

**This item is the archived peer-reviewed author-version of:**

An experimental investigation of the effect of TV cooking show consumption on children's food choice behaviour

**Reference:**

Ngqangashe Yandisa, De Backer Charlotte, Hudders Liselot, Hermans Nina, Vandebosch Heidi, Smits Tim.- An experimental investigation of the effect of TV cooking show consumption on children's food choice behaviour  
International journal of consumer studies - ISSN 1470-6423 - 42:4(2018), p. 402-408  
Full text (Publisher's DOI): <https://doi.org/10.1111/IJCS.12433>  
To cite this reference: <https://hdl.handle.net/10067/1524450151162165141>

**TV CONSUMPTION AS HEALTH CATALYST?  
AN EXPERIMENTAL INVESTIGATION OF THE EFFECT OF TV COOKING SHOW  
CONSUMPTION ON CHILDREN'S FOOD CHOICE BEHAVIOR.**

**Short title**

TV CONSUMPTION AS HEALTH CATALYST?

Yandisa Ngqangashe<sup>a</sup>, Charlotte De Backer<sup>a</sup>, Liselot Hudders<sup>b</sup>, Nina Hermans<sup>c</sup>,  
Heidi Vandebosch<sup>a</sup>, Tim Smits<sup>d</sup>

a: Department of Communication Sciences, University of Antwerp, Sint-  
Jacobstraat 2, 2000 Antwerp, Belgium

b: Department of Communication Sciences, Ghent University, Korte Meer 7-9-11,  
9000 Gent, Belgium

c: Department of Pharmaceutical Sciences, Universiteitsplein 1, Wilrijk 2610,  
Antwerp Belgium

d: Institute for Media Studies, KULeuven, Parkstraat 45, 3000 Leuven, Belgium

**Corresponding Author**

Charlotte De Backer

Department of Communication Sciences, University of Antwerp, Sint-Jacobstraat  
2, 2000 Antwerp, Belgium

[Charlotte.debacker@uantwerpen.be](mailto:Charlotte.debacker@uantwerpen.be)

Office Phone +32 3 2655680

## Abstract

For several decades, television consumption has been crucial in the complex web of factors underlying the obesity epidemic. It has been suggested that if television cooking shows would endorse healthy eating styles, they may have positive effects on consumers' eating habits. This study empirically investigated the consequences of exposing children ( $N = 85$ , aged 9–12 years) to an existing television cooking show episode endorsing the consumption of fruits and vegetables compared with exposure to a non-food-related science show. The measures included pre-test and post-test attitudes toward health/nutrition and fruits/vegetables, as well as state preferences for a list of healthy and unhealthy foods. At the end of the study, children were separately given the choice between a popular cookie and a piece of fruit as a reward; this was used as a behavioral measure. The results of a logistic regression on the behavioral choice measure showed that the mere exposure to one episode of the television cooking show significantly increased the odds that the children would choose a piece of fruit over a cookie. Repeated-measures analyses showed that watching this single episode also decreased children's state appetite for unhealthy foods. State appetites for healthy foods and attitudes toward health/nutrition or fruits/vegetables did not change after watching the television cooking show episode. In sum, existing television cooking shows that endorse healthy eating positively influence children's food consumption in the short term and may have the potential to be used as platforms for nutrition education.

Keywords: Children, TV Cooking Shows, Food Choice, Attitudes.

## Introduction

Television (TV) consumption has been identified as a key component in the complex web of factors underlying the obesity epidemic (Guran and Bereket, 2011). The media are also key social influencers of food preferences in children and adolescents (Atik and Ozdamar Ertekin, 2013). Decades ago, warnings that TV consumption may cause obesity emerged (Dietz and Gortmaker, 1985). Ample evidence has since shown that, among children, TV consumption corresponds with less healthy diet choices, mainly due to the endorsement of foods in TV advertisements (Cairns et al., 2013, Boyland et al., 2016, Taveras et al., 2006). However, in these studies, scant attention has been paid to TV cooking shows, although they clearly endorse food, have an established place in popular culture (Adema, 2000), and affect the eating habits of young viewers (Neyens and Smits, 2017).

