

Journal of Children and Media

ISSN: 1748-2798 (Print) 1748-2801 (Online) Journal homepage: <https://www.tandfonline.com/loi/rchm20>

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To cite this article: Suzanna J. Oprea, Siana Petrova & Esther Rozendaal (2020) Investigating the unintended effects of television advertising among children in former-Soviet Bulgaria, *Journal of Children and Media*, 14:2, 141-157, DOI: [10.1080/17482798.2019.1644359](https://doi.org/10.1080/17482798.2019.1644359)

To link to this article: <https://doi.org/10.1080/17482798.2019.1644359>



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Published online: 18 Jul 2019.



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Investigating the unintended effects of television advertising among children in former-Soviet Bulgaria

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ABSTRACT

Extensive research has been carried out to examine the unintended effects of television advertising on children in Western Europe. Little, however, is known about effects in Eastern European settings. Eastern European countries were part of the former USSR and its Soviet regime, meaning that all forms of commercial advertising were prohibited. Current parents and educators experienced the shift to capitalism first-hand and are particularly critical of consumer culture. This study adds to the current body of literature by studying unintended effects on advertising on children in a new context (i.e., Sofia, Bulgaria) and exploring the moderating effects of children's advertising literacy. We collected data among 273 8- to 11-year-olds and found that advertising exposure increases children's materialism and consumer involvement. We also found that children's conceptual advertising literacy buffered the effect on materialism for children with low advertising exposure, but enhanced the effect for children with high advertising exposure.

ARTICLE HISTORY

Received 6 July 2018
Revised 12 July 2019
Accepted 12 July 2019

KEYWORDS

Eastern Europe; Bulgaria; advertising effects; children; materialism; consumer involvement; life satisfaction; advertising literacy

Introduction

Extensive research has been carried out to examine the unintended effects of television advertising on children across the globe, including Europe. This research has shown that among Western European children, exposure to television advertising is linked with increased materialism and involvement in consumer culture (e.g., Buckingham & Tingstad, 2010; Oprea, Buijzen, van Reijmersdal, & Valkenburg, 2014; Schor, 2004), and, subsequently, decreased life satisfaction (e.g., Roberts & Clement, 2007). However, despite calls to study economically developing countries (Kasser, 2016; Valkenburg, 2000), little is known about the unintended effects of advertising on children in Eastern European countries. Therefore, this study aims to explore the effects of television advertising exposure on materialism, consumer involvement, and life satisfaction on children in Bulgaria, an economically developing former-Soviet country.

Bulgaria is an interesting country to study because it was under a communist regime between 1945 and 1989. In 1948, Vasil Kolarov, then-Head of the Communist Party in

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Bulgaria, condemned Western advertising as a product of capitalism, promoting consumer culture by pushing individuals to desire things they did not need, and labelled it as useless to a socialist society (Atanasova, 2009). Since the government was accountable for the production of all goods in the country, there was no need for advertisements (Tolstikova, 2007) unless they served state priorities – that is, to promote the government and strengthen the socialist spirit. Only after the fall of the communist regime in 1989, the Bulgarian citizens were introduced to commercially oriented advertising. Currently, the self-regulated National Council for Self-Regulation (NCSR) sets the code for advertising and commercial communication in Bulgaria. Article 17 of the code, pertaining to children and youth, sets boundaries to the type of products that can be advertised to children, the type of appeals that can be used in child-directed advertising, and the ways children can be depicted in advertising (NNS, 2019). However, it does not set limits to the amount of child-directed advertising.

Unlike Western nations, where television advertising has been employed for over 70 years (Rutherford, 1994), in Bulgaria television advertising is considered a relatively recent phenomenon. As a result, Bulgarian parents and grandparents lack lifelong experience with advertising, and may miss part of the advertising-related knowledge (also referred to as advertising literacy; see Rozendaal, 2011) that is necessary to effectively guide and educate children as skilled and critical consumers. Consequently, Bulgarian children might perceive commercials as trustworthy, fair, and unbiased which, in turn, could make them more vulnerable to the unintended effects of advertising. Parents across the world dislike child-directed advertising and consider it excessive and exploitative (Oates, Newman, & Tziotzi, 2014). In similar vein, Bulgarian parents consider it manipulative (Petrovici & Marinov, 2007), and the concerns about its unintended effects are mounting.

