



THE IMPACT OF MARKETING ACTIVITIES ON CHILDREN'S HEALTHY FOOD CHOICES

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Summary

Purpose: Within marketing and consumer research, prior studies have often tackled children's decisions concerning food in a fragmented manner, either by looking solely at attitudes or behaviours. Such an approach restricts the comprehensive comprehension of children as consumers. This study examines how marketing actions (specifically, the word claim used) help encourage children to prefer healthier choices. Design/methodology/Approach: 215 children, aged 6 to 9, took part in a simulated food choice task, with participants drawn from two schools in Zagreb. Parents gave their written informed consent for their child's involvement in the study. Findings and implications: The results emphasise the significant role of specific word claims like „healthy“, „popular“ and „tasty“ or emoticons „smiley“, „heart“ and „muscle“ in influencing children's food choices. Utilising these claims increases the likelihood of children opting for healthier food options. These insights hold practical implications for crafting interventions that promote healthier eating habits in children. Limitations: Hypothetical food choices may not fully represent children's behaviours in real-life settings. Exploring alternative labelling strategies beyond word claims would allow for

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comparisons and identification of effective methods to motivate healthy choices. Originality: By investigating the impact of marketing activities on children's healthy food choices, this study introduced an innovative perspective, focusing on the effectiveness of word claims and emoticons as labelling strategies. These results enhance our comprehension of the factors influencing children's dietary decisions and provide a basis for developing interventions to cultivate healthier eating habits.

Keywords: *marketing activities; children; healthy food choices; word claims; labelling.*

1. INTRODUCTION

With immense economic implications, children's food choices significantly impact their overall well-being. Despite appearing straightforward, these choices are complex and influenced by various factors (Köster, 2009). Extensive efforts are made to promote healthier eating (Hawkes et al., 2020). However, children's health is not improving: globally, the number of school-age children with obesity has risen over ten times in 40 years (Unicef, 2021). As Cooke and Wardle (2005) stated, children mostly prefer high-energy (unhealthy) foods and have an aversion to fruits and vegetables (Russell & Worsley, 2007). Researchers are focusing on strategies to change children's eating habits (Albani et al., 2018; John & Chaplin, 2022). Early behaviour changes can benefit kids and society in the long-term (Skinner et al., 2002). However, we still don't fully understand what shapes children's preferences for healthy food from a young age.

Current literature observes that children consume less food when described as "healthy" (Maimaran & Fishbach, 2014). Therefore, it is necessary to find marketing activities that aim to change behavior without directly mentioning the benefits of eating healthy food. On the other hand, information to more nutritious food choices is welcomed positively (Campos et al., 2011; Drichoutis et al., 2006). For example, providing positive food-related details (i.e., word claims) led to more positive food preferences among consumers (Kozup et al., 2003). For this purpose, it is necessary to examine whether adding word claims to food can promote the choice of healthy food in 6- and 9-year-old children.

While the impact of information has been well-documented in exploring effective interventions for influencing food choices, recent attention has turned towards the concept of nudging, which offers a promising avenue for behaviour change (Cordts, 2021). Building upon the understanding that descriptors can influence children's food preferences and considering the success of nudging interventions across age groups (Ensaff, 2021), it becomes crucial to delve deeper into the potential of incorporating

positive word claims to encourage healthy food selection among 6- and 9-year-old children.

Based on consumer research, this study investigates nudging intervention through labelled food choices in the early literacy stage. Interventions to improve health outcomes are challenging for children aged 5 to 11 years due to low health literacy (Ogden et al., 2014; Privitera et al., 2015). However, children aged 7-11 begin to spend their own money (McNeal, 1999), show independence (Dockett & Perry, 2001), and their cognitive abilities develop linearly (Piaget, 1963). Therefore, this article advances our understanding of children's decision-making in the food domain by exploring food word claims as essential drivers of healthy food choices.