Studies that have investigated the content of TV cooking shows have concluded that their recipes do not follow guidelines for healthy eating (Howard et al., 2012, Jones et al., 2012, Silva et al., 2010). Further, among adult women, it is known that those who watch TV cooking shows more often are more likely to consume sweet snacks (De Backer and Hudders, 2016), while they tend to eat more sweet snacks while watching TV cooking shows (Bodenlos and Wormuth, 2013). Women who watch TV cooking shows for inspiration and frequently cook from scratch also report higher body mass indexes compared with those who watch these shows but do not cook (Pope et al., 2015). Therefore, although studies remain scarce, TV cooking shows do not seem to endorse healthful eating.

It has been suggested that a few adjustments to the focus and content of TV cooking shows may turn them into a powerful platform for endorsing a healthy lifestyle among consumers (Pope et al., 2015). In terms of children, media portraying healthy foods positively affect their attitudes toward these foods, as has been demonstrated with TV advertising (Klepp et al., 2007, Dixon et al., 2007). The promotion of healthy dietary choices via TV viewing may be a potential strategy to counter marketing that exposes children to unhealthy

dietary choices, and consequently, may represent a strategy to improve children's eating habits (McGinnis et al., 2006). This is because changes in attitudes can lead to changes in behavior. Among children, health nutrition attitudes have been found to strongly correlate with their intake of fruits and vegetables (Neumark-Sztainer et al., 2003), and healthy food choices overall (Marty et al., 2017). Others have, however, shown that not so much attitudes but preferences are associated with a higher consumption of fruits and vegetables (Nguyen et al., 2015, Vereecken et al., 2005). When it comes to media, both attitudes (Lwin et al., 2017) and preferences (Klepp et al., 2007) partially mediate the relationship between exposure to TV food content and consumption. Thus, this study considers both attitudes and preferences as variables that may be influenced by watching TV cooking shows.

The use of cooking shows to educate people about healthy diets is an avenue that has been explored by nutritionists in the past, both among adult (Clifford et al., 2009, Chew et al., 1995, Adam et al., 2015, Shannon et al., 1979) and child populations (Jenkins et al., 1975). Except for an older case study (Goldberg et al., 1978), none of the shows considered in this research were created in joint production with media professionals, and they were designed by nutritionists. Consequently, these shows predominantly educated their audiences rather than entertaining them; however, entertainment is increasingly the primary goal of broadcasted cooking shows (Collins, 2009, Nathanson, 2009). Consumer reception studies have shown that adults (Villani et al., 2015) and children (Goodchild, 2012) watch TV cooking shows for both entertainment and education. Thus, TV cooking shows may be a suitable "edutainment" platform (De Solier, 2005). Recently, media companies have produced many shows that could be considered "edutainment," including some specifically targeting children (*Junior Masterchef* genre). Using such popular media as platforms of entertainment education is not new; this strategy has mainly been applied in the context of soap operas (Bouman, 2002). However, the question remains of whether highly entertaining shows, as they exist today, would have the potential to educate consumers about healthy dietary choices and influence related attitudes and preferences. Therefore, this study aims to investigate whether the

consumption of an existing edutainment TV cooking show episode that focuses on healthy dietary choices (fruits and vegetables) will endorse healthy reactions among children. More precisely, we aim to investigate if such consumption can have the following effects:

1. Positively influence children's attitudes toward health/nutrition in general, and specifically fruits and vegetables;
2. Increase children's preference for healthy foods and decrease their preference for unhealthy foods; and
3. Increase the likelihood that children will choose a healthy versus an unhealthy snack.

For all these investigations, gender and age are used as control measures. This is because, first, among children, girls have more positive attitudes toward health (Yon et al., 2008) and fruits and vegetables (Cooke and Wardle, 2005) compared with boys. Second, as children grow older, their attitudes and preferences broaden to include a wider range of foods (Cooke and Wardle, 2005).

### **Methods**

This study followed the American Psychological Association's Ethical Guidelines for Research with Human Subjects. Informed consent was obtained from all the parents and participants, and the study was approved by the ethical commission of (blinded for review).

#### *Participants*

A sample of 85 children (32 girls and 48 boys) was recruited from two schools with comparable student profiles in terms of sociodemographic characteristics. Both schools were randomly assigned to the experimental and control groups, so that all children from school A belonged to the experimental group, and all children from school B belonged to the control group. From each school, children from the last two grades of elementary school were selected. According to the school system in (blinded for review), these are children aged 9–12 (group 7) and 10–13 years (group 8). The rationale for including this age group was mainly that the TV cooking show selected for this study targets children in this age

range. In addition, these preadolescent children are about to enter a developmental stage in which they are more autonomous in their food choice and preparation (Neumark-Sztainer et al., 1999). The children in this sample were aged 9–12 years, mean ( $M$ ) = 10.98, standard deviation ( $SD$ ) = .71. Although the same age groups/grades were selected at both schools, the children in the control group were slightly older than the children from the experimental group,  $M_{control} = 11.33$ ,  $SD = .53$ ,  $M_{experimental} = 10.67$ ,  $SD = .71$ ,  $t(83) = 4.82$ ,  $p < .001$ . The control and experimental groups did not differ in terms of gender distribution,  $\chi^2(1, N = 85) = 1.88$ ,  $p = 0.17$ . However, age and gender are both used as control variables in all the analyses.