Previous research on the unintended effects of advertising on materialism, consumer involvement, and life satisfaction has often focused on children in middle childhood, because this is the developmental stage in which children start to recognize and utilize product symbolism (Chaplin & Roedder John, 2007; McNeal, 2007; Valkenburg & Cantor, 2001). Similarly, this research will focus on studying Bulgarian children aged eight to eleven years. Nowadays, Bulgarian children in this age group have access to various television channels and broadcasting content. In fact, Bulgarian children top the EU ranking in television viewing. According to a recent report, Bulgarian children spend 25.7 hours per week watching television, compared to Western European children, who devote approximately 16 to 17 hours of their time to watching television (Trud, 2016). While there is control over the type of content that can be shown – usually between 06:00 and 23:00, which is the time appointed by law for children’s television (Lex, 2016) – there is limited control over the type of television advertisements to which children are exposed or over the impact television advertisements have on them. The estimates of the number of television commercials Bulgarian children are exposed to now approach international estimates (e.g., 40,000 commercials per year; Stoyanova, 2015). Advertising directs young audiences in Bulgaria to such an extent that major online toy stores now offer entire catalogues solely dedicated to as-shown-on-TV and advertised toys (Hippoland, 2016).

The present study has two research goals. First, as said, we want to use existing measures to examine to what extent children in Eastern European settings such as Bulgaria are affected by advertising in terms of materialism, consumer involvement, and life satisfaction.

By focusing on children in the unexplored setting of former-Soviet Bulgaria, a country where commercial television advertising is a relatively recent phenomenon, this study attempts to broaden the scope of research on children's susceptibility to the unintended effects of advertising. Second, we want to investigate if advertising literacy can reduce children's susceptibility to unintended advertising effects. In doing so, this study provides a unique contribution to the field, because advertising literacy research has predominantly focused on the question whether advertising literacy can reduce intended effects on children's brand and product liking, as well as purchase requests and intentions (Rozendaal, Lapierre, van Reijmersdal, & Buijzen, 2011). Research focusing on the moderating role of advertising literacy in the unintended effects of advertising is still scarce (for an exception, see Hudders, Cauberghe, Panic, & de Vos, 2016).

Theory

Unintended effects of advertising exposure

Direct effects on materialism and consumer involvement

In general, materialism is attributed to those who cherish material possessions and physical convenience more than intangible virtues and spiritual qualities, thus giving the term a rather negative connotation (Srikant, 2013). Moreover, it refers to how people perceive attaining, owning, and displaying of material objects (Nairn, Ormrod, & Bottomley, 2007). It is important to note that such beliefs do not come into being on their own; rather, they need a force to drive them. Advertising can be considered as such a force, because, as Sirgy et al (2012) suggest, it draws attention toward what people possess rather than what or who they are as human beings.

In research among children, materialism has been defined as "having a preoccupation with possessions and believing that products bring happiness and success" (Opree, Buijzen, & Valkenburg, 2012, p. 487). In terms of the relation between exposure to television advertising and materialism in children, studies show that the two are positively connected. The majority of studies on children demonstrate a linear relationship between the two constructs, indicating that exposure to television advertising predicts materialistic views in children (Buijzen & Valkenburg, 2003a, 2003b; Opree et al., 2014; Vega & Roberts, 2011). Scholars explain this link by the fact that children are exposed to a lot of product advertising while watching television. They are led to believe that by owning the products advertised on television they could achieve satisfactory status in life, as well as popularity and success among their peers (Opree, Buijzen, van Reijmersdal, & Valkenburg, 2011); hence, they wish to possess these products.

H1: Children's advertising exposure and materialism are directly and positively related

In the past, the concept of materialism has been used interchangeably with that of consumer culture involvement. An explanation for this could be the fact that the two concepts share roughly the same idea. Both refer to a focus on what is physical, tangible, or material. Although no clear distinction between the two concepts has been explicitly established by previous research, Kasser, Ryan, Couchman, and Sheldon (2004) propose that materialism is a consequence of participation in consumer culture. Or, as Schor

(2004) puts it, consumer culture enables children to display “consumerist” behaviours. She distinguishes materialism from consumer culture involvement through the example of product ownership: “Having a lot of possessions could indicate that a child is materialistic and focused on things, or it might just mean that he is wealthy” (Schor, 2004, p. 148). For modern children it is virtually impossible to *not* participate in consumer culture, because they were born in such an environment and consumption is heavily promoted through the media and advertising.

H2: Children’s advertising exposure and consumer involvement are directly and positively related

Indirect effects on life satisfaction

According to Buijzen and Valkenburg (2003a), life satisfaction can be described as children’s happiness with their lives or themselves. In general, happiness is thought to depend on the amount of satisfaction with the different realms of life, taking into account social and ethical norms. For children, the reach of these domains is usually limited to their close environments: family, class, school, and friends (Huebner, 2004; Oberle, Schonert-Reichl, & Zumbo, 2010). In these settings, other factors can also influence children’s life satisfaction. One such factor is television viewing (Bruni & Stanca, 2008). Unhappiness can be caused by exposure to television advertising because of the repeatedly unrealistic ways in which products and brands are presented to young audiences (Buijzen & Valkenburg, 2003b). Moreover, television advertising encourages children to ask their parents to make purchases, which eventually leads to distress and conflicts in the family and thus decreases the children’s overall life satisfaction (Buijzen & Valkenburg, 2000; Pine & Nash, 2002; Pine, Wilson, & Nash, 2007).