2. LITERATURE REVIEW

In modern economies, children influence an estimated four-fifths of family food purchases (Hunter, 2002). Despite the importance of their role in family food purchasing, our understanding of children's food choices needs to be more studied (DeJesus et al., 2019; DeJesus et al., 2020). Adequately accounting for children's food behaviour is vital since early learning significantly determines their future consumer behaviour as adults (Skinner et al., 2002).

Within the realm of food marketing research, a collective body of literature (Beattie & McGuire, 2020; Craeynest et al., 2005; Guthrie et al., 2015; Smith et al., 2019; Vandebroele et al., 2020) emphasises the imperative of developing effective nudging interventions to instigate a transformation in children's dietary behaviours concerning both healthy and unhealthy food choices. These studies highlight the necessity of crafting interventions that press children toward making favourable dietary selections, aligning with health-oriented objectives. The insights drawn from this assemblage of research underscore the significance of tailored strategies aimed at shaping young consumers' preferences and choices within the complex food consumption landscape.

Preschool-age children (3-5 years old) may perceive a food presented as "healthy" as less attractive and consume less of it than when it is shown as "yummy" or in a neutral manner (Maimaran & Fishbach, 2014). The same preference was found in children 9 to 11 years old (Wardle & Huon, 2000) with reduced willingness to ask parents to buy a beverage labelled as "healthy". If food is presented to children (using marketing activities) as "healthy," most marketing activities target cognitive processes of conscious thoughts. That suggests that campaigns that use the terminology "healthy" to improve children's diets may be counterproductive (Marty et al., 2018).

Creative names associated with fruit can nudge children towards healthier choices (Greene et al., 2017). Type of food message (word claim) affects children's food choices, and there is longstanding evidence regarding what increases the choice of unhealthy food options. Namely, TV commercials for sugary foods influenced first graders to choose more sugary foods (Goldberg et al., 1978) and viewing candy commercials encouraged children to pick candy over fruit as a snack (Gorn & Goldberg, 1982).

Also, researchers have found that simple interventions with emoticons and claims can encourage children to choose healthier food (Privitera et al., 2015; 2014). Emoticon is an image-based tagging strategy in which we create the emotional association of health using simple emoticons (happy = healthy). The conclusion of a study conducted by Gallo et al. (2017) states that children respond positively to using emotions to talk about how they feel about different food choices. However, it is still unclear if there is a link between emoticons and food choices. Siegel et al. (2015) used green (happy) emoticons next to nonfat plain white milk, fruits, vegetables, and a main course to encourage healthy food purchases. The intervention increased the investment of plain white milk without fat and decreased the purchase of chocolate milk. De Vries Mecheva et al. (2021) tested the effectiveness of green-red (happy-sad) emoticons and peer influence on healthy food choices.

Nudging interventions and the issue of their effectiveness are also becoming increasingly important in the age of digitisation due to increasingly frequent decision-making in a digital environment (Weinmann et al., 2016). There is an increasing number of conceptual works on digital nudging (Hummel & Maedche, 2019; Ledderer et al., 2020; Mirsch et al., 2017). Given the widespread use of technology in everyday life, more and more purchases and life decisions are made via screens. In the digital context, users often engage in rapid and automated decision-making, which makes them prone to making flawed decisions. In this context, digital nudging can be an effective tool to guide users' decision-making (Mirsch et al., 2017), especially when nudging towards healthy food is analysed (Eltahir & Xing, 2021; Patel & Volpp, 2015; Starke et al., 2021).

Labelling (i.e., claims or emoticons) in the digital environment, cartoon characters, and traffic-light system information may also influence children's food choices (Velázquez et al., 2021). However, more research is needed to determine what type of word claims or which emoticons are attached to healthy foods, which may increase their appeal and encourage children to choose healthy food (Gallo et al., 2017). Therefore, it is necessary to test whether adding word claims or emoticons can influence behaviour without directly mentioning the benefits of healthy food consumption. Such findings could have a positive impact on children's healthier diets.