### *Stimuli and Procedure*

An experimental two-group pre-/post-test design was used. Schools were randomly assigned to one of two conditions as follows: either watching an existing TV cooking show episode with a specific focus on fruits and vegetables or watching an episode of a children's science program where no reference was made to foods. For the experimental group, an excerpt of an existing entertainment TV cooking show, (name blinded for review), was selected. This program was produced by the public broadcasting company of (name blinded for review), with the specific aim of educating children about healthy foods. The show combines educational and entertainment elements. In every episode, children from two schools compete in different activities. The children cook and compete in teams, and at the end, there is a quiz about healthy food. Interspersed with the competition, short, informative videos are shown. In the chosen episode, extra attention was given to fruits and vegetables. In contrast, the control group was exposed to a fragment of an edutainment science TV show also targeting children of this age group, (name of the show blinded for review). The show did not contain any references to food or health. Both shows pertained to the edutainment genre and were 15 minutes in length, with no commercials shown before, during, or after the shows.

The entire study was conducted at the schools during class time, and it started with a brief questionnaire. The children then watched an excerpt of a TV show

for 15 minutes, immediately followed by another short survey. After completion of the second survey, the children met with the experimenter individually in a separate room and were given the choice between a cookie and a piece of fruit (mandarin) as a reward for participating in the study. The choice was recorded without their awareness. Finally, all the children and their parents were debriefed on the full scope of the study.

### Measures

All survey questions were pre-tested on four boys and four girls aged 9–12 years to verify the clarity and ease of answering the questions. No issues appeared in this pre-test. Identical questions were used for the pre- and post-test measures.

#### *Health/Nutrition Attitudes*

In both the pre- and post-experimental survey, attitudes toward nutrition and health in general, and specifically fruits and vegetables, were measured.

*General health/nutrition attitudes* were measured with a five-item scale, taken from the study of Neumark-Sztainer and colleagues (Neumark-Sztainer et al., 2003). For the five-item scale, the reliability scores were  $\alpha_{\text{pre}} = .66$  and  $\alpha_{\text{post}} = .66$ ; however, by removing one item (“At this point in my life, I am not very concerned about my health”), the reliability scores could be significantly improved. Therefore, the averaged scores of the remaining four items were used to create two new variables, as follows: “General health/nutrition attitudes pre-exposure,”  $\alpha = 0.72$ ,  $M = 3.86$ ,  $SD = .56$ , range: 1–5, and “General health/nutrition attitudes post-exposure,”  $\alpha = 0.73$ ,  $M = 3.88$ ,  $SD = .55$ , range: 1–5. For both variables, higher scores implied a more positive attitude.

*Attitudes toward fruit and vegetables* were measured pre- and post-exposure using items from the Child Nutrition Questionnaire (Wilson et al., 2008) with a 5-point Likert scale (ranging from 1 = “strongly disagree” to 5 = “strongly agree”). The averages resulted in pre-exposure and post-exposure scales, as follows: “Attitudes toward fruit/vegetables pre-exposure,”  $\alpha = 0.76$ ,  $M = 3.63$ ,  $SD = .52$ , range: 1–5, and “Attitudes toward fruit/vegetables post-exposure,”  $\alpha = 0.76$ ,  $M =$

3.57,  $SD = .57$ , range: 1–5. For both new variables, higher scores implied more positive attitudes.