While some studies findings reveal a negative correlation between children’s exposure to television advertising and their life satisfaction (e.g., Holder, Coleman, & Sehn, 2009), others find no support for this relation – not in cross-sectional research (e.g., Buijzen & Valkenburg, 2003a) nor longitudinal research (e.g., Opree et al., 2012). Still, several studies seem to suggest that television advertising exposure indirectly affects children’s life satisfaction through materialism. More specifically, materialism would decrease life satisfaction because desires become insatiable (i.e., the escalation hypothesis or *hedonic treadmill*, see Kasser, 2002), the current and desired state drift apart (i.e., the adaptation hypothesis), and because of an increased focus on objects rather than interpersonal relationships (i.e., the displacement hypothesis) (Opree et al., 2012). Previous studies have indeed demonstrated a negative correlation between materialism and life satisfaction. However, since correlation is not a matter of causation, it is possible that children who possess materialistic values suffer from decreased life satisfaction and that unhappy children seek comfort in material possessions (Abela, 2006; Dittmar, Bond, Hurst, & Kasser, 2014; Piachaud, 2008).

H3: Increased advertising exposure is related to higher materialism, which in turn is related to lower life satisfaction.

Based on the same line of reasoning for the effect of advertising exposure on materialism, we expect that increased exposure to advertising also leads to higher consumer involvement, and in turn to lower life satisfaction.

H4: Increased advertising exposure is related to higher consumer involvement, which in turn is related to lower life satisfaction.

Moderating effect of advertising literacy

Livingstone and Helsper (2006) claim that children “of all ages could be, more or less equivalently, affected by advertising but that the effects of advertising are dependent on advertising literacy” (p.576). In other words, the authors suggest that it is not the age of children that determines the way they respond to advertising, rather it is their level of advertising literacy. According to recent studies (Oprea & Rozendaal, 2015; Rozendaal, Oprea, & Buijzen, 2016), advertising literacy includes a conceptual and an attitudinal component. Children who have well-developed *conceptual* advertising literacy would recognise when they are being exposed to advertising content because they generally understand that advertisements try to persuade and eventually sell something to them. Children who have well-developed *attitudinal* advertising literacy would hold a healthy sceptical attitude toward advertising, and evaluate the trustworthiness, fairness, and appropriateness of advertising messages.

It is often assumed that increased conceptual and attitudinal advertising literacy were associated with less effective persuasion (see Hudders et al., 2017; Kunkel et al., 2004; Livingstone & Helsper, 2006). Traditionally, most advertising theories assume that advertising literacy can serve as a shield against the influence of advertising. In this view, children who have higher levels of advertising literacy are better able to critically process the advertisements they encounter, making them less susceptible to its effects, including the purchase of and the desire and requests for the advertised product (e.g., Brucks, Armstrong, & Goldberg, 1988). However, in the contemporary academic debate, this traditional assumption is increasingly contested. Theoretical insights on child development and advertising processing highlight important limitations to the functioning of advertising literacy as a defence against advertising effects (Rozendaal et al., 2011). It has been argued that due to the affect-based nature of persuasion in child-directed advertising in combination with children’s immature cognitive skills, children are highly unlikely to activate and apply their advertising literacy as a critical defence when confronted with advertising (see Buijzen, Van Reijmersdal, & Owen, 2010; Harris, Brownell, & Bargh, 2009; Livingstone & Helsper, 2006). Moreover, empirical evidence for the mitigating effect of advertising literacy on the persuasive influence of advertising is inconclusive (Lapierre, 2019).

The studies that have investigated the relationship between advertising literacy and the intended effects of advertising (e.g., brand attitude, advertised product desire) yielded mixed results: while some studies found that children with a better understanding of advertising (i.e., conceptual advertising literacy) were less susceptible to advertising’s effects, others did not find such a relation, or even found a positive relation suggesting that advertising literacy enhances advertising effects (e.g., Blumberg, Williams, & Kelley, 2014; Mallinckrodt & Mizerski, 2007; Panic, Cauberghe, & De

Pelsmacker, 2013; Ross et al., 1984; Rozendaal, Buijzen, & Valkenburg, 2009; Van Reijmersdal, Rozendaal, & Buijzen, 2012, 2015; Vanwesenbeeck, Walrave, & Ponnet, 2016; Waiguny, Nelson, & Terlutter, 2012; Waiguny & Terlutter, 2011). Still, in line with the defense view, several studies showed that children with more critical attitudes toward advertising (i.e., attitudinal advertising literacy) do have less positive attitudes towards and less desire for the advertised brands (Buijzen, 2007; Rozendaal, Buijzen, & Valkenburg, 2012).