For the last two decades, there has been a rapid growth of research through experiments with children and testing the effectiveness of interventions aimed at changing food choice behaviour (Cadario & Chandon, 2020; List et al., 2021; Overcash, 2019; Rausch et al., 2013). The experiments were carried out in school canteens, kindergartens, restaurants, and supermarkets. The authors concluded that interventions involving children affect their skills and final economic choice, ultimately affecting current and future behaviour. List et al. (2021) state that the interventions should be carried out at school because they are children in a natural environment. The interventions are an excellent experiment tool because they are suitable for children aged 6 to 12, whose cognitive abilities grow linearly at that age. They gain independence by spending their own money on snacks and toys.

The present study hypothesises that labelling healthy food with different word claims and emoticons in a digital environment can increase children's hypothetical healthy food choices. As children's cognitive abilities increase linearly at this age and they become more independent in their consumption decisions, in the analyses that follow, children were combined into one younger (6-7 years) and one older (8-9 years) group.

3. PARTICIPANTS AND PROCEDURE

The study was approved by the Ethics Committee of the Faculty of Economics and Business Zagreb, which confirms strict adherence to the UN Convention on the Rights of the Child and the European Convention on the Exercise of Children's Rights. All applicable institutional and governmental regulations concerning the ethical use of human volunteers were adhered to during this study. In addition, the entire research was explained to each child and their written consent was obtained. Participants were children from two schools in the city of Zagreb, where principals agreed to conduct the research. Within these schools, parents of children attending first, second, and third grade (years 6-9) were asked to give written informed consent for their child to participate. Age groups were chosen to capture developmental changes in cognitive ability and the onset of formal schooling. The sample consisted of 215 children ($M = 7.70$; $SD = .883$; 51.6% girls): 87 participants were aged 6-7 (51 girls), and 128 participants were aged 8-9 (61 girls).

Table 1. Number of children by age and gender

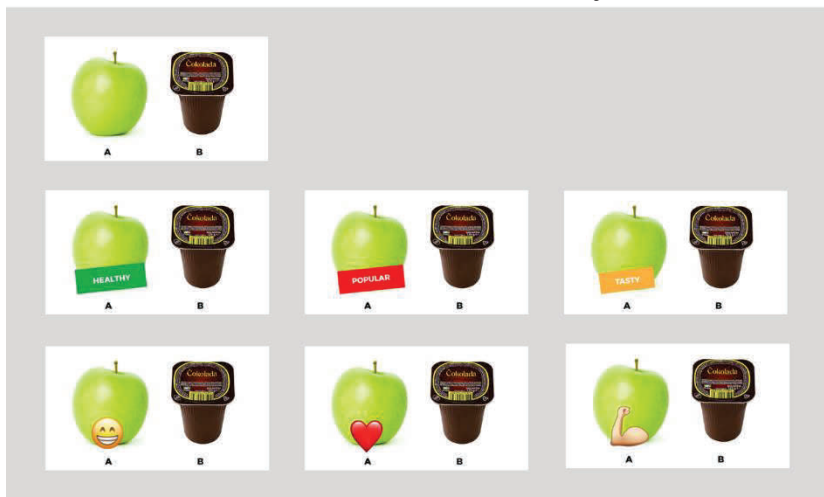
Age	Gender		Total
	Girls	Boys	
6	9	10	19
7	41	27	68
8	42	44	86
9	19	23	42
Total	111	104	215

Source: Created by the authors

Children were tested individually in a quiet room alone with an adult facilitator. Children received touch-screen tablets (25 cm diagonal screen). Each session began with a short description of the study. Children were told that they would answer several questions and solve choice tasks.

The task for children was to make eight choices between one healthy food item – an apple – and one unhealthy food item – chocolate pudding. Always seeing the same pair of images, as shown in Figure 1, children made choices with the apple presented without (control) or with word claims ("healthy", "popular", "tasty") and emojis ("smiley", "heart", "muscle").

