

Main Conclusions and Implications

Regarding Characters in Health Communication Interventions

Over the past few years, there has been a growing interest in social marketing interventions targeting young children's healthy food choices. Specifically, the commercial marketing techniques used to promote unhealthy food products are now being used to promote healthy food products, such as fruit and vegetables. The most popular technique is that of linking a food product to a cartoon character. For example, the Netherlands Nutrition Centre (Voedingscentrum, 2012) promotes healthy eating via characters in online advergames and comic books (e.g., *Donald Duck*), while grocery stores promote healthy foods by depicting characters on the packaging or through plush character giveaways (Agrimarkt, 2012; Chiquita, 2012). Currently, little is known about the impact of these character-related health communication interventions. Therefore the aims of this dissertation were to (1) establish *whether* characters can stimulate young children's healthy food choices (4-6 years old), and (2) explain *how* characters stimulate these choices in order to enhance their impact in health communication interventions. This final chapter discusses the most important conclusions, implications, and future directions of this dissertation.

Main Conclusions

The Effect of Characters Established

The first aim of this dissertation was to establish whether characters can stimulate young children's healthy food choices. The impact of characters was measured in two types of vehicle: product packaging and picture books. With regard to product packaging, this dissertation demonstrated that characters depicted on healthy food packages increased children's liking and choice of fruit and vegetables (De Droog, Buijzen, Opre, & Valkenburg, 2011a; De Droog, Buijzen, & Valkenburg, 2012a; De Droog, Valkenburg, & Buijzen, 2011b). These laboratory findings are in line with observational findings from the retail environment, in which products with characters were noticed, pointed at, requested, or grabbed off the shelf by children more than other products (e.g., Buijzen, 2010; McNeal, 2007; Rust, 1993).

With regard to picture books, this dissertation was the first to establish the impact of characters depicted in healthy food-promoting picture books. Children were read the books passively (listening to the story only) or interactively (also answering questions about the story) in a natural classroom setting. While the findings indicated that vegetable-promoting picture books increased children's vegetable consumption, this impact appeared to be the result of the reading method (i.e., reading the book interactively) rather than the character (De Droog, Buijzen, & Valkenburg, 2012b). These results will be explained in the following section.

The Effect of Characters Explained

The second aim of this dissertation was to explain how characters stimulate young children's healthy food choices. Characters may be more or less persuasive depending on their design. The design factor studied systematically within this dissertation was character-product congruence. Congruence signifies

that two stimuli fit together (Garretson & Niedrich, 2004). In the case of character-product congruence, the character fits well with the associated food product. For example, a character and a product are perceived as congruent by children when the two form a familiar concept, such as a rabbit and a carrot (*conceptual congruence*; De Droog et al., 2012a). Congruent stimuli are assumed to be more persuasive than incongruent stimuli, because they are processed more easily at a preconscious level, triggering pleasant feelings (Jacoby, Kelley, & Dywan, 1989; Reber, Winkielman, & Schwarz, 1998).

Based on this assumption, a theoretical model explaining the impact of character-product congruence on children's healthy food choices was developed and tested (De Droog et al., 2011a, 2012c). The key purpose of this model was to reveal the affective response mechanisms underlying the relation between character-product congruence and children's healthy food choices, and to test whether these underlying mechanisms were maintained after repeated exposure. According to the model, depicted in Figure A, the pleasant feeling children experience when processing a congruent character-product combination manifests itself in a positive automatic response toward the healthy food product (path a). In turn, this automatic response feeds into children's conscious responses, evoking a positive elaborate response toward the healthy food product (path b) that enhances children's choice of that product (path c).

This character-product congruence model explained successfully the impact of character-product congruence used in both product packaging and picture books, because fruit and vegetables became more appealing to children when they were combined with a picture of a product-congruent character (De Droog et al., 2011a, 2011b, 2012a, 2012c). Specifically, when comparing congruent with incongruent character-product combinations, only the congruent combinations induced a positive automatic response, which then fed into children's elaborate affective response, leading to increased healthy food choice. However, the advantage of character-product congruence disappeared after repeated exposure to the character-product combinations. Perhaps with increased exposure, children familiarize with incongruent combinations (thus learning the incongruent character-product concept), consequently inducing automatic affective responses similar to congruent combinations.