It is uncertain whether the results observed in the above-mentioned studies on intended advertising effects will also hold for the unintended effects of advertising. Therefore, we will test whether children's level of conceptual and attitudinal advertising literacy affects the relationship between advertising exposure and materialism, consumer involvement, and life satisfaction. To our knowledge, only one study has focused on the moderating role of advertising literacy in the unintended effects of advertising (Hudders et al., 2016). This study showed that attitudinal advertising literacy decreased materialism after playing an advergaming. Based on the outcomes of this study and the traditional advertising defence hypothesis (Brucks et al., 1988), we expect that children who are more advertising literate are less susceptible to the unintended effects of advertising.

H5: Children's conceptual advertising literacy moderates the direct and positive relation between children's advertising exposure and materialism (H1), such that the relation is weaker for children with higher levels of conceptual advertising literacy.

H6: Children's conceptual advertising literacy moderates the direct and positive relation between children's advertising exposure and consumer involvement (H2), such that the relation is weaker for children with higher levels of conceptual advertising literacy.

H7: Children's attitudinal advertising literacy moderates the direct and positive relation between children's advertising exposure and materialism (H1), such that the relation is weaker for children with higher levels of attitudinal advertising literacy.

H8: Children's attitudinal advertising literacy moderates the direct and positive relation between children's advertising exposure and consumer involvement (H2), such that the relation is weaker for children with higher levels of attitudinal advertising literacy.

The complete overview of the hypotheses is provided in the theoretical model depicted in [Figure 1](#).

Method

Sample

After obtaining active informed consent from the regional inspector of education and school principals and passive informed consent from parents, data was collected among 273 children in four different schools in Sofia, Bulgaria (50.5% girls, $M_{\text{age}} = 9.66$, $SD_{\text{age}} = 1.16$). Though these four urban schools may not be representative for Bulgaria as a country, they formed an interesting set as three of these schools were general state schools that follow

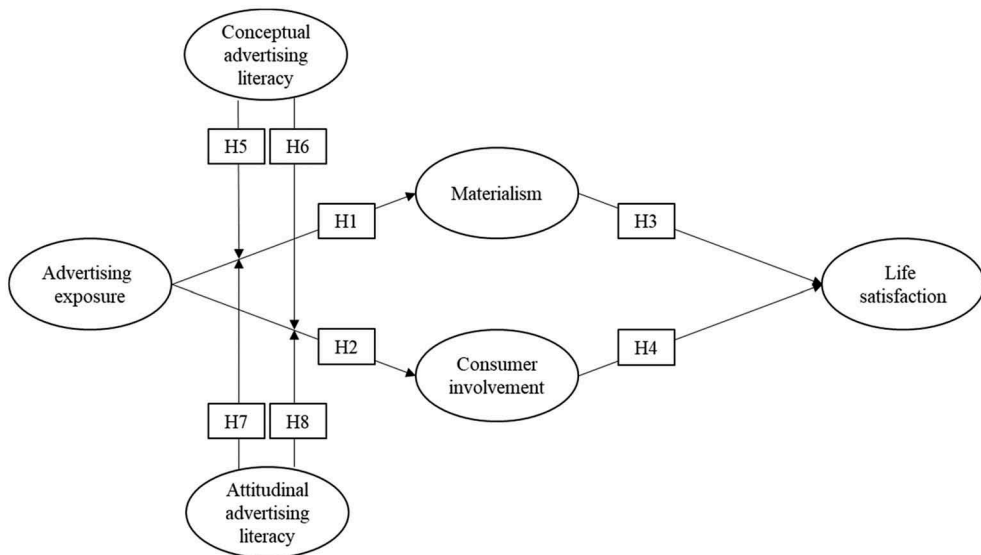


Figure 1. Theoretical model.

the curriculum set by the Bulgarian Ministry of Education and Science, and one school was a private acting school where – in addition to the regular curriculum – children received “media arts education”. Although the main focus of the additional lessons is on performing arts (i.e., children are trained to act for film, theatre, musicals, and television), children also receive media literacy coaching. As child-actors who are often employed by marketing agencies to star in television and radio advertisements, they need to have at least a basic knowledge of the nature of advertising.

Due to the difference in the curriculum, we expected that children who attended the private acting school would score higher on advertising literacy than children attending the general state schools. By purposively sampling at both types of schools, we wanted to capture enough variance in advertising literacy in order to test its postulated moderation effects. Of our total sample, two-third (181 children, 66.3%; 51.4% girls; $M_{age} = 9.69$, $SD_{age} = 1.19$) attended a regular state school and one-third (92 children, 33.7%; 48.9% girls; $M_{age} = 9.61$, $SD_{age} = 1.10$) attended the private acting school.

