

# Lower Life Satisfaction Related to Materialism in Children Frequently Exposed to Advertising



**WHAT'S KNOWN ON THIS SUBJECT:** Materialism and life satisfaction are known to be associated with each other. Research among adults has shown that materialism and life satisfaction negatively affect each other, leading to a downward spiral.



**WHAT THIS STUDY ADDS:** In contrast to research conducted among adults, no longitudinal effect of materialism on life satisfaction was found for 8- to 11-year-olds. However, life satisfaction did negatively affect materialism, but only for children who were frequently exposed to advertising.

## abstract

**OBJECTIVE:** Research among adults suggests that materialism and life satisfaction negatively influence each other, causing a downward spiral. So far, cross-sectional research among children has indicated that materialistic children are less happy, but causality remains uncertain. This study adds to the literature by investigating the longitudinal relation between materialism and life satisfaction. We also investigated whether their relation depended on children's level of exposure to advertising.

**METHODS:** A sample of 466 children (aged 8–11; 55% girls) participated in a 2-wave online survey with a 1-year interval. We asked children questions about material possessions, life satisfaction, and advertising. We used structural equation modeling to study the relationship between these variables.

**RESULTS:** For the children in our sample, no effect of materialism on life satisfaction was observed. However, life satisfaction did have a negative effect on materialism. Exposure to advertising facilitated this effect: We only found an effect of life satisfaction on materialism for children who were frequently exposed to advertising.

**CONCLUSIONS:** Among 8- to 11-year-old children, life satisfaction leads to decreased materialism and not the other way around. However, this effect only holds for children who are frequently exposed to television advertising. It is plausible that the material values portrayed in advertising teach children that material possessions are a way to cope with decreased life satisfaction. It is important to reduce this effect, because findings among adults suggest that materialistic children may become less happy later in life. Various intervention strategies are discussed. *Pediatrics* 2012;130:e486–e491

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### KEY WORDS

life satisfaction, materialism, television advertising, children

### ABBREVIATIONS

BCa CI—bias corrected accelerated confidence interval

CFI—comparative fit index

H1—hypothesis 1

H2—hypothesis 2

H3—hypothesis 3

H4—hypothesis 4

RMSEA—root mean square error of approximation

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Over recent decades, the increasing commercialization of children's environments has alarmed caretakers, consumer advocates, and policy makers.<sup>1-3</sup> One of their major concerns is that growing up in a commercialized environment renders today's children more materialistic than previous generations. Materialism is generally defined as having a preoccupation with possessions and believing that products bring happiness and success.<sup>4-6</sup> Materialism in children may be cause for concern, because it is often associated with lowered life satisfaction.<sup>7-9</sup> Several studies have found evidence for a negative relation between materialism and life satisfaction in children.<sup>10-12</sup> However, as yet it remains uncertain whether materialism indeed causes lower life satisfaction or whether dissatisfaction with their life causes children to seek fulfillment in material possessions, implying an opposite causal direction of the relation between materialism and life satisfaction.<sup>10-12</sup>

By using a longitudinal design, this study is the first to explore the relation between materialism and life satisfaction over time among 8- to 11-year-olds. There are 3 explanations for why materialism may lead to decreased life satisfaction. First, the escalation hypothesis states that materialistic individuals develop an insatiable desire for material objects. When the desired products cannot be obtained, decreased life satisfaction will follow.<sup>6,13-15</sup> Second, the adaptation hypothesis assumes that materialists have higher expectations than less materialistic people, and the gap between the desired state and their actual state may make them less satisfied with their lives.<sup>11,13-15</sup> Third, according to the displacement hypothesis, a focus on material goals and superficial satisfaction may displace a focus on interpersonal relations and inherent needs and, as a consequence, stand in the way of obtaining happiness.<sup>14-18</sup>

Thus, materialism in children can be expected to lead to decreased life satisfaction (hypothesis 1, H1).

Research among adults suggests that the relation between materialism and life satisfaction is reciprocal. Materialists may experience a decrease in life satisfaction, but vice versa, people who are unsatisfied with their lives also seem to be more inclined to pursue materialistic goals. People with low self-esteem, for instance, use possessions as a way to compensate.<sup>15,16,18,19</sup> On the basis of these findings, children's life satisfaction can also be expected to affect materialism negatively (hypothesis 2, H2).

