. (2017). Processes and effects of targeted online advertising among children. *International Journal of Advertising*, 36(3), 396-414. <https://doi.org/10.1080/02650487.2016.1196904>
- Van Wesenbeeck, I., Walrave, M., & Ponnet, K. (2017). Children and advergames: the role of product involvement, prior brand attitude, persuasion knowledge and game attitude in purchase intentions and changing attitudes. *International Journal of Advertising*, 36(4), 520-541. <https://doi.org/10.1080/02650487.2016.1176637>
- Zarouali, B., De Pauw, P., Ponnet, K., Walrave, M., Poels, K., Cauberghe, V., & Hudders, L. (2019). Considering children's advertising literacy from a methodological point of view: Past practices and future recommendations. *Journal of Current Issues & Research in Advertising*, 40(2), 196-213.

Table 1. Main characteristics of the sample

	Adult (N=501)	Minor (N=501)
Age	18 to 29: 6.6% (33) 30 to 45: 68.5% (343) 46 to 60: 20.4% (102) +60: 4.6% (23)	10-12: 60% (300) 13-14: 40% (201)
Gender	Men: 18% (90) Women: 82% (411)	Boys: 46% (230) Girls: 54% (271)
Minor's education		5th grade: 24% (120) 6th grade: 24% (121) 7th grade: 20% (100) 8th grade: 16% (80) 1st high school: 16% (80)
Relationship to minor	Father/Mother: 93% (466) Uncle/Aunt: 1% (5) Grandparent: 4% (20) Other: 2% (10)	
No of members of the household	2 members: 4.8% (24) 3 members: 15.8% (79) 4 members: 32.7% (164) 5 members: 24.2% (121)	6 members: 11.8% (59) 7 or + members: 8.8% (44) No answer: 2% (10) N=501 households
Geographical location of the household	Center: 20% (100) North: 20% (100) East: 20% (100) West: 20% (100) South: 20% (101)	
Head household educational level	No formal studies: 0.2% (1) Some primary education: 4.6% (23) Completed primary education: 8.6% (43) Some secondary education: 11.4% (57) Completed secondary education: 35.1% (176) Some technical education: 9% (45) Completed technical education: 13% (65) Some university education: 5.8% (29) Completed university education: 10% (50) Postgraduate: 1.8% (9) No answer: 0.6% (3)	
Household socioeconomic status	High (C1): 7.2% (36) Middle (C2 and C3): 46.9% (235) Low (D): 42.9% (215) No answer: 3% (15)	
Mobile technology in use		Smartphones: 99% (496) Notebook/laptop: 52% (261) Tablet: 49% (245)
Main uses for mobile technology		Entertainment and leisure: 83% (416) Communication: 77% (386) Check/be active on social networks: 43% (215)
Most downloaded apps*		Video players: 66% (308) Social networks: 56% (261) Games: 54% (252) Youtube (92%); WhatsApp (83%); Instagram (52%); Facebook (39%); Netflix (32%); Spotify (32%)

*on N=466 apps downloaders

Table 2. Level of advertising recognition per mobile devices platforms

		Adult	Minor
On WhatsApp N _A =431* ¹ N _M =431* ¹	Yes*	15.7%	29.5%
	No	73.4%	70.5%
	NR/DK	10.9%	0.0%
On Facebook N _A =281* ¹ N _M =281* ¹	Yes*	59.9%	76.5%
	No*	32.3%	23.5%
	NR/DK	7.7%	0.0%
On Instagram N _A =281* ¹ N _M =281* ¹	Yes*	51.9%	73.0%
	No	34.2%	27.0%
	NR/DK	13.9%	0.0%
On Twitter N _A =56* ¹ N _M =56* ¹	Yes*	42.2%	66.1%
	No	33.3%	33.9%
	NR/DK	24.4%	0.0%
On YouTube N _A =455* ¹ N _M =455* ¹	Yes*	69.8%	85.7%
	No*	20.2%	14.3%
	NR/DK	10.0%	0.0%
Inside games N _A =383* ¹ N _M =383* ¹	Yes*	45.3%	74.4%
	No*	33.3%	25.6%
	NR/DK	21.4%	0.0%
By email N _A =501* ¹ N _M =501* ¹	Yes*	4.6%	18.3%
	No*	68.3%	81.7%
	NR/DK	27.1%	0.0%
Phone Calls N _A =501* ¹ N _M =501* ¹	Yes*	7.2%	24.8%
	No*	66.9%	75.2%
	NR/DK	25.9%	0.0%
On SMS N _A =501* ¹ N _M =501* ¹	Yes*	7.8%	21.8%
	No*	63.3%	78.2%
	NR/DK	28.9%	0.0%

* Statistically significant result between sample A and M. Results are based on two-sided tests with a significance level of 0.05. The tests are adjusted for all pairwise comparisons within one row of each subtable applying the Bonferroni correction. The NR / DK category is not used in comparisons because this column ratio equals zero or one.

*¹ Those who are registered or with access to the platform or service.