Procedure

The procedure for this study was granted IRB-approval from the Erasmus School of History, Culture and Communication of Erasmus University Rotterdam. All data was collected using paper-and-pencil questionnaires, using validated scales for children’s television advertising literacy, advertising exposure, materialism, consumer involvement, and life satisfaction. The scales were translated from English to Bulgarian by a licensed translator. All questionnaires were administered in the period between 21st March and 14 April 2016, with a break of ten days between 1st and 10th of April due to the children’s spring school holiday. Depending on children’s study load, each school’s principal selected the class where questionnaires were

distributed. To avoid any misunderstanding, children were verbally briefed on their rights and responsibilities as respondents. Filling out the questionnaires was anonymous and took ten to twenty minutes to complete.

Measures

Advertising exposure

Television advertising exposure was measured in accordance with the strategy validated by Opree (2014), asking children about their viewing frequency of the broadcasting channel most popular among their age group. To determine which commercial broadcasting channels were to be included in the questionnaire, we first determined which channels were available through all major television providers, and second which of these catered to 8- to 11-year-olds specifically (i.e., excluding channels for younger or older audiences). This resulted in a list of four channels: Cartoon Network, Disney Channel, Nickelodeon, and Super 7 (a local network). To determine whether this list was exhaustive, we asked 20 8- to 11-year-olds to list their favourite broadcasting channels. Based on their responses, Discovery Channel and National Geographic were added to the list. For each of the six channels, children were asked to specify if they watched it 1 (Never), 2 (Sometimes), 3 (Often), or 4 (Very often). In order to create the overall score for the advertising exposure variable, all the scores for all six television channels were averaged ($M = 2.39$, $SD = 0.50$).

Materialism

Materialism in children was measured using the complete validated eighteen-item Material Values Scale developed by Opree et al (2011). The six items for material centrality formed one reliable subscale ($\alpha = .85$, $M = 2.32$, $SD = 0.75$), and so did the six items for material happiness ($\alpha = .80$, $M = 2.23$, $SD = 0.68$), and material success ($\alpha = .85$, $M = 1.59$, $SD = 0.59$). The three subscales, in turn, were averaged and formed one reliable overall scale ($\alpha = .84$, $M = 2.05$, $SD = 0.59$).

Consumer involvement

Children's involvement in consumer culture was measured using a five-item sub-scale of the Consumer Involvement Scale originally created by Schor (2004) and validated by Bottomley, Nairn, Kasser, Ferguson, and Ormrod (2010). The overall scale measured "Dissatisfaction" (six items), "Consumer orientation" (five items) and "Brand awareness" (five items). Because dissatisfaction and brand awareness can also be seen as outcomes of children's consumer involvement, we operationalized the construct solely as consumer orientation. Each item was formulated as a statement rather than a question, with response categories ranging from 1 (Strongly disagree), 2 (Disagree), 3 (Agree), to 4 (Strongly agree). The five items formed one reliable scale ($\alpha = .63$, $M = 3.02$, $SD = 0.56$).

Life satisfaction

Life satisfaction was measured using the eight-item scale used by Opree et al (2011) that was developed and validated by Huebner and his team (2004, 2006). Eight questions related to children's sense of happiness with their proximate surroundings were asked, giving response options ranging from 1 (Not happy), 2 (Not so happy), 3 (A little happy),

to 4 (Very happy). The eight items formed one reliable scale ($\alpha = .78$, $M = 3.65$, $SD = 0.37$).

Advertising literacy

Advertising literacy was measured using fifteen items out of the twenty-five-item scale developed by Rozendaal et al (2016). In the original study, conceptual advertising literacy was measured using a sixteen-item scale consisting of six sub-scales. Because the other four sub-scales required visual stimulus materials to be presented to children, only two of them were used for this research: "Understanding the persuasive intent of advertising" (three items) and "Understanding the selling intent of advertising" (three items). The response categories ranged from 1 (Yes, for sure), 2 (Yes, I think so), 3 (No, I don't think so), to 4 (No, certainly not), but the children's scores were reversed so that higher scores reflected higher advertising literacy. The three items for understanding persuasive intent formed one reliable scale ($\alpha = .80$, $M = 2.95$, $SD = 0.88$), and so did those for understanding selling intent ($\alpha = .78$, $M = 3.21$, $SD = 0.84$). Together, the two scales formed a reliable measure for children's conceptual advertising literacy ($\alpha = .77$, $M = 3.08$, $SD = 0.78$).