Figure 1. Hypothetical Food Choice – Healthy vs. Unhealthy Food Products with Different Claims and Emojis

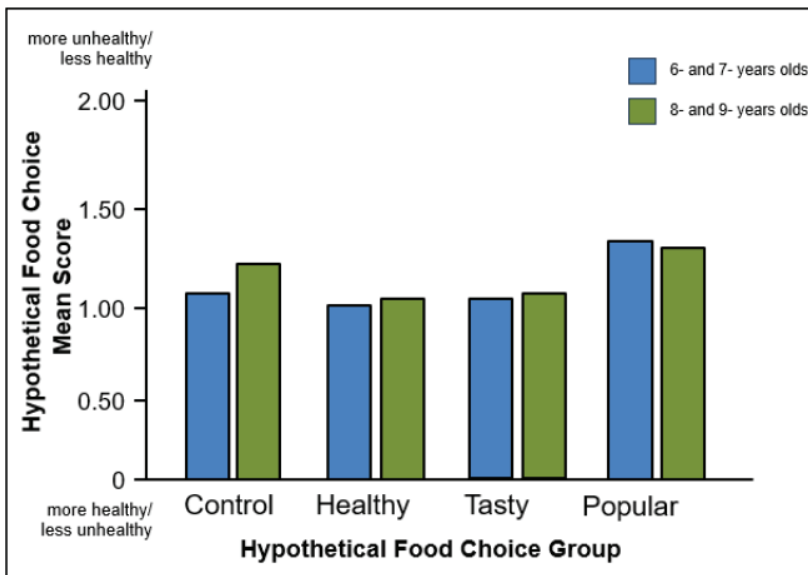


Source: Created by the authors

4. RESULTS

The hypothetical food choice task was assigned to participants, and the group means were examined. Three relevant findings emerged. First, the group with the "healthy" claim placed next to the healthy food demonstrated a lower standard for younger ($M = 1.10$, $SD = .306$) and older children ($M = 1.16$, $SD = .365$) than the control group (younger: $M = 1.20$, $SD = .399$; older: $M = 1.27$, $SD = .447$). Second, the group with the "tasty" claim placed next to the healthy food demonstrated a lower mean for younger ($M = 1.13$, $SD = .347$) and older children ($M = 1.16$, $SD = .372$) compared to the control group. Third, the group with the "popular" claim placed next to the healthy food demonstrated a higher mean for younger ($M = 1.33$, $SD = .474$) and older children ($M = 1.32$, $SD = .468$). In general, these results indicate that the presence of the claims "healthy" and "tasty" in equal measure improves the choice of healthy food, while the claim "popular" negatively affects the choice of healthy food. As far as the difference between age groups is concerned, there is no statistically significant difference. Both age groups react similarly to health claims.

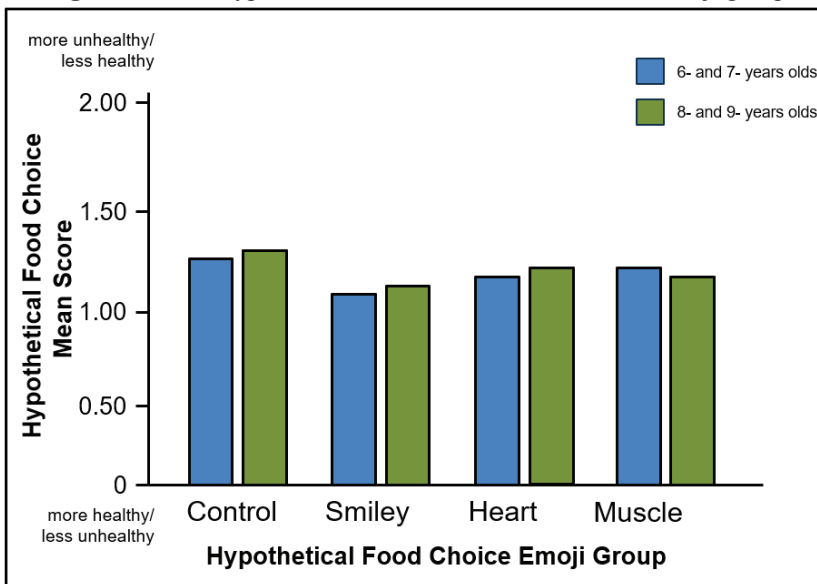
Figure 2. Mean hypothetical food choice scores for each claim group