An additional aim of this study is to investigate the role of advertising in the materialism-life satisfaction relation. Commercialization of children's environments largely takes place through media, in particular television advertising, which may have consequences for both hypothesized relations between materialism and life satisfaction. Advertising generally stresses the importance of material possessions, thereby promoting the core idea of materialism.<sup>13,17,20-22</sup> In relation to H1, high exposure to advertising may cause children to become more materialistic, which in turn may lead them to become less satisfied with their lives (hypothesis 3, H3). In addition, advertising promotes the idea that possessions are a way to increase happiness and to compensate for low life satisfaction.<sup>13,17,20-22</sup> In relation to H2, unhappy children might be more likely to become more materialistic if they are frequently exposed to advertising, implying that advertising reinforces the negative effect of life satisfaction on materialism (hypothesis 4, H4).

In this study we focus on children between the ages of 8 and 11. Empirical studies into the relation between age and materialism are rare,<sup>23,24</sup> yet according to a review article by John, findings

from developmental psychology suggest that children start to develop materialistic orientations in middle childhood.<sup>25</sup> Between the ages of 8 and 11, children are in an important phase of consumer development known as the analytical stage. During this stage, children become aware of the symbolic meaning of products. Unlike younger children, they may want to acquire products not only for the sake of having them but also for the purpose of increasing happiness and social status.<sup>19,25</sup> Understanding product symbolism is core to materialism.<sup>4-6</sup> Hence, it is not until age 8 that materialism may start to develop.

## METHODS

For this study, longitudinal survey data were collected among 466 8- to 11-year-olds (55% girls). The first wave of the study took place in October 2006 and the second wave in October 2007. The data collection was granted internal review board approval by the university's ethical committee. All participants were recruited through an online youth panel managed by a large research company in the Netherlands. This panel is representative for Dutch youth in terms of age, gender, socioeconomic status, and geographic distribution. Completing the questionnaire took 15 to 20 minutes. As an incentive for participating, children received credit points for the research company's reward system.

Children's materialism was measured with the Material Values Scale for children.<sup>26</sup> The scale consists of 3 subscales that are measured with 6 items each. We measured children's tendency to place possessions and their acquisition at the center of their lives (ie, material centrality subscale), the degree to which children believe possessions and their acquisition bring happiness (ie, material happiness subscale), and the degree to which children like other

children more if they have more possessions (ie, material success subscale). Response categories on all items varied from 1 (no, not at all) to 4 (yes, very much).

Children's life satisfaction was measured with an adjusted 8-item version of the Student Life Satisfaction Scale.<sup>27–29</sup> Children were asked to indicate how happy they were with their life, home, parents, friends, class, school, and themselves and how happy they felt in general. Response options varied from 1 (not happy) to 4 (very happy).

Following other scholars, we applied the common method to use children's viewing frequency of advertising-dense television shows as an indicator for children's exposure to advertising.<sup>29–31</sup> First, we determined which shows were most popular among 8- to 11-year-olds by studying data from the national Audience Research Foundation. Then, based on data from Nielsen Media Research, we studied the amount of advertising aired prior, during, and after each of the shows. We selected the 9 television shows that scored highest on advertising density and could therefore be considered an accurate proxy for children's advertising exposure: the children's TV series *SpongeBob SquarePants*, *Totally Spies*, *Danny Phantom*, and *The Tofus*, and the Dutch family shows *Flodder*, *Kees & Co*, *Good Times Bad Times*, *RTL Boulevard*, and *Skating With Celebrities*. For each of these shows, children were asked to indicate how often they watched it. Response categories varied from 1 (never) to 4 (very often), with a fifth option being "I don't know." If a child chose "I don't know" for an item, his or her score was replaced by mean substitution.