Table 3. Manifested attitude towards mobile advertising. Reasons

<i>Attitude</i>	Adult (N=501)	Minor (N=501)	Reasons	Adult	Minor
<i>Totally ignores ads</i>	42.8%	53.9%	Not calling their attention / not caring / not being interested	51.8%	48.0%
			Not liking*	6.6%	14.5%
			Not finding it entertaining	14.5%	10.8%
			Disliking and/or finding it annoying	2.4%	3.0%
			Seeming dangerous	0.6%	3.0%
			Interrupting him/her	4.2%	2.6%
			Continue watching a video or playing*	5.4%	1.5%
			Not allowed by parents	3.0%	1.1%
			NR / DK	3.0%	-
<i>Closes/Blocks ads</i>	23.7%	23.2%	Not calling their attention / not caring / not being interested	42.4%	35.3%
			Not liking*	9.8%	19.8%
			Not finding it entertaining	13.0%	12.1%
			Disliking and/or finding it annoying	5.4%	10.3%
			Interrupting him/her	3.3%	2.6%
			Taking time	3.3%	1.7%
			Not allowed by parents*	8.7%	0.9%
			Continue watching a video or playing	5.4%	0.9%
			Seeming dangerous	3.3%	0.9%
			Unsuitable content for children	5.4%	0.0%
			NR / DK	1.1%	-
<i>Simply calls his/her attention</i>	21.9%	20.4%	Arousing curiosity	60.0%	71.6%
			Not calling their attention / not caring / not being interested	15.3%	10.8%
			Not liking	3.5%	2.9%
			Not allowed by parents	2.4%	1.0%
			Continue watching a video or playing	2.4%	0.0%
			NR / DK	1.2%	-
<i>Calls his/her attention and clicks on it</i>	4.9%	2.6%	Arousing curiosity	57.9%	84.6%
			NR / DK	15.8%	-
	6.7%	0.0%	-	-	-

** Statistically significant result between sample A and M. Results are based on two-sided tests with a significance level of 0.05. The tests are adjusted for all pairwise comparisons within one row of each subtable applying the Bonferroni correction.*

Table 4. Children's level of trust when exposed to advertising on different platforms

		%		Net confidence	
		Adult (N=501)	Minor (N=501)	Adult	Minor
SMS	Strongly distrust	52.1%	56.9%		
	Distrust*	12.4%	21.6%		
	Neither trust nor distrust	14.6%	13.2%	-55.7%	-70.1%
	Trust	6.8%	4.8%		
	Strongly trust	2.0%	3.6%		
Phone call	NR/DK	12.2%	0.0%		
	Strongly distrust	55.1%	49.5%		
	Distrust*	10.4%	20.4%		
	Neither trust nor distrust	12.2%	11.6%	-52.3%	-51.3%
	Trust	6.8%	9.8%		
Mail	Strongly trust	6.4%	8.8%		
	NR/DK	9.2%	0.0%		
	Strongly distrust	57.5%	59.1%		
	Distrust*	10.8%	18.8%		
	Neither trust nor distrust	12.2%	12.4%	-62.3%	-68.1%
WhatsApp	Trust	4.0%	6.2%		
	Strongly trust	2.0%	3.6%		
	NR/DK	13.6%	0.0%		
	Strongly distrust	39.9%	35.3%		
	Distrust	15.0%	15.6%	-39.5%	-19.6%
YouTube	Neither trust nor distrust	20.6%	17.8%		
	Trust*	9.2%	14.6%		
	Strongly trust*	6.2%	16.8%		
	NR/DK	9.2%	0.0%		
	Strongly distrust*	35.7%	26.9%		
Facebook	Distrust*	12.4%	17.8%		
	Neither trust nor distrust*	28.1%	22.2%	-30.1%	-11.6%
	Trust	13.0%	16.0%		
	Strongly trust*	5.0%	17.2%		
	NR/DK	5.8%	0.0%		
Twitter	Strongly distrust	48.7%	53.1%		
	Distrust	14.2%	17.0%		
	Neither trust nor distrust	16.8%	17.2%	-53.9%	-57.3%
	Trust	6.0%	9.2%		
	Strongly trust	3.0%	3.6%		
Instagram	NR/DK	11.4%	0.0%		
	Strongly distrust*	57.1%	72.9%		
	Distrust	8.8%	11.4%		
	Neither trust nor distrust	7.4%	9.2%	-61.7%	-77.6%
	Trust	2.8%	4.8%		
Games	Strongly trust	1.4%	1.8%		
	NR/DK	22.6%	0.0%		
	Strongly distrust	51.1%	49.1%		
	Distrust	12.2%	16.4%		
	Neither trust nor distrust	13.0%	14.2%	-54.1%	-45.1%
Games	Trust*	6.8%	13.4%		
	Strongly trust*	2.4%	7.0%		
	NR/DK	14.6%	0.0%		
	Strongly distrust*	47.7%	40.5%		
	Distrust*	10.2%	18.0%	-44.7%	-33.3%
Games	Neither trust nor distrust	16.6%	16.4%		
	Trust*	6.8%	12.8%		
	Strongly trust*	6.4%	12.4%		
	NR/DK	12.4%	0.0%		
	Strongly distrust*	47.7%	40.5%		

* Statistically significant result between sample A and M. Results are based on two-sided tests with a significance level of 0.05. The tests are adjusted for all pairwise comparisons within one row of each subtable applying the Bonferroni correction. The NR / DK category is not used in comparisons because this column ratio equals zero or one.