Note. Higher scores indicate unhealthier food choices; lower scores indicate healthier food choices. Source: Created by the authors

As for healthy food choices marked with emojis, the results are as follows. First, the group with the "smiley" emoji placed next to the healthy food demonstrated a lower mean for younger ($M = 1.09$, $SD = .291$) and older children ($M = 1.13$, $SD = .341$) than the control group (younger: $M = 1.25$, $SD = .437$; older: $M = 1.29$, $SD = .455$). Second, the group with the "heart" emoji placed next to the healthy food demonstrated a lower mean for younger ($M = 1.15$, $SD = .359$) and older children ($M = 1.17$, $SD = .379$) compared to the control group. Third, the group with the "muscle" emoji placed next to the healthy food demonstrated a lower mean for younger ($M = 1.17$, $SD = .380$) and older children ($M = 1.12$, $SD = .323$). In general, these results indicate that the presence of all three emoji's in equal measure improves the choice of healthy food. As far as the difference between age groups is concerned, there is no statistically significant difference, and it can be concluded that both age groups react similarly to health claims.

Figure 3. Mean hypothetical food choice scores for each emoji group



Note. Higher scores indicate unhealthier food choices; lower scores indicate healthier food choices. Source: Created by the authors

5. DISCUSSION

The study explores the impact of marketing activities (labelling healthy foods with word claims and emoticons) on children's healthy food choices. Specifically, it

examines how labelling healthy food options with word claims and emoticons may encourage children to choose healthy options. This paper presents two significant contributions.

Firstly, the paper extends our understanding of how marketing activities (on how word claims attached to foods) affect food choices. While previous work establishes that these claims can influence children's behaviour (Gallo et al., 2017), the effects of specific claims remain mixed (Maimaran & Fishbach, 2014). In this study, the claims "healthy" and "tasty" had a positive effect on the likelihood of children choosing an apple over a chocolate pudding). This reinforces the view that word claims can affect children's food choices and that a "healthy" claim may not necessarily have a negative effect on children's behaviour (DeJesus et al., 2019; Maimaran & Fishbach, 2014). Moreover, the results further expand our understanding by examining how the presence of "tasty" and "popular" word claims affect food choices.

Secondly, the outcomes highlight the effectiveness of "emolabeling" to promote children's healthier food choices, particularly for 5- to 11-year-olds (Ogden et al., 2014). These findings align with previous research that identified promising results in using emoticons to enhance health literacy (Privitera et al., 2013) and encourage healthier food choices (Privitera et al., 2014; 2015). The influence of emoticons on children's food choices underscores the potent impact of visual information on shaping food preferences in children (Kraak & Story, 2015).

Given the changing landscape of family food shopping driven by retail chains, these findings have implications for caregivers and marketing managers, especially concerning healthy and environmentally friendly food products (Hémar-Nicolas & Ezan, 2019). As argued by Wingert et al. (2014), retail chains often target children with unhealthy but profitable products, contributing to unhealthy food habits. However, retail chains have recently created promotional activities to increase the purchase of healthy food by families. For example, the leading retail chain in Croatia designed the loyalty program "Zdravoljupci" which, over 9 weeks, tried to encourage families with children to buy fruits and vegetables. The program is designed so that consumers collect points by purchasing fruits and vegetables, and the points can then be exchanged for plush toys, which resemble fruits and vegetables in shape and appearance. The program increased fruit and vegetable purchases by 7-11% (Panzone et al., 2022). The authors stated that growth continued even after the end of the program. Furthermore, it has been investigated how nudging in retail chains can encourage the purchase of healthy foods (Gillebaart et al., 2023). The authors placed screens above fruits and vegetables that displayed an animated character activated by the passing of consumers. This intervention led to a 17% increase in vegetable sales. Appropriately designed marketing strategies and promotional

activities within retail chains can thus play a pivotal role in nudging healthier eating habits, benefiting public health and commercial interests (Panzone et al., 2022).