## Data Analysis

The data were analyzed with structural equation modeling by using Amos 19.0. For our analyses we conducted latent

variable modeling, meaning that all constructs were estimated from  $\geq 1$  manifest indicators. Materialism scores were estimated from the average scores on the subscales material centrality, material happiness, and material success. Life satisfaction scores were estimated from the average scores on 3-item parcels, which were constructed by using a factorial algorithm. To control for measurement error, each indicator had its own error term. In addition, error terms of corresponding indicators over time were allowed to correlate to control for shared method variance.<sup>32</sup>

We evaluated the fit of our models by using the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). These indices were preferred over the  $\chi^2$  statistic, which is often unreliable with large samples.<sup>33</sup> A good model fit is indicated by a RMSEA value smaller than .05, with  $P$ -close larger than .05 and a CFI value larger than 0.95. RMSEA values between 0.05 and 0.08 and CFI values between 0.90 and 0.95 indicate acceptable model fit.<sup>33,34</sup>

## RESULTS

### Descriptives and Zero-order Correlations

Table 1 provides the reliabilities, means, and standard deviations of all measures. The table also includes the correlations between measures. Stability within measures was high ( $r \geq .596$  with  $P < .001$ ). Significant negative correlations were found between materialism and life satisfaction. This was true for both correlations within and between waves. Materialism at wave 1 was negatively correlated to life satisfaction at wave 2 ( $r = -.238$ ,  $P < .001$ ), and life satisfaction at wave 1 was negatively correlated to materialism at wave 2 ( $r = -.230$ ,  $P < .001$ ). Children's exposure to advertising was related to materialism but not to life satisfaction.

Children's exposure to advertising at wave 1 was positively related to materialism at wave 2 ( $r = .136$ ,  $P < .01$ ).

### Cross-Lagged Panel Model (H1 and H2)

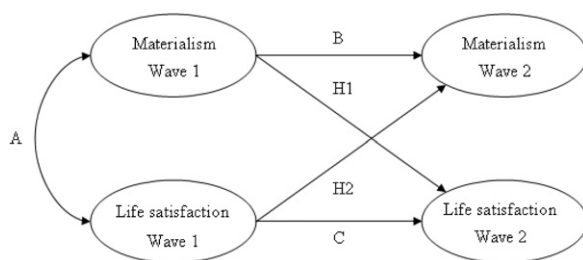
To test H1 and H2, we tested the cross-lagged panel model presented in Fig 1. The 2 cross-lagged paths represent the longitudinal effect of materialism on life satisfaction (H1) and the longitudinal effect of life satisfaction on materialism (H2). Other paths are added to control for the covariances between the independent variables (A) and the stability within measures (B and C).

Our hypothesized model from Fig 1 had an acceptable fit to the data,  $\chi^2(DF = 43, N = 466) = 127.519$ ,  $P < .001$ , CFI = 0.974, RMSEA = 0.065. Again, we found high stability within measures. Materialism at wave 1 was an important predictor for materialism at wave 2 ( $\beta = 0.612$ ,  $P < .001$ ), and life satisfaction at wave 1 was an important predictor for life satisfaction at wave 2 ( $\beta = 0.672$ ,  $P < .001$ ). H1 was not confirmed by the data: materialism at wave 1 was expected to have an effect on life satisfaction at wave 2, but no such effect was found ( $\beta = -.060$ ,  $P = .197$ ). H2 was confirmed by the data: life satisfaction at wave 1 was found to have a significant effect on materialism at wave 2 ( $\beta = -.099$ ,  $P < .001$ ; see Fig 2). To test the robustness of our findings regarding our hypotheses, we retested the model in Fig 1 with the bootstrap procedure.<sup>24</sup> By using this procedure (1000 samples,  $N = 466$ ), we generated a 95% bias-corrected and accelerated confidence interval (BCa CI) for the cross-lagged effects found in the previous model. Findings indicated that the effect of materialism at wave 1 on life satisfaction at wave 2 was not significantly different from zero (BCa CI = 0.132 to 0.033,  $P = .253$ ), whereas the effect of life satisfaction at wave 1 on

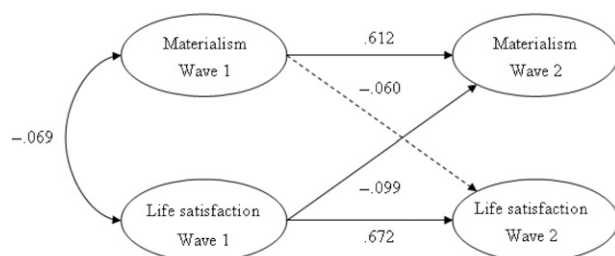
**TABLE 1** Descriptives and Zero-Order Correlations