Following the suggestion by Rozendaal et al (2016), attitudinal advertising literacy was measured using a nine-item scale consisting of three sub-scales: "Understanding advertising's bias" (three items), "Scepticism toward advertising" (three items), and "Disliking of advertising" (three items), offering response options ranging from 1 (Never), 2 (Sometimes), 3 (Often), to 4 (Very often). Two of the bias and all three of the scepticism items were reversed so that higher scores reflected higher advertising literacy. The three items for understanding advertising's bias originally formed an unreliable scale ($\alpha = .51$), but it could be made reliable by omitting its third item ($\alpha = .64$, $M = 3.02$, $SD = 0.72$). The three items for scepticism toward advertising immediately formed a reliable scale ($\alpha = .77$, $M = 3.21$, $SD = 0.60$), and so did the three items for disliking of advertising ($\alpha = .83$, $M = 3.04$, $SD = 0.83$). Together, the three scales formed a reliable measure for children's attitudinal advertising literacy ($\alpha = .64$, $M = 3.09$, $SD = 0.55$).

Control variables

In addition to the main variables presented above, our analyses also contained three control variables being the dummy variable sex (i.e., 0 = boys, 1 = girls), the continuous variable age, and the dummy variable school type (i.e., 0 = general state school, 1 = private acting school). As explained before, we expected that children enrolled in the private acting school to have a higher conceptual and attitudinal advertising literacy than those enrolled in the general state school. Two independent-samples t-tests confirmed these assumptions: The children enrolled in the private acting school indeed scored higher on conceptual advertising literacy ($M = 3.61$ compared to $M = 2.81$, $t(266.430) = -11.508$, $p = .000$) and attitudinal advertising literacy ($M = 3.31$ compared to $M = 2.98$, $t(271) = -4.895$, $p = .000$). There was no difference in the sex and the age distribution at the two school types (sex: $\chi^2(1) = 0.149$, $p = .700$; age: $t(271) = 0.553$, $p = .581$).

Results

The main hypotheses about the direct effect of advertising exposure on materialism (H1) and consumer involvement (H2), and the direct effects of materialism and consumer involvement on life satisfaction (H3, H4), as well as the moderating effects of conceptual advertising literacy (H5, H6) and attitudinal advertising literacy (H7, H8) on the effect of advertising exposure on materialism and consumer involvement were tested in a single structural equation model using Amos Graphics 22. Prior to the analysis, children's scores on advertising exposure, conceptual advertising literacy, and attitudinal advertising literacy were standardized. Next, we constructed two interaction terms: One by multiplying the standardized score of advertising exposure with the standardized score of conceptual advertising literacy, and one by multiplying the standardized score of advertising exposure with the standardized score of attitudinal advertising literacy. Finally, we built a model using (1) the standardized scores of advertising exposure, conceptual advertising literacy, and attitudinal advertising literacy as well as the two interaction terms as exogenous manifest variables; (2) the unstandardized scores of materialism and consumer involvement as endogenous manifest intervening variables; and (3) the unstandardized score of life satisfaction as an endogenous manifest outcome variable (see Figure 2). We also added a correlation between the error terms of materialism and consumer involvement to account for the fact that these are both consumer values.

We assessed the fit of our model using the model chi-square, the CFI-value, and the RMSEA-value and its associated p -close value. The model chi-square was $\chi^2(5) = 6.881$ with $p = .230$, the CFI-value .994, and the RMSEA-value .037 with p -close = .558. These are indicators of excellent fit, as the model chi-square is not significant, the CFI-value exceeds .95, and the RMSEA-value is lower than .05, and p -close is not significant (Kline, 2005). Hence, the model allows for reliable conclusions regarding the hypotheses.

The results from the aforementioned model indicate that advertising exposure and materialism ($\beta = .140$, $p = .012$) and advertising exposure and consumer involvement ($\beta = .180$, $p = .002$) were indeed positively related, confirming both H1 and H2. H3 and H4, however, both have to be rejected: The negative relations between materialism ($\beta = -.042$, $p = .561$) and consumer involvement ($\beta = .111$, $p = .125$) with life satisfaction

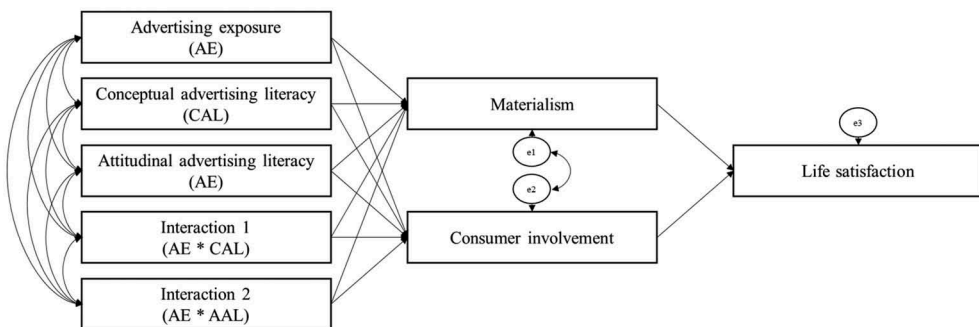


Figure 2. Structural equation model. The dummy variables for sex and school type and the standardized score of age were included as exogenous manifest control variables.