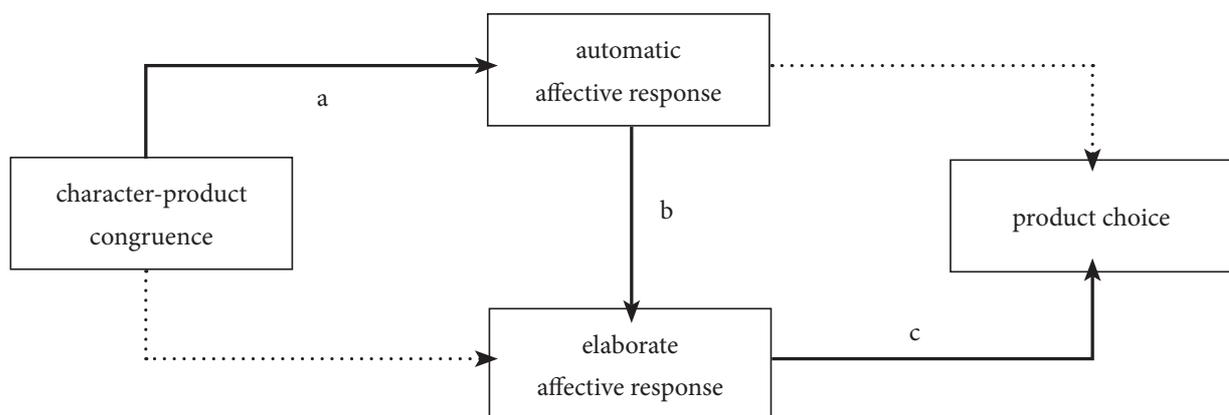


Figure A. Character-product congruence model (De Droog et al., 2011a, 2012c). All relations in the model were hypothesized initially, but only the solid arrows were observed in both studies.

Theoretical Implications

The impact of familiar media characters, such as *Dora the Explorer* and *SpongeBob SquarePants*, on children's food choices has received considerable research attention (Atkin, 1975; Kotler, Schiffman, & Hanson, 2012; Mizerski, 1995; Roberto, Baik, Harris, & Brownell, 2010; Ülger, 2009). Children have a tendency to bond with frequently encountered media characters. This kind of emotional bonding means that a character begins to feel like a close friend, stimulating children to emulate that character's behavior and collect products linked to that character (Acuff & Reiher, 1997; Hoffner, 1996; McNeal, 2007). For this reason, it is generally assumed that familiar media characters have a greater impact on children's food choices than unfamiliar characters that are developed solely for the purposes of marketing (Callcott & Lee, 1995; McNeal, 2007). The findings of this dissertation reject this assumption by demonstrating that unfamiliar characters can be as effective as familiar media characters in stimulating children's food choices, providing they are conceptually congruent with the food product (De Droog et al., 2011b, 2012a).

The finding that character-product congruence can stimulate children's healthy food choices supports earlier congruence literature. For example, there is strong theoretical and empirical evidence that spokespersons generate greater advertising effects, such as product liking and choice, when they fit well with the endorsed product (Kamins, 1990; Kamins & Gupta, 1994; Lynch & Schuler, 1994; Martin, 1996; Sengupta, Goodstein, & Boninger, 1997; Stafford, Stafford, & Day, 2002). In such studies, credibility is assumed to be the explanatory mechanism. Specifically, when a spokesperson is perceived as an expert on the subject, people are more inclined to believe the spokesperson's message and thus be influenced by it. A spokesperson's perceived credibility is often the result of a previously formed schema (Kamins, 1990; Lynch & Schuler, 1994; Martin, 1996). For example, because models are connected typically with beauty, they are a credible source for beauty products. Likewise, because athletes are connected with great sports performances, they are a credible source for sportswear.

This dissertation contributes to the congruence literature in three ways. First, it has demonstrated that in addition to credibility, processing fluency provides a further explanatory mechanism for congruence effects. Specifically, it was demonstrated that a previously formed schema about a spokesperson (e.g., that a rabbit fits with carrots) induced automatically a positive response toward the associated product as a result of easier processing of that schema. Because automatic responses feed into conscious elaborate responses, it is conceivable that processing fluency also (partly) explained the increased advertising effects found in earlier congruence studies.