	Descriptives		Intercorrelations (Pearson's <i>r</i> )					
			LS		MAT		ADEXP	
	$\alpha$	M (SD)	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
<b>LS</b>								
Wave 1	.79	3.31 (0.44)	—	—	—	—	—	—
Wave 2	.78	3.29 (0.43)	.60***	—	—	—	—	—
<b>MAT</b>								
Wave 1	.90	2.15 (0.49)	-.28***	-.24***	—	—	—	—
Wave 2	.89	2.15 (0.50)	-.23***	-.39***	.60***	—	—	—
<b>ADEXP</b>								
Wave 1	.62	2.07 (0.45)	-.06	-.05	.07	.14***	—	—
Wave 2	.59	1.94 (0.42)	-.05	-.06	.11*	.16***	.62***	—

LS, life satisfaction (the extent children are happy with their life, home, parents, friends, class, school, and themselves); MAT, materialism (the degree children value material well-being and material progress); ADEXP, advertising exposure (the frequency children watch 9 specific advertising-dense programs on commercial networks). —, indicates perfect correlation. \* $P < .05$ ; \*\* $P < .01$ ; \*\*\* $P < .001$ .

**FIGURE 1**

Hypothesized cross-lagged model on the relation between life satisfaction and materialism.

**FIGURE 2**

Observed structural model on the relationship between materialism and life satisfaction. Dashed arrows represent insignificant relations. All path coefficients are standardized coefficients.

materialism at wave 2 was (BCa CI  $-0.245$  to  $0.004$ ,  $P = .055$ ). In other words, the findings from the bootstrap procedure confirmed our previous results, namely, that life satisfaction had a significant and negative effect on materialism (H2).

### Moderation Analysis (H4)

Because we did not find empirical support for the hypothesis that materialism

causes a decrease in life satisfaction (H1), there was no reason to test the related hypothesis that advertising exposure has a negative indirect effect on life satisfaction via materialism (H3). Because we did find support for the hypothesis that life satisfaction negatively affects materialism (H2), we performed an additional analysis to test the hypothesis that the effect of life satisfaction on materialism was

moderated by advertising exposure (H4). To test H4, we divided our sample by means of a median split into a group of children with low advertising exposure ( $n = 236$ ) and a group of children with high advertising exposure ( $n = 230$ ). We tested the model from Fig 1 for both groups separately by using multi-group analysis.

Model fit for the multigroup analysis was acceptable,  $\chi^2(DF = 86, N = 466) = 167.306$ ,  $P < .001$ , CFI = 0.975, RMSEA = 0.045. No effect of materialism at wave 1 on life satisfaction at wave 2 was found for either the children whose exposure to advertising was relatively low ( $\beta = -0.088$ ,  $P = .192$ ) or the children whose exposure to advertising was relatively high ( $\beta = -0.033$ ,  $P = .618$ ). In line with H4, we did find a difference in the effect of life satisfaction at wave 1 on materialism at wave 2 between children whose exposure to advertising was relatively low and children whose exposure to advertising was relatively high. Although the effect was not significant for the first group ( $\beta = -.080$ ,  $P = .344$ ), it was significant for the second ( $\beta = -.135$ ,  $P = .042$ ).

Our results were confirmed by the bootstrap procedure (1000 samples,  $N = 466$ ). Again, we did not find an effect of materialism at wave 1 on life satisfaction at wave 2 for children with relatively low exposure (BCa CI  $-0.187$ – $0.046$ ,  $P = .218$ ) or children with relatively high exposure to advertising (BCa CI  $-0.145$ – $0.087$ ,  $P = .676$ ). Furthermore, we also did not find an effect of life satisfaction at wave 1 on materialism at wave 2 for children with relatively low exposure to advertising (BCa CI  $-0.251$ – $0.092$ ,  $P = .315$ ). However, for children with relatively high exposure to advertising, the effect of life satisfaction at wave 1 on materialism at wave 2 was significantly different from zero (BCa CI  $-0.370$ – $0.030$ ,  $P = .097$ ).