did not yield significance. To determine whether H5 to H8 need to be accepted or rejected, we inspected the path coefficients for interaction term 1 (for H5 and H6) and interaction term 2 (for H7 and H8). Conceptual advertising literacy did not relate to materialism directly ($\beta = .107, p = .082$), but did moderate the relation between advertising exposure and materialism ($\beta = .181, p = .002$). Furthermore, conceptual advertising literacy was not directly related to consumer involvement ($\beta = .030, p = .638$) and did not moderate the relation between advertising exposure and consumer involvement ($\beta = .022, p = .713$). Attitudinal advertising literacy was directly related to materialism ($\beta = -.145, p = .014$) but not to consumer involvement ($\beta = -.118, p = .051$), and did not moderate the relation between advertising exposure and the first ($\beta = -.056, p = .336$) or second variable ($\beta = .030, p = .613$).

To understand the moderating effect of conceptual advertising literacy on the relation between advertising exposure and materialism, we have calculated children's materialism score using the unstandardized regression coefficients in the scenarios that

- (1) The standardized scores on both advertising exposure and conceptual advertising literacy variables are low (i.e., -2): $(-2 \cdot .083) + (-2 \cdot .063) + ((-2 \cdot -2) \cdot .111) = .152$
- (2) The standardized score on advertising exposure is low (i.e., -2) but the standardized score on conceptual advertising literacy is high (i.e., +2): $(-2 \cdot .083) + (2 \cdot .063) + ((-2 \cdot 2) \cdot .111) = -.484$
- (3) The standardized score on advertising exposure is high (i.e., +2) but the standardized score on conceptual advertising literacy is low (i.e., -2): $(2 \cdot .083) + (-2 \cdot .063) + ((2 \cdot -2) \cdot .111) = -.404$
- (4) The standardized scores on both advertising exposure and conceptual advertising literacy are high (i.e., +2): $(2 \cdot .083) + (2 \cdot .063) + ((2 \cdot 2) \cdot .111) = .736$

These scores reflect the differences in materialism between children with high and low advertising exposure and conceptual advertising literacy, holding all other variables constant. For children with low advertising exposure, conceptual advertising literacy weakens the relation between advertising exposure and materialism (the difference in materialism between children with low and high conceptual advertising literacy being $-.484$ minus $.152 = -.636$). For children with high advertising exposure, in contrast, conceptual advertising literacy strengthens the relation between advertising exposure and materialism (the difference in between children with low and high conceptual advertising literacy being $.736$ minus $-.404 = +1.14$). Both effects are quite large, considering materialism was measured on a 4-point scale. In sum, H5 was partially accepted, and H6, H7, and H8 were rejected.

Discussion

The first aim of this research was to explore whether exposure to television advertising fosters materialism, consumer involvement, and lower life satisfaction among Bulgarian children aged eight to eleven years. Additionally, the second aim was to investigate the moderating role of conceptual and attitudinal advertising literacy in this relation. The findings with regard to the effects of advertising exposure on materialism, consumer involvement, and life satisfaction are in line with those in previous research in Western

Europe and Anglosphere countries: We found positive relations between advertising exposure and materialism (Opree et al., 2014) and advertising exposure and consumer involvement (Schor, 2004), and no relation between materialism and life satisfaction or between consumer involvement and life satisfaction, which is in accordance with previous longitudinal findings (Opree et al., 2012).

The beta size for the relation between advertising exposure and materialism observed in the current study (i.e., .140) is higher than that observed by others. The review by Buijzen and Valkenburg (2003a, p. 444) showed that previous studies found betas ranging from $-.07$ (*n.s.*) to .11, and the most recent longitudinal research by Opree et al (2014) reported a beta of .09. The beta size for the relation between advertising exposure and consumer involvement is also higher (i.e., .180) than those reported by Schor (2004, p. 168–171; betas ranging from .129 to .135). Hence, it seems that children in Bulgaria are slightly more susceptible to the undesired effects of advertising compared to children in Western Europe and America, who are raised by parents who grew up in a consumer culture too. Future research using a cross-national design (i.e., including samples from both Western and Eastern European countries) might prove whether this difference in susceptibility is significant.