#### *State Food Preferences*

In line with previous research on media and children's food preferences (Dixon et al., 2007), all participants rated several healthy and unhealthy foods in terms of how much appetite they had for each food at the moment (1 = "no appetite at all" to 5 = "would love to eat it"). Healthy food items were fresh fruits, fresh vegetables, fish, lean meats or replacements (chicken, tofu), unsweetened dairy or replacements (unsweetened yoghurt or soy products), whole grains (bread), and unsweetened drinks (water, tea with no sugar added). Participants were told that these foods could be eaten raw, cooked, or steamed, but not fried. Unhealthy food items were sweet snacks, salty snacks, fried foods, fast food (hamburger, pizza, kebab), sweetened milk/dairy products (flavored yoghurts, puddings), sweet breads (rolls, viennoiseries), and sweetened drinks. All items were presented in a randomized order in both the pre- and post-experimental surveys. Averaging the scores of the pre- and post-survey items, four new variables were created, as follows: "Healthy food preferences pre-exposure,"  $\alpha = 0.67$ ,  $M = 2.93$ ,  $SD = .63$ , range: 1–5; "Healthy food preferences post-exposure,"  $\alpha = 0.69$ ,  $M = 2.92$ ,  $SD = .60$ , range: 1–5; "Unhealthy food preferences pre-exposure,"  $\alpha = 0.85$ ,  $M = 3.18$ ,  $SD = .79$ , range: 1–5; and "Unhealthy food preferences post-exposure,"  $\alpha = 0.85$ ,  $M = 3.02$ ,  $SD = .76$ , range: 1–5. For all new variables, a higher score implied more appetite.

#### *Food Choice Behavior*

A binary behavioral measure was added by giving the children the choice between a popular cookie and a piece of fruit as a reward after completing the second survey. The experimenter coded their choices without their awareness.

## **Results**

#### *Effects on Attitudes*

A repeated-measures analysis of covariance (ANCOVA) with the pre- and post-measure of the *general health/nutrition attitude* as dependent variable, the

condition variable and gender as between-subjects factors, and age as a covariate revealed no significant pre- to post-exposure change in general health/nutrition attitudes,  $F(1, 79) = .04, p = .84, \eta^2 = .001$ . No significant interaction effect occurred with the condition (TV cooking shows vs. science show),  $F(1, 79) = 1.13, p = .29, \eta^2 = .014$ ; gender,  $F(1, 79) = .17, p = .68, \eta^2 = .002$ ; or age,  $F(1, 79) = .06, p = .81, \eta^2 = .001$ . The three-way interaction also appeared non-significant,  $F(1, 79) = .43, p = .52, \eta^2 = .005$ .

A similar analysis with the pre- and post-measure of the *fruits/vegetables attitude* as dependent variable revealed no significant change in attitudes toward fruits/vegetables,  $F(1, 77) = .44, p = .51, \eta^2 = .006$ . There was no significant interaction effect with the condition (TV cooking shows vs. science show),  $F(1, 77) = .04, p = .84, \eta^2 = .001$ ; gender,  $F(1, 79) = 1.72, p = .19, \eta^2 = .022$ ; or age,  $F(1, 77) = .62, p = .44, \eta^2 = .008$ . The three-way interaction also appeared non-significant,  $F(1, 77) = .31, p = .58, \eta^2 = .004$ . Table I gives an overview of the detailed descriptive data for the experimental and control groups.

[Table I]

#### *Effects on State Food Preferences*

An analysis was carried out with the pre- and post-measures of *state preference toward healthy foods* as the dependent variable. There was no significant change in how much the participants craved healthy foods before and after watching the TV show,  $F(1, 75) = 2.17, p = .15, \eta^2 = .028$ .

No significant interaction occurred with the condition (what they watched),  $F(1, 75) = .13, p = .72, \eta^2 = .002$ , or age,  $F(1, 75) = 2.42, p = .12, \eta^2 = .031$ . The interaction with gender was significant,  $F(1, 75) = 8.06, p < .01, \eta^2 = .097$ . The descriptive data revealed that, regardless of what the participants watched, there was a drop in craving healthy foods among girls,  $M_{pre} = 3.07, SD = .65, M_{post} = 2.87, SD = .71$ , while healthy food preference increased for boys  $M_{pre} = 2.83, SD = .61, M_{post} = 2.91, SD = .55$ . The three-way interaction, however, appeared non-significant,  $F(1, 75) = .46, p = .50, \eta^2 = .006$ .