Second, this dissertation has demonstrated that characters (*animated* spokespersons) can also be effective when congruent with the product. Earlier character studies concluded that congruence with the product had little effect (Garretson & Niedrich, 2004; Stafford et al., 2002). However, these studies employed a sample of adolescents. The third and final contribution to the congruence literature, therefore, is this dissertation's focus on young children. Young children may be more susceptible to characters as they tend to perceive them as real people, thus identifying and developing deep emotions for them just as easily (Hoffner, 1996; Lemish, 2007; Valkenburg, 2004). Children may therefore perceive characters to be a credible source for the promotion of (food) products. Additionally, young children's ability to consciously process a message is still underdeveloped, rendering them highly susceptible to affective

responses (Buijzen, Van Reijmersdal, & Owen, 2010). Thus, in comparison to adolescents, young children may be influenced more easily by processing fluency induced as a consequence of character-product congruence.

Both the congruency and processing fluency literature suggest that the effects produced by congruent combinations persist over time (e.g., Reber, Schwarz, & Winkielman, 2004; Sengupta et al., 1997; Zajonc, 1968). Indeed, a pre-existing schema about a character and product can influence an individual's responses for a lifetime. To my knowledge, this dissertation was the first to compare the impact of a congruent versus an incongruent combination over time. It was revealed that the initial advantage of using a congruent character-product combination wears out when people have the opportunity to familiarize with the incongruent character-product combination after repeated exposure. The advantage of congruence may thus persist over time only in comparison to novel combinations.

Nonetheless, it would be premature to conclude that character-product congruence plays an insignificant role in health communication interventions intended for repeated exposure, such as picture books. This dissertation noted a trend for children who were read the picture book with the congruent combination interactively to score best on all dependent variables (vegetable liking, choice, and consumption). This trend may be explained by mechanisms other than fluent processing. While fluent processing appears to explain the impact of character-product congruence after a single brief exposure, other mechanisms could come into play when children are exposed repeatedly to character-product congruence. A persuasive process related to repeated exposure is character involvement, which implies that increased familiarity with a character stimulates greater interaction with that character (Hoffner, 1996; Horton & Wohl, 1956; Klimmt, Hartmann, & Schramm, 2006; Tian & Hoffner, 2010). Character involvement often begins with affection for a familiar character (e.g., character liking). In turn, this affection stimulates friendship formation with the character (parasocial interaction) and a wish to be or act like that character (wishful identification) (Bandura, 1977; Hoffner, 1996; Hoffner & Cantor, 1991; Moyer-Gusé, 2008).

Character-product congruence may speed up the process of character involvement, because affectionate feelings toward the character and food product are instantly induced due to concept familiarity (De Droog et al., 2011a, 2012a). An interesting pattern in the group of children who were read the books interactively appears to support this idea. After a single exposure, children exposed to the congruent character-product combination liked the character more than children exposed to the incongruent character-product combination. After multiple exposures, this increased character liking stimulated parasocial interaction and wishful identification with that character which, in turn, stimulated liking, choice and consumption of the associated vegetable. This pattern calls for further exploration of the process of character involvement as an explanation for the impact of character-product congruence on children's healthy food choices.

Future Research

Successful health interventions must be based on an understanding of health behaviors, the contexts in which they occur, and how they are maintained (Glanz & Bishop, 2010). This necessitates an ambitious research agenda, involving three steps: In addition to (1) designing theory-based interventions, (2) these interventions must be implemented in nonresearch settings in order to account for relevant

environmental factors and (3) their success should be evaluated over an extended period of time (cf. Bandura, 2004; Feldstein & Glasgow, 2008). This dissertation addressed the first two steps by developing a theory-based health communication intervention for young children implemented in their natural environment. While the findings of this dissertation are promising, greater research is needed to establish whether character-related health interventions are worth their investments in the long run. Following the above research agenda, this section discusses potential avenues for future research.

With reference to the design of character-related health interventions, we need to investigate further the impact of different types of character in various vehicles. In addition to familiar and conceptually congruent characters, there are two other types of character being used increasingly in health communication interventions. The first is a food-resembling character, such as a banana figure promoting bananas (e.g. Agrimarkt, 2012; Fyffes; 2012). The second is a child-resembling character, typically depicted in a group representing various ethnic backgrounds (e.g., Goodies, 2012; Hak, 2012). Continuing my path of research, it would be interesting to investigate the impact of such characters on children's healthy food choices, and whether any impact results from fluent processing, character involvement, or other explanatory mechanisms.