The findings with regard to the moderating effect of conceptual and attitudinal advertising literacy on the adverse effects of advertising exposure were only partially in line with our expectations. Based on the advertising defence hypothesis (Brucks et al., 1988), it is generally assumed that children who are more advertising literate are also less susceptible to the effects of advertising. Our results showed that conceptual advertising literacy moderates the positive relation between children's advertising exposure and materialism. Specifically, we found that for children who are *rarely* exposed to advertising, a higher level of conceptual advertising literacy leads to *decreased* materialism, and for children who are *often* exposed to advertising, a higher level of conceptual advertising literacy leads to *increased* materialism. This is in line with earlier research showing that advertising literacy can both reduce and enhance the intended effects of advertising, such as advertised product liking and desire (e.g., Blumberg et al., 2014; Mallinckrodt & Mizerski, 2007; Ross et al., 1984; Rozendaal et al., 2009; Van Reijmersdal et al., 2012, 2015; Vanwesenbeeck et al., 2016; Waiguny et al., 2012; Waiguny & Terlutter, 2011).

The current study shows that conceptual advertising literacy can – under the right circumstances – reduce materialism, one of the major unintended effects of advertising. However, no moderating effect of conceptual advertising literacy on consumer involvement was found and, in addition, no moderation effects of attitudinal advertising literacy on either materialism or consumer involvement were found. Though it might be tempting to conclude that advertising literacy plays only a limited role in reducing children's susceptibility to advertising's unintended effects, more research is needed into this area. Next to an increased materialistic value orientation, Kasser and Linn (2016) explicitly mention unhealthy eating, body and eating disorders, violence and aggression, and use of alcohol and tobacco as unintended effects of children's advertising exposure. Though an increased materialistic value orientation could seem relatively "harmless" as long as it is non-disruptive to the individual (after all, one might argue that current and future spending is vital to the survival of economies; Preston, 2004), some of the other unintended effects of advertising seem very undesirable. Future research should indicate whether improving children's conceptual and/or attitudinal advertising literacy can mitigate advertising's effect on children's physical and mental health.

Based on our findings that the magnitude of advertising's unintended effects may differ across regions in the world and that advertising literacy *can* mitigate some of them, we would like to repeat the call of Valkenburg (2000) and Kasser (2016) before and urge other scholars to study advertising's unintended effects of advertising across the globe. More insight is needed into the local prevalence of unintended effects, as well as into the ways that these unintended effects can be contained. Still, the findings of this study are relevant to the authorities in the city of Sofia, the country of Bulgaria, and beyond. First of all, given that children in Sofia were found to be susceptible to advertising's effect on materialism and consumer involvement, legislators, parents, and caretakers may want to think of measures (i.e., imposing laws or restrictions) to limit children's exposure.

Second, given that the children in the private acting school scored higher on both conceptual and attitudinal advertising literacy, legislators, parents, and caretakers in Sofia specifically and Bulgaria in general might want to consider implementing the advertising lessons from the private acting school into the regular curriculum. In the United Kingdom and the United States, optional media and advertising literacy programmes have already been developed and implemented in order to equip the youngest students with important skills in recognising and withstanding the persuasive pressures of advertisements (Gunter, Oates, & Blades, 2005; Nelson, 2016). This has been done in an attempt not only to protect children from the harmful influence that advertisements might have on them, but also to help them develop relevant consumer socialisation, which would allow them to make better informed purchase choices in the future. Contemporary research has indicated that consumer socialisation is culture specific, and that more research is needed to understand how it differs across the globe (Lapierre & Rozendaal, 2018). After the shift from a socialist to a capitalist economy, aiding Bulgarian teachers, parents, and caretakers to facilitate their children's consumer socialisation seems of utmost importance.

Still, even though educational advertising interventions may successfully increase children's conceptual and attitudinal advertising literacy (Jeong, Cho, & Hwang, 2012; Nelson, 2016), the current study and earlier research shows that these efforts do not necessarily enable them to defend themselves against advertising (Livingstone & Helsper, 2006; Nairn & Fine, 2008; Rozendaal et al., 2011). This underlines the importance for educators to develop advertising interventions based on academic insights into children's processing of advertising, and, as argued by Wright, Friestad, and Boush (2005), the need to examine the effectiveness of such interventions.

Conclusion

This study showed that advertising can have the same adverse effects on children from Sofia in Bulgaria, a country in transition when it comes to consumer culture, to those previously observed among children in Western European countries. Also, as for children in other countries, advertising literacy can both mitigate and enhance these adverse effects. The current study showed that whether advertising literacy mitigates or enhances the adverse effects of advertising depends on the level of advertising exposure of children.

Disclosure statement

No potential conflict of interest was reported by the authors.

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