Similarly, a repeated-measures ANCOVA with the pre- and post-measure of *state preference toward unhealthy foods* as dependent variable was performed. The results showed no significant change in how much the participants craved unhealthy foods after watching the TV show,  $F(1, 73) = .64, p = .43, \eta^2 = .009$ , but there was a significant interaction effect with the condition (what they watched),  $F(1, 73) = 4.96, p < .05, \eta^2 = .064$ . The descriptive data revealed a drop in craving unhealthy foods among those who watched the TV cooking show,  $M_{pre} = 3.27, SD = .65, M_{post} = 3.00, SD = .77$ , whereas hardly any change occurred for those who watched the science show,  $M_{pre} = 3.10, SD = .88, M_{post} = 3.00, SD = .75$ . No significant interactions occurred for age,  $F(1, 73) = .99, p = .32, \eta^2 = .013$ , or gender,  $F(1, 73) = .01, p = .93, \eta^2 = .000$ . The three-way interaction was also non-significant,  $F(1, 73) = 1.51, p = .22, \eta^2 = .020$ .

#### *Effects on Food Choice Behavior*

Finally, a binomial logistic regression analysis with food choice as the dependent variable, and age, condition, and gender as covariates (the latter two indicated as categorical) was conducted to further investigate whether the choice between the popular cookie and piece of fruit significantly differed between the experimental and control groups (Table II gives an overview of all results). A test of the full model versus a model with the intercept only was statistically significant,  $\chi^2(3, N = 85) = 15.24, p < .01$ . The model's overall success rate was 75.3%. Univariate analyses indicated that watching the TV cooking show versus science program significantly predicted children's choice of fruit over a cookie,  $B = 2.34, \text{standard error (SE)} = .72, \text{Wald } \chi^2(1) = 10.65, p = .001$ . The odds for choosing the fruit (vs. cookie) increased to 10.33 when watching the TV cooking show. There was also a significant effect of age,  $B = 1.17, SE = .46, \text{Wald } \chi^2(1) = 6.38, p < .05$ . The odds for choosing the fruit (vs. cookie) increased to 3.23 with every age increase ( $\text{MIN}_{age} = 9, \text{MAX}_{age} = 12$ ). Finally, participants' gender had no significant effect on the choice,  $B = .82, SE = .61, \text{Wald } \chi^2(1) = 1.84, p = .18$ .

[Table II]

Next, we added the attitudinal and food preference variables from the post-survey as covariates to this model, to control whether the observed effect could be attributed to any of these variables. The results showed that the TV show that was watched and age remained the only significant predictors (see Table II).

### **Discussion**

This is the first study to investigate the effect of watching TV cooking shows on children's attitudes and behavior regarding healthy foods. Results showed that when children (9- to 12-year old) watched one episode of an entertaining TV cooking show endorsing healthy foods, their appetite for less healthy foods decreased, and the odds of choosing a piece of fruit over a popular cookie increased. While watching TV cooking shows may also make children consume higher amounts of unhealthy foods (Neyens & Smits, 2017), this study showed that TV cooking shows could also endorse healthier eating habits. These results therefore refine the predominant idea that TV consumption contributes to the obesity epidemic (Guran and Bereket, 2011). Focusing on adult audiences, it had been suggested that a simple shift toward healthier recipes could elicit healthier food choice behavior (Pope et al., 2015). This study empirically supported this idea, and also added that shows targeting children could also make a difference.

Furthermore, the results supported earlier attempts by nutritionists to use videos to endorse healthy food choices, both among children (McGinnis et al., 2006, Goldberg et al., 1978) and adults (Adam et al., 2015, Clifford et al., 2009). These studies used videos designed by nutrition experts, which may differ from TV cooking shows designed by media professionals, known to focus more on entertainment (Collins, 2009, Nathanson, 2009). Yet, this study indicated that watching TV cooking shows focusing on healthy dietary choices may be as effective as video's designed by nutritionists in changing food choices. It could be argued that episodes focusing on healthy nutrition are rare, since nutritional content analyses of TV cooking shows mainly put forward a warning message about the imbalance of the meals prepared in these shows (Howard et al., 2012, Jones et al., 2012, Silva et al., 2010). These studies focused on shows targeting adults, while in this study a show targeting children was used. No research has

been done so far on the nutritional value of recipes from TV cooking shows targeting children.

Finally, while TV cooking shows may be as effective as videos designed by nutritionists to improve food choice behavior, this study also demonstrated that changes in health/nutrition attitudes and food preferences were not of the same magnitude. Watching the TV cooking show reduced the participants' preference for unhealthy foods compared with watching the science show, but there was no change in instant preference for healthy foods. This contrasts with previous results concerning the positive effects of viewing a pro-healthy nutrition video designed by nutritionists (Goldberg et al., 1978). Furthermore, this study demonstrated that watching a TV cooking show endorsing fruits and vegetables had no effect on children's attitudes toward fruits and vegetables or their general health/nutrition attitudes. Studies have shown that altering children's attitudes toward fruit and vegetables requires repetitive exposure over time (Nicklas et al., 2001). Intervention studies that successfully changed children's (Goldberg et al., 1978) and adults' (e.g., Clifford et al., 2009) food attitudes used repetitive exposure, while this study only exposed children to a single episode. Perhaps including multiple episodes would yield similar results. Alternatively, the stronger entertainment focus of TV cooking shows (Collins, 2009, Nathanson, 2009) versus the stronger educational focus of video's designed by nutritionists may be explain these results.