This dissertation focused on product packaging and picture books. Other vehicles requiring research attention are digital mobile devices. Due to their intuitive touchscreen interface, such devices are being adopted rapidly by very young children. Currently, 79% has access to smartphones and 20-30% to tablets such as iPads (Cohen, Hadley, & Frank, 2011; PlayScience, 2011; Sanoma Media, 2011). Because the content for these devices is usually highly interactive and involving, characters used in health messages via these devices may be more persuasive than in other vehicles (Wang & Singhal, 2009).

Regardless of how well a health communication intervention is designed, its efficacy may differ according to environmental factors. For young children, social environmental factors tend to be most crucial (Harrison et al., 2011). For example, character-branded packages may stimulate children's food requests in grocery stores, but it is parents who must purchase and sometimes even prepare the requested foods. In other cases, such as food-promoting picture books, the intervention may be effective only with the support of teachers, parents, and other caregivers. While many social environmental factors regarding young children's healthy eating behaviors have been identified, such as food availability, modeling, and dietary intake rules (Institute of Medicine, 2006), a factor that has received little attention is the ability of caregivers to enhance the impact of communication interventions through a variety of mediation strategies. This dissertation demonstrated that caregivers can enhance the impact of picture books on children's healthy food choices via interactive shared reading. Future research should investigate further the impact of various mediation strategies, particularly whether and how these interact with character techniques such as character-product congruence.

Finally, because developing healthy eating habits takes time (Brock & Green, 2005), research must also investigate the long-term effects of health communication interventions. For example, the initial impact of an intervention may decrease if the enthusiasm and motivation of children, parents, and teachers begins to fade. The initial impact may also decrease due to developmental changes impacting children's interests and social environments (Shaffer & Kipp, 2007; Valkenburg, 2004). Specifically, character-branded packages and picture books may stimulate healthy food choices successfully during early

childhood, but other interventions may be required to continue these choices into middle childhood, late childhood, and adolescence. Future research should evaluate the impact of health intervention programs over a longer period of time (preferably from early childhood to adolescence) and identify different types of strategies and other influential factors that help maintain healthy eating habits.

This ambitious research agenda requires academia, government, and industry to work together closely. Scientific institutions affiliated with the University of Amsterdam have taken an important first step by rendering research more accessible and attractive for a wider audience. SWOCC (2012) frequently organizes conferences for professionals in the field, while Bitescience (2012) and CCAM (2012) spread the latest findings on youth and their commercialized media environment in easy to understand portions via their websites, newsletters, and social media. While such initiatives facilitate increased knowledge transfer and networking opportunities, collaboration between academia, government, and industry remains low. For example, while health programs have begun to use marketing techniques, they frequently lack the formative research, planning, and evaluation to effectively launch and sustain a successful social marketing program. A step forward could be to regard collaboration with scientific institutions as an important criterium for health communication funding.

Practical and Societal Implications

This final section addresses the implications of this dissertation's findings for micro-, meso-, and macro-practice. On a micro-level, the findings regarding characters on healthy food packaging may inspire parents and caregivers. In the United States, a group of parents has already found a creative and simple way to implement this character technique themselves. They are influencing their children's food choices successfully in the retail and home environment by placing stickers of their favorite characters on healthy food products (Rau, 2011). Additionally, the findings regarding healthy food-promoting picture books may inspire parents and caregivers to use the interactive shared reading method in the home environment. There are a number of healthy food-promoting picture books available, and the internet provides instructional videos in which the interactive shared reading method is being demonstrated (e.g., Stevenson, 2008).

To reach families where healthy eating is a low priority, the picture book intervention could be implemented in the school environment, where shared reading is often an essential part of the curriculum. For instance, schools could organize a fruit and vegetable program for kindergarten children, in which a new food (or group of foods) is introduced each month via interactive shared reading of a healthy food-promoting picture book. To enhance the intervention, children could be offered a taste of the promoted food(s) directly after the reading sessions. Bitter tasting vegetables in particular may benefit from such repetitive tasting (Birch, 1999).

On a meso-level, this dissertation offers information to the agri-food sector regarding character use to promote healthy foods and healthy lifestyles among young children. It was demonstrated that characters depicted near the healthy food product (e.g., on the packaging) work particularly well in situations where children are motivated to make food choices quickly based on initial feelings (e.g., grocery stores). This dissertation stresses the importance of designing and selecting characters carefully. Characters

differ on multiple dimensions and their impact on healthy food choices may vary accordingly. Pretesting and evaluating characters or using characters that have already proven effective in (scientific) research is thus advised. Ideally, characters would be designed specifically for the food product they promote, and the vehicle (e.g., packaging, television, magazine, internet) and venue (e.g., home, school, grocery store) in which they are being used.

On a macro-level, the findings of this dissertation may inspire government officials to reassess their food marketing policies. Such policies are often guided by concerns regarding children's commercialized media environment, leading to various regulations and guidelines intended to protect children from commercial exploitation. For example, the UK, Sweden, and Norway have enacted bans on (food) advertisements to children aged 12 and under (EASA, 2012; Ofcom, 2012). Other countries have specific guidelines regarding character use. For instance, the Netherland's self-regulatory code specifies that characters in audiovisual media should not actively promote a food product (SRC, 2012). In addition to discouraging commercial practices promoting unhealthy diets, government officials should also encourage commercial practices promoting healthy diets (including the use of characters for healthy food products) (Institute of Medicine, 2006). I hope that the findings of this dissertation will motivate government officials and self-regulatory organizations to encourage character-related commercial practices that promote fruit and vegetable consumption among children.

To conclude, this dissertation was inspired by children's commercialized media environment and whether one aspect of this environment – the use of characters – could be used to enhance children's healthy food choices. The findings regarding characters on packaging and interactive shared reading of picture books are promising. They indicate that by rendering fruit and vegetables more appealing to children, their fruit and vegetable choices may be stimulated. Consumption of these foods has been identified as an important prevention factor of overweight (Lin & Morrison, 2002; Tohill, 2005). With the percentage of overweight children worldwide still rising (World Health Organization, 2012), identifying factors that may prevent this worrying trend are likely to remain a top priority. I hope that this dissertation inspires others to further investigate, design, and implement character-related health interventions for young children, alongside initiating fruitful partnerships between academia, government, and industry to implement these interventions successfully.

References

- Acuff, D. S., & Reiher, R. H. R. (1997). *What kids buy and why*. New York, NY: Free Press.
- Atkin, C. K. (1975). *First year of experimental evidence: The effects of television advertising on children, Report 1*. East Lansing: Michigan State University. (ERIC Document Reproduction Service No. ED116783).
- Agrimarkt (2012). Gezonde vriendjes. Retrieved from <http://www.agrimarkt.nl/akties/gezonde-vriendjes.htm>
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior*, 31(2), 143-164.
- Birch, L. L. (1999). Development of food preferences. *Annual Review of Nutrition*, 19, 41-62.
- Bitescience (2012). *About Bitescience*. Retrieved from <http://www.bitescience.com/Aboutus.aspx>
- Buijzen, M. (2010). Hoe ouders de strijd met commercie aan kunnen gaan. In K. Segers & J. Bouwens (Eds.), *Maak mij wat wijs! De media kennen, begrijpen en zelf creëren* (pp. 120-132). Leuven, BE: Lannoo-campus.
- Buijzen, M., Van Reijmersdal, E.A., & Owen, L.H. (2010). Introducing the PCMC model: An investigative framework for young people's processing of commercial media content. *Communication Theory*, 20, 427-450.
- Brock, T. C., & Green, M. C. (2005). *Persuasion: Psychological insights and perspectives* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Callcott, M. F., & Lee, W. N. (1995). Establishing the spokes-character in academic inquiry: Historical overview and framework for definition. *Advances in Consumer Research*, 22, 144-151.
- CCAM (2012). *About CCAM*. Retrieved from <http://www.ccam-ascor.nl/index.php/en/about-ccam>
- Chiquita (2012). Chiquitakids. Retrieved from <http://www.chiquitakids.nl>
- Cohen, M., Hadley, M., & Frank, M. (2011). *Young children, apps & iPad*. Retrieved from http://www.mcgrc.com/wp-content/uploads/2011/07/ipad-study-cover-page-report-mcg-info_new-online.pdf
- De Droog, S. M., Buijzen M., Opre, S. J., & Valkenburg, P. M. (2011a). Merkfiguurtjes stimuleren de gezonde keuze van kleuters via affectieve reactiemechanismen. *Tijdschrift voor Communicatiewetenschap*, 39(4), 58-73.
- De Droog, S. M., Buijzen, M., & Valkenburg, P. M. (2012a). Use a rabbit or a rhino to sell a carrot? The effect of character-product congruence on children's liking of healthy foods. *Journal of Health Communication*, 17, 1068-1080.
- De Droog, S. M., Buijzen, M., & Valkenburg, P. M. (2012b). *Enhancing children's vegetable consumption using vegetable-promoting picture books: The impact of interactive shared reading and character-product congruence*. Manuscript submitted for publication.
- De Droog, S. M., Buijzen, M., & Valkenburg, P. M. (2012c). *Unraveling the impact of character-product congruence in picture books on children's healthy food choices*. Manuscript submitted for publication.
- De Droog, S. M., Valkenburg, P. M., & Buijzen, M. (2011b). Using brand characters to promote young children's liking of and purchase requests for fruit. *Journal of Health Communication*, 16, 79-89.
- EASA, European Advertising Standards Alliance (2012). *Issue brief - advertising to children*. Retrieved from <http://www.easa-alliance.org/Issues/Children/page.aspx/96>

Feldstein, A. C., & Glasgow, R. E. (2008). A practical, robust implementation and sustainability model (PRISM) for integrating research findings into practice. *Joint Commission on Accreditation of Healthcare Organizations*, 34(4), 228-243.

Fyffes (2012). *Freddy Fyffes*. Retrieved from <http://freddyfyffes.ie>

Garretson, J. A., & Niedrich, R. W. (2004). Spokes-characters: Creating character trust and positive brand attitudes. *Journal of Advertising*, 33(2), 25-36.

Glanz, K., & Bishop, D. B. (2010). The role of behavioral science theory in development and implementation of public health interventions. *Annual Review of Public Health*, 31, 399-418.

Goodies (2012). *Ontmoet de Goodies gang*. Retrieved from <http://www.organix.nl/nl/goodies/gang#tractor>

Hak (2012). *Hak Fruitsnack*. Retrieved from <http://www.hak.nl/index.php?nav=product&p=1.1.2.3.0&productID=121>

Harrison, K., Bost, K. K., McBride, B. A., Donovan, S. M., Grigsby-Toussaint, D. S., Kim, J., Liechty, J. M., Wiley, A., Teran-Garcia, M., & Jacobsohn, G. C. (2011). Toward a developmental conceptualization of contributors to overweight and obesity in childhood: The Six-Cs Model. *Child Development Perspectives*, 5, 50-8.

Hoffner, C. (1996). Children's wishful identification and parasocial interaction with favorite television characters. *Journal of Broadcasting & Electronic Media*, 40, 389-403.

Hoffner, C., & Cantor, J. (1991). Perceiving and responding to mass media characters. In J. Bryant & D. Zillmann (Eds.), *Responding to the screen: Reception and reaction processes* (pp. 63-101). Hillsdale, NJ: Erlbaum.

Horton, D., & Wohl, R. R. (1956). Mass communication and parasocial interaction. *Psychiatry*, 19, 215-229.

Institute of Medicine (2006). *Food marketing to children and youth: Threat or opportunity?* Washington, DC: National Academies Press.

Jacoby, L. L., Kelley, C. M., & Dywan, J. (1989). Memory attributions. In H. L. Roediger & F. I. M. Craik (Eds.), *Varieties of memory and consciousness: Essays in honour of Endel Tulving* (pp. 391-422). Hillsdale, NJ: Erlbaum.

Kamins, M. A. (1990). An investigation into the "match-up" hypothesis in celebrity advertising: When beauty may be only skin deep. *Journal of Advertising*, 19(1), 4-13.

Kamins, M. A., & Gupta, K. (1994). Congruence between spokesperson and product type: A matchup hypothesis perspective. *Psychology and Marketing*, 11, 569-586.

Klimmt, C., Hartmann, T., & Schramm, H. (2006). Parasocial interactions and relationships. In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 291-313). Mahwah, NJ: Erlbaum.

Kotler, J. A., Schiffman, J. M., & Hanson, K. G. (2012). The influence of media characters on children's food choices. *Journal of Health Communication*, 17, 886-898.

Lemish, D. (2007). *Children and television: A global perspective*. Oxford, UK: Blackwell.

Lin, B. H., & Morrison, R. M. (2002). Higher fruit consumption linked with lower body mass index. *Food Review*, 25(3), 28-32.

Lynch, J., & Schuler, D. (1994). The matchup effect of spokesperson and product congruency: A schema theory interpretation. *Psychology and Marketing*, 11, 417-445.

Martin, J. H. (1996). Is the athlete's sport important when picking an athlete to endorse a nonsport product? *Journal of Consumer Marketing*, 13(6), 28-43.

- McNeal, J. U. (2007). *On becoming a consumer: Development of consumer behavior patterns in childhood*. Oxford, UK: Butterworth-Heinemann.
- Mizerski, R. (1995). The relationship between cartoon trade character recognition and attitude toward product category in young children. *Journal of Marketing*, 59, 58-70.
- Moyer-Gusé, E. (2008). Toward a theory of entertainment persuasion: Explaining the persuasive effects of entertainment-education messages. *Communication Theory*, 18, 407-425.
- Ofcom (2012). *Television advertising of food and drink products to children (UK)*. Retrieved from http://stakeholders.ofcom.org.uk/consultations/foodads_new/statement
- PlayScience (2011). *Mobile playgrounds: Kids, families & mobile play* (PlayScience Report: volume 2, number 1). Retrieved from http://playsciencelab.com/LabReport/MobilePlaygrounds_LabReport.pdf
- Rau, G. (2011, March 24). Dora Influences My Child's Snacks? *Food for Thought*. Retrieved from <http://www.feedourfamilies.com/2011/03/dora-influences-my-childs-snacks.html>
- Reber, R., Schwarz, N., & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review*, 8(4), 364-382.
- Reber, R., Winkielman, P., & Schwarz, N. (1998). Effects of perceptual fluency on affective judgments. *Psychological Science*, 9, 45-48.
- Roberto, C. A., Baik, J., Harris, J. L., & Brownell, K. D. (2010). Influence of licensed characters on children's taste and snack preferences. *Pediatrics*, 126, 88-93.
- Rust, L. (1993). How to reach children in stores: Marketing tactics grounded in observational research. *Journal of Advertising Research*, 33(6), 67-72.
- Sanoma Media (2011, October 13). *Europees iPad gebruik vergelijkbaar met Nederlandse trend*. Retrieved from http://www.sanomamedia.nl/nl-web-Nieuws-Persberichten-2011-Europees_iPad_gebruik_vergelijkbaar_met_Nederlandse_trend.php
- Sengupta, J., Goodstein, R. C., & Boninger, D. S. (1997). All cues are not created equal: Obtaining attitude persistence under low-involvement conditions. *Journal of Consumer Research*, 23, 351-361.
- Shaffer, D. R., & Kipp, K. (2007). *Developmental psychology; Childhood & adolescence* (7th ed). Belmont, CA: Thomas Higher Education.
- SRC, Stichting Reclame Code (2012). *Nederlandse Reclame Code*. Retrieved from <https://www.reclamecode.nl/consument/default.asp?paginaID=28&hID=41>
- Stafford, M. R., Stafford, T. F., & Day, E. (2002). A contingency approach: The effects of spokesperson type and service type on service advertising perceptions. *Journal of Advertising*, 31(2), 17-35.
- Stevenson, W. (2008, April 6). *Dialogic reading training module by Whitney Stevenson*. Retrieved from <https://www.youtube.com/watch?v=eXmwfyxS1f8>
- SWOCC (2012). *Over SWOCC*. Retrieved from <http://www.swocc.nl/over-swocc>
- Tian, Q., & Hoffner, C. A. (2010). Parasocial interaction with liked, neutral, and disliked characters on a popular TV Series. *Mass Communication and Society*, 13, 250-269.
- Tohill, B. C. (2005). *Dietary intake of fruit and vegetables and management of body weight*. Geneva, Switzerland: World Health Organization.

- Ülger, B. (2009). Packages with cartoon trade characters versus advertising: An empirical examination of preschoolers' food preferences. *Journal of Food Products Marketing*, 15, 104-117.
- Valkenburg, P. M. (2004). *Children's responses to the screen: A media psychological approach*. Mahwah, NJ: Erlbaum.
- Voedingscentrum (2012). *Ik ga naar school*. Retrieved from <http://www.voedingscentrum.nl/nl/ik-ga-naar-school.aspx>
- Wang, H., & Singhal, A. (2009). Entertainment-education through digital games. In U. Ritterfeld, M. Cody, & P. Vorderer (Eds.), *Serious games: Mechanisms and effects* (pp. 271-292). New York, NY: Routledge.
- World Health Organization (2012). *Childhood overweight and obesity on the rise*. Retrieved from <http://www.who.int/dietphysicalactivity/childhood/en>
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology, Monograph Supplement*, 9, 1-27.