5.1. Implications for Managers

The findings from this study hold valuable implications for marketers seeking to shape children's food preferences early on. The study highlights the potential impact of employing specific word claims such as "healthy," "popular," and "tasty," as well as the use of emoticons, to influence children's choices toward healthier foods. Both word claims and emoticons have demonstrated effectiveness in steering children's food preferences toward more health-conscious options.

However, given the variability in results, further investigation is warranted to ascertain the optimal word claims and emoticons that resonate best with different age groups, thus maximising their efficacy. These insights carry meaningful implications for policymakers and retailers, providing them with a foundation to formulate impactful strategies that foster healthier dietary decisions among children.

5.2. Limitations and Future Research Recommendations

Although this study provides notable insights into children's food choices, one should take certain limitations into account. First, this study measured children's online hypothetical food choices that are highly likely to be exposed to behavioural biases (e.g., desirability bias). Such hypothetical choices might only partially reflect what children would do in a natural, in-store setting. Therefore, future studies should replicate this study by including real (in-store) food choices in which children would choose between actual food options. In this way, it would be possible to see any differences between the online and authentic environment and determine more precisely whether children's intention to buy led to purchase behaviour.

The second limitation is related to sample size. Due to the small sample size, relations of interest were measured separately only for two age groups – a group of younger (6- to 7-year-olds) and older (8- to 9-year-olds) children. It could be interesting to measure differences in children's choices in each age group separately (in 6-year-olds, 7-year-olds etc.). A larger sample is required if we wish to do so.

Further, this study tested how two types of labelling, specifically word claims and emoticons, affect children's food choices. Trying the effect of other labelling strategies is necessary to find the most effective way to motivate children's health decisions.

6. CONCLUSION

In conclusion, this study demonstrated that marketing activities, explicitly labelling the healthy option with word claims such as "healthy" or "tasty" and with emoticons such as "smiley", "heart," or "muscle" can increase the likelihood of choosing the healthier option among children in early literacy stage. These outcomes emphasise the potential of interventions focused on food labelling, particularly within the context of elementary schools, which serve as a natural setting for shaping children's food preferences.

By targeting this age group during the early years of formal schooling, educators can leverage a critical period for learning about food and promoting healthy food habits. Therefore, an elementary school can provide a significant opportunity to influence children's healthy food behaviours.

The findings from this study extend beyond educators and resonate with researchers and policymakers dedicated to promoting healthy, conscious decisions among children. The study emphasises the effectiveness of marketing activities and labelling interventions. By focusing on elementary schools, interventions can have a lasting impact on children's behaviours towards healthy eating.

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REFERENCES:

1. Albani, V., Butler, L. T., Traill, W. B., & Kennedy, O. B. (2018). Understanding fruit and vegetable consumption in children and adolescents. The contributions of affect, self-concept, and habit strength. *Appetite*, 120, 398-408. <https://doi.org/10.1016/j.appet.2017.09.018>
2. Beattie, G., & McGuire, L. (2020). The modifiability of implicit attitudes to carbon footprint and its implications for carbon choice. *Environment and Behavior*, 52(5), 467- 494. <https://doi.org/10.1177/0013916518808571>
3. Cadario, R., & Chandon, P. (2020). Which healthy eating nudges work best? A meta-analysis of field experiments. *Marketing Science*, 39(3), 465-486. <https://doi.org/10.1287/mksc.2018.1128>