This study was subject to a few other limitations than using the exposure to one episode only. Second, food choice behavior was only measured immediately after exposure; future studies should measure behavior in the hours and days after TV cooking show consumption. Finally, all participants watched the TV cooking show or the science program together in class, which differs from a natural TV consumption setting. Children in this study may have been more attentive than if they were consuming TV at home. It would be interesting to investigate whether similar results could be obtained from using the experimental design in a home setting.

### **Conclusion**

Consuming a single episode of an entertaining TV cooking show endorsing fruits and vegetables reduced the appetite for unhealthy foods among children aged 9–12 years and significantly increased the likelihood of choosing a piece of fruit over a cookie. This is the first study to show that healthy TV cooking shows can positively influence children’s nutrition choices in the short-term.

Accepted Article

## REFERENCES

- Adam, M., Young-Wolff, K. C., Konar, E. & Winkleby, M. (2015) Massive open online nutrition and cooking course for improved eating behaviors and meal composition. *International Journal of Behavioral Nutrition and Physical Activity*, **12**, 1.
- Adema, P. (2000) Vicarious consumption: Food, television and the ambiguity of modernity. *The Journal of American Culture*, **23**, 113.
- Atik, D. & Ozdamar Ertekin, Z. (2013) Children's perception of food and healthy eating: dynamics behind their food preferences. *International journal of consumer studies*, **37**, 59-65.
- Bodenlos, J. S. & Wormuth, B. M. (2013) Watching a food-related television show and caloric intake. A laboratory study. *Appetite*, **61**, 8-12.
- Bouman, M. (2002) Turtles and Peacocks: Collaboration in Entertainment—Education Television. *Communication Theory*, **12**, 225-244.
- Boyland, E. J., Nolan, S., Kelly, B., Tudur-Smith, C., Jones, A., Halford, J. C. & Robinson, E. (2016) Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food and nonalcoholic beverage advertising on intake in children and adults. *The American journal of clinical nutrition*, ajcn120022.
- Cairns, G., Angus, K., Hastings, G. & Caraher, M. (2013) Systematic reviews of the evidence on the nature, extent and effects of food marketing to children. A retrospective summary. *Appetite*, **62**, 209-215.
- Chew, F., Palmer, S. & Kim, S. (1995) Sources of information and knowledge about health and nutrition: can viewing one television programme make a difference? *Public Understanding of Science*, **4**, 17-29.
- Clifford, D., Anderson, J., Auld, G. & Champ, J. (2009) Good Grubbin': impact of a TV cooking show for college students living off campus. *Journal of nutrition education and behavior*, **41**, 194-200.
- Collins, K. (2009) *Watching what we eat: The evolution of television cooking shows*. Bloomsbury Academic.
- Cooke, L. J. & Wardle, J. (2005) Age and gender differences in children's food preferences. *British Journal of Nutrition*, **93**, 741-746.
- De Backer, C. J. & Hudders, L. (2016) Look who's cooking. Investigating the relationship between watching educational and edutainment TV cooking shows, eating habits and everyday cooking practices among men and women in Belgium. *Appetite*, **96**, 494-501.
- De Solier, I. (2005) TV dinners: Culinary television, education and distinction. *Continuum: Journal of Media & Cultural Studies*, **19**, 465-481.
- Dietz, W. H. & Gortmaker, S. L. (1985) Do we fatten our children at the television set? Obesity and television viewing in children and adolescents. *Pediatrics*, **75**, 807-812.
- Dixon, H. G., Scully, M. L., Wakefield, M. A., White, V. M. & Crawford, D. A. (2007) The effects of television advertisements for junk food versus nutritious food on children's food attitudes and preferences. *Social Science & Medicine*, **65**, 1311-1323.
- Goldberg, M. E., Gorn, G. J. & Gibson, W. (1978) TV messages for snack and breakfast foods: do they influence children's preferences? *Journal of Consumer Research*, **5**, 73-81.