## DISCUSSION

Does materialism cause lowered life satisfaction, or does a dissatisfactory life cause children to seek happiness and fulfillment in material possessions? This study was the first to investigate the longitudinal relation between materialism and life satisfaction among children. Our longitudinal study demonstrated that children who were less satisfied with their lives became more materialistic over time. Lowered life satisfaction increased materialism in children (H2) and not the other way around (H1). As predicted (H4), the strength of this effect was dependent on children's advertising exposure: Life satisfaction only affected materialism for children whose exposure to advertising was high.

Our results suggest that the idea that material possessions are a way to cope with decreased life satisfaction might be learned from television advertising. Advertisers use a wide array of persuasive tactics and techniques to convince people to purchase their products. Advertisements show products being used by people who are famous or extremely attractive or by someone obtaining some sort of social reward by using the product. Advertisements also display a level of wealth that is unattainable for the average consumer and show idealized versions of life within the context of the advertisement.<sup>13,17,20–22</sup> Such tactics create associations between the product and desirable outcomes and also teach consumptive behavior through modeling.<sup>35,36</sup>

Contrary to expectations, we did not find support for our hypothesis that materialism leads to decreased life satisfaction among children, which has convincingly been demonstrated among adults.<sup>15,16,18,19,37</sup> The escalation hypothesis (ie, becoming unhappy because of an insatiable desire), the

adaptation hypothesis (ie, becoming unhappy due to a large gap between the desired and actual state), and the displacement hypothesis (ie, becoming unhappy because of a focus on possessions rather than interpersonal relationships) explain why materialistic adults experience a decrease in life satisfaction. Apparently, these hypotheses do not hold for children, and why this occurs needs additional investigation. A possible explanation can be found in the difference in autonomy between children and adults. Children rely on their parents both emotionally and financially. Possessions may not replace the warm bond between children and parents, and whether children get what they want is out of their hands.

Depending on where future research on the relationship between materialism and life satisfaction is conducted, children's socioeconomic background may need to be taken into account. Our sample was representative for the Netherlands, meaning that differences in socioeconomic status were small. In other Western countries, such as the United Kingdom and United States, differences in income are substantially larger.<sup>37</sup> A 2004 study by Elliott and Leonard suggests that socioeconomic status influences consumer expectations. In comparison with children from a privileged background, children from a lower economic background more strongly believe that obtaining popular and/or expensive brands is important for fitting in.<sup>38</sup> If true, children from lower economic families are at higher risk for consumer disappointment, which means that materialism may have a negative effect on life satisfaction for them. In addition, because it addresses their need to fit in, children from seriously deprived families might be even more susceptible to the effects of advertising.

## CONCLUSIONS

Lower life satisfaction was found to lead to materialism among children who were frequently exposed to advertising. These findings need further attention as previous studies conducted among adults suggest that it is very likely that children's materialism will lead to decreased life satisfaction later in life. Studies conducted among adults suggest that the negative relation between life satisfaction and materialism is reciprocal, resulting in a vicious circle or even a downward spiral. In other words, studies among adults indicate not only that people with lower life satisfaction become more materialistic, but also that more materialistic people become less satisfied with their lives.<sup>15,16,18,19,39</sup> To prevent the less satisfied children from becoming increasingly more dissatisfied and unhappy in the future, intervention is called for.

A basis for intervention might be found in the role of advertising observed in this study. Our findings suggest that unhappy children learn the idea that material possessions are a way to cope with decreased life satisfaction from television advertising. To prevent unhappy children from becoming materialistic and, most likely, even less satisfied with their lives, 3 strategies could be applied. A first is to remove the source and regulate children's exposure to advertising, for example, by advertising exposure restrictions. A second strategy is to teach children to deal with advertising critically and to instruct them about the persuasive techniques in advertising.<sup>30</sup> A third strategy is to counter advertising influence by educating children about other sources of happiness in life, such as love, friendship, and play, deemphasizing the role of possessions. Future research should investigate which of these solutions, or combination of solutions, is most feasible to reduce children's materialism and its detrimental consequences for their well-being.

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