4. Campos, S., Doxey, J., & Hammond, D. (2011). Nutrition labels on pre-packaged foods: a systematic review. *Public health nutrition*, 14(8), 1496-1506. <https://doi.org/10.1017/S1368980010003290>
5. Cooke, L. J., & Wardle, J. (2005). Age and gender differences in children's food preferences. *British Journal of Nutrition*, 93(5), 741-746. <https://doi.org/10.1079/bjn20051389>
6. Cordts, F. (2021). Nudging and Attitude: Exploring Nudges in an Online Food Choice Environment (Master's thesis, University of Twente)
7. Craeynest, M., Crombez, G., De Houwer, J., Deforche, B., Tanghe, A., & De Bourdeaudhuij, I. (2005). Explicit and implicit attitudes towards food and physical activity in childhood obesity. *Behaviour research and therapy*, 43(9), 1111-1120. <https://doi.org/10.1016/j.brat.2004.07.007>
8. DeJesus, J. M., Du, K. M., Shutts, K., & Kinzler, K. D. (2019). How information about what is “healthy” versus “unhealthy” impacts children’s consumption of otherwise identical foods. *Journal of Experimental Psychology: General*, 148(12), 2091-2103. <https://doi.org/10.1037/xge0000588>
9. DeJesus, J. M., Gelman, S. A., & Lumeng, J. C. (2020). Children’s implicit food cognition: Developing a food Implicit Association Test. *Cognitive Development*, 54, 100889. <https://doi.org/10.1016/j.cogdev.2020.100889>
10. de Vries Mecheva, M., Rieger, M., Sparrow, R., Prafiantini, E., & Agustina, R. (2021). Snacks, nudges and asymmetric peer influence: Evidence from food choice experiments with children in Indonesia. *Journal of Health Economics*, 79, 102508. <https://doi.org/10.1016/j.jhealeco.2021.102508>
11. Dockett, S., & Perry, B. (2001). Starting School: Effective Transitions. *Early Childhood Research & Practice*, 3(2), n2.
12. Drichoutis, A. C., Lazaridis, P., & Nayga, R. M. (2006). Consumers’ use of nutritional labels: a review of research studies and issues. *Academy of Marketing Science Review*, 9.
13. Eltahir, A., & Xing, C. (2021). Digital Nudging: Employing the psychological aspect of Nudges to influence user's decision. *International Journal of Recent Research in Social Sciences and Humanities*, 8(2), 20-29.
14. Ensaff, H. (2021). A nudge in the right direction: the role of food choice architecture in changing populations' diets. *Proceedings of the Nutrition Society*, 80(2), 195-206. <https://doi.org/10.1017/S0029665120007983>
15. Gallo, K. E., Swaney-Stueve, M., & Chambers, D. H. (2017). A focus group approach to understanding food-related emotions with children using words and emojis. *Journal of Sensory Studies*, 32(3), e12264. <https://doi.org/10.1111/joss.12264>

16. 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(2), 73-81. <https://doi.org/10.1086/208717>
17. Gorn, G. J., & Goldberg, M. E. (1982). Behavioral evidence of the effects of televised food messages on children. *Journal of Consumer Research*, 9(2), 200-205. <https://doi.org/10.1086/208913>
18. Gillebaart, M., Blom, S., De Boer, F., & De Ridder, D. (2023). Prompting vegetable purchases in the supermarket by an affordance nudge: Examining effectiveness and appreciation in a set of field experiments. *Appetite*, 184. <https://doi.org/10.1016/j.appet.2023.106526>
19. Greene, K. N., Gabrielyan, G., Just, D. R., & Wansink, B. (2017). Fruit-Promoting Smarter Lunchrooms Interventions: Results from a Cluster RCT. *American Journal of Preventive Medicine*, 52(4), 451-458. <https://doi.org/10.1016/j.amepre.2016.12.015>
20. Guthrie, J., Mancino, L., & Lin, C. T. J. (2015). Nudging consumers toward better food choices: Policy approaches to changing food consumption behaviors. *Psychology & Marketing*, 32(5), 501-511. <https://doi.org/10.1002/mar.20795>
21. Hawkes, C., Fox, E., Downs, S. M., Fanzo, J., & Neve, K. (2020). Child-centered food systems: Reorienting food systems towards healthy diets for children. *Global Food Security*, 27, 100414. <https://doi.org/10.1016/j.gfs.2020.100414>
22. Hémar-Nicolas, V., & Ezan, P. (2019). How do children make sense of food well-being? Food for thought for responsible retailers. *International Journal of Retail & Distribution Management*, 47(6), 605-622. <https://doi.org/10.1108/IJRDM-08-2017-0181>
23. Hummel, D., & Maedche, A. (2019). How effective is nudging? A quantitative review on the effect sizes and limits of empirical nudging studies. *Journal of Behavioral and Experimental Economics*, 80, 47-58. <https://doi.org/10.1016/j.socec.2019.03.005>
24. Hunter, B. T. (2002). Marketing foods to kids: Using new avenues. *Consumers' Research Magazine*, 85(4), 23-25.
25. John, D. R., & Chaplin, L. N. (2022). Children as consumers: A review of 50 years of research in marketing. In Kahle, L. R., Lowrey, T. M., & Huber, J. (ed.), *APA handbook of consumer psychology*. American Psychological Association, pp. 185-202.
26. Kozup, J. C., Creyer, E. H., & Burton, S. (2003). Making healthful food choices: the influence of health claims and nutrition information on consumers'