- Goodchild, R. (2012) The 'reality' of the Australian 'Junior Masterchef' television series for preadolescents and their parents. Murdoch University.
- Guran, T. & Bereket, A. (2011) International epidemic of childhood obesity and television viewing. *Minerva pediatrica*, **63**, 483-490.
- Howard, S., Adams, J. & White, M. (2012) Nutritional content of supermarket ready meals and recipes by television chefs in the United Kingdom: cross sectional study. *BMJ*, **345**.
- Jenkins, S., Stumo, M. & Voichick, J. (1975) Evaluation of the nutrition film series "Mulligan Stew". *Journal of Nutrition Education*, **7**, 17-19.
- Jones, M., Freeth, E. C., Hennessy-Priest, K. & Costa, R. J. (2012) A Systematic Cross-Sectional Analysis of British Based Celebrity Chefs' Recipes: Is There Cause for Public Health Concern? *Food and Public Health*, **3**, 100-110.
- Klepp, K.-I., Wind, M., De Bourdeaudhuij, I., Rodrigo, C. P., Due, P., Bjelland, M. & Brug, J. (2007) Television viewing and exposure to food-related commercials among European school children, associations with fruit and vegetable intake: a cross sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, **4**, 1.
- Lwin, M. O., Shin, W., Yee, A. Z. & Wardoyo, R. J. (2017) A parental health education model of children's food consumption: influence on children's attitudes, intention, and consumption of healthy and unhealthy foods. *Journal of health communication*, **22**, 403-412.
- Marty, L., Miguët, M., Bournez, M., Nicklaus, S., Chambaron, S. & Monnery-Patris, S. (2017) Do hedonic-versus nutrition-based attitudes toward food predict food choices? a cross-sectional study of 6-to 11-year-olds. *International Journal of Behavioral Nutrition and Physical Activity*, **14**, 162.
- McGinnis, J. M., Gootman, J. A. & Kraak, V. I. (2006) *Food marketing to children and youth: threat or opportunity?* National Academies Press.
- Nathanson, E. (2009) As easy as pie: Cooking shows, domestic efficiency, and postfeminist temporality. *Television & New Media*, **10**, 311-330.
- Neumark-Sztainer, D., Story, M., Perry, C. & Casey, M. A. (1999) Factors influencing food choices of adolescents: findings from focus-group discussions with adolescents. *Journal of the American dietetic association*, **99**, 929-937.
- Neumark-Sztainer, D., Wall, M., Perry, C. & Story, M. (2003) Correlates of fruit and vegetable intake among adolescents: Findings from Project EAT. *Preventive medicine*, **37**, 198-208.
- Neyens, E. & Smits, T. (2017) Seeing is doing. The implicit effect of TV cooking shows on children's use of ingredients. *Appetite*, **116**, 559-567.
- Nguyen, S. P., Girgis, H. & Robinson, J. (2015) Predictors of children's food selection: the role of children's perceptions of the health and taste of foods. *Food quality and preference*, **40**, 106-109.
- Nicklas, T. A., Baranowski, T., Baranowski, J. C., Cullen, K., Rittenberry, L. & Olvera, N. (2001) Family and child-care provider influences on preschool children's fruit, juice, and vegetable consumption. *Nutrition reviews*, **59**, 224-235.
- Pope, L., Latimer, L. & Wansink, B. (2015) Viewers vs. Doers. The relationship between watching food television and BMI. *Appetite*, **90**, 131-135.

Shannon, B., Thurman, G. & Schiff, W. (1979) Food \$ en \$ e: A pilot TV show on nutrition issues. *Journal of Nutrition Education*, **11**, 15-18.

Silva, N., Di Bonaventura, E., Byrnes, C. & Herbold, N. (2010) Are 30 - Minute Cooking Shows on the Food Network an Option for Dietitians to Recommend During Counseling? *Topics in Clinical Nutrition*, **25**, 70-74.

Taveras, E. M., Sandora, T. J., Shih, M. C., Ross - Degnan, D., Goldmann, D. A. & Gillman, M. W. (2006) The Association of Television and Video Viewing with Fast Food Intake by Preschool - Age Children. *Obesity*, **14**, 2034-2041.

Vereecken, C. A., Van Damme, W. & Maes, L. (2005) Measuring attitudes, self-efficacy, and social and environmental influences on fruit and vegetable consumption of 11- and 12-year-old children: Reliability and validity. *Journal of the American Dietetic Association*, **105**, 257-261.