- evaluations of packaged food products and restaurant menu items. *Journal of Marketing*, 67(2), 19-34. <https://doi.org/10.1509/jmkg.67.2.19.18608>
27. Köster, E. P. (2009). Diversity in the determinants of food choice: A psychological perspective. *Food Quality and Preference*, 20(2), 70-82. <https://doi.org/10.1016/j.foodqual.2007.11.002>
 28. Kraak, V. I., & Story, M. (2015). Influence of food companies' brand mascots and entertainment companies' cartoon media characters on children's diet and health: a systematic review and research needs. *Obesity Reviews*, 16(2), 107-126. <https://doi.org/10.1111/obr.12237>
 29. Ledderer, L., Kjær, M., Madsen, E. K., Busch, J., & Fage-Butler, A. (2020). Nudging in public health lifestyle interventions: a systematic literature review and Metasynthesis. *Health Education & Behavior*, 47(5), 749-764. <https://doi.org/10.1177/1090198120931788>
 30. List, J. A., Petrie, R., & Samek, A. (2021). How Experiments with Children Inform Economics (No. w28825). National Bureau of Economic Research.
 31. Maimaran, M., & Fishbach, A. (2014). If it's useful and you know it, do you eat? Preschoolers refrain from instrumental food. *Journal of Consumer Research*, 41(3), 642-655. <https://doi.org/10.1086/677224>
 32. Marty, L., Chambaron, S., Nicklaus, S., & Monnery-Patris, S. (2018). Learned pleasure from eating: An opportunity to promote healthy eating in children?. *Appetite*, 120, 265-274. <https://doi.org/10.1016/j.appet.2017.09.006>
 33. McNeal, J. U. (1999). The kids market: Myths and realities. Paramount Market Publishing.
 34. Mirsch, T., Lehrer, C., & Jung, R. (2017). Digital nudging: Altering user behavior in digital environments. Proceedings der 13. Internationalen Tagung Wirtschaftsinformatik (WI 2017), 634-648.
 35. Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *Jama*, 311(8), 806-814.
 36. Overcash, F. M., Vickers, Z., Ritter, A. E., Mann, T., Mykerezzi, E., Redden, J., Rendahl, A. K., Davey, C., & Reicks, M. (2019). An in-home intervention of parent-implemented strategies to increase child vegetable intake: Results from a non-randomized cluster-allocated community trial. *BMC Public Health*, 19(1), 1-13. <https://doi.org/10.1186/s12889-019-7079-4>
 37. Panzone, L., Tocco, B., Brecic, R., & Gorton, M. (2023). Healthy foods, healthy sales? Cross-category spillover effects of a reward program promoting sales of fruit and vegetables. *International Journal of Population Data Science*, 8(3). <https://doi.org/10.23889/ijpds.v8i3.2270>

38. Patel, M. S., & Volpp, K. G. (2015). Nudging students toward healthier food choices—Applying insights from behavioral economics. *JAMA pediatrics*, 169(5), 425-426. <https://doi.org/10.1001/jamapediatrics.2015.0217>
39. Piaget, J. (1963). The attainment of invariants and reversible operations in the development of thinking. *Social research*, 283-299.
40. Privitera, G. J