Villani, A., Egan, T., Keogh, J. & Clifton, P. (2015) Attitudes and beliefs of Australian adults on reality television cooking programmes and celebrity chefs. Is there cause for concern? Descriptive analysis presented from a consumer survey. *Appetite*, **91**, 7-12.

Wilson, A. M., Magarey, A. M. & Mastersson, N. (2008) Reliability and relative validity of a child nutrition questionnaire to simultaneously assess dietary patterns associated with positive energy balance and food behaviours, attitudes, knowledge and environments associated with healthy eating. *International Journal of Behavioral Nutrition and Physical Activity*, **5**, 1.

Yon, M. Y., Han, Y. H. & Hyun, T. S. (2008) Dietary habits, food frequency and dietary attitudes by gender and nutrition knowledge level in upper-grade school children. *Korean Journal of Community Nutrition*, **13**, 307-322.

Table I

*Descriptive data of the effect of watching a children's TV cooking show episode versus a children's science show episode on food attitudes, - preferences, - choice behavior, controlling for gender and age (N = 85)*

Variables	Experimental group n = 45		Control group n = 40		Effect of condition (TV cooking show vs. science show)
	Pre	Post	Pre	Post	
<i>Health/Nutrition Attitudes</i>					
General Health/Nutrition Attitude, 1-5 Likert M (SD)	3.85 (.55)	3.82 (.53)	3.87 (.58)	3.94 (.57)	$F(1, 79) = 1.13^a$
Attitude towards fruits and vegetables, 1-5 Likert M (SD)	3.66 (.58)	3.59 (.59)	3.60 (.45)	3.51 (.54)	$F(1, 77) = .04^a$
<i>State Food Preferences</i>					
Appetite for Healthy Foods, 1-5 Likert M (SD)	3.03 (.65)	3.04 (.59)	2.80 (.60)	2.74 (.60)	$F(1, 75) = .13^a$
Appetite for Unhealthy Foods, -5 Likert M (SD)	3.27 (.65)	3.00 (.77)	3.10 (.88)	3.00 (.75)	$F(1, 73) = 4.96^{*a}$
<i>Food choice behavior</i>					
Chooses fruit over popular cookie at the end, %	NA	35.6%		12.5%	$B = 2.34, SE = .72,$ $Wald \chi^2(1) = 10.65^{**}$

*Notes. a. Results of individual Repeated Measure Analyses, for the detailed results, and results of gender and age: see text. b. Results of individual Binomial Logistic Regression Analyses, for the detailed results, and results of gender and age: see text. NA. Not applicable; these variables were only measured in the post-experimental survey*

*\*  $p < .05$ , \*\*  $p < .01$*

Table II

*The effect of watching a children's TV cooking show episode versus a children's science show episode on choosing fruit versus choosing a cookie after watching (N = 85)*

	B (SE)	95% CI for Odds Ratio		
		Lower	Odds Ratio	Upper
<i>Predictors<sup>a</sup></i>				
Effect of TV cooking show in contrast to science show	2.34** (.72)	2.54	10.33	41.95
Age (older compared to younger)	1.17* (.46)	1.30	3.23	8.01
Gender (boys compared to girls)	.82 (.61)	.13	.44	1.44
Constant	-15.98 (5.43)			
$\chi^2$ (df = 3)	15.24**			
<i>Predictors<sup>b</sup></i>				
Effect of TV cooking show in contrast to science show	2.15** (.76)	1.95	8.58	37.87
Age (older compared to younger)	1.04* (.50)	1.07	2.83	7.53
Gender (boys compared to girls)	1.11 (.68)	.79	3.03	11.56
General Health/Nutrition Attitude	-.02 (.57)	.32	.98	3.00
Attitude towards fruits and vegetables	.90 (.74)	.58	2.47	10.53
Appetite for Healthy Foods	.28 (.69)	.35	1.32	5.06
Appetite for Unhealthy Foods	-.81 (.42)	.20	.44	1.00
Constant	-16.22 (6.59)			
$\chi^2$ (df = 7)	17.92*			

*Notes: a.* Results of a Binomial Logistic Regression Analysis controlling for gender and age *b.* Results of a Binomial Logistic Regression Analysis controlling for gender, age, health/nutrition attitudes and food preferences. Attitudes and appetites are measured on 1 for *low* to 5 for *high*.

\*  $p < .05$ , \*\*  $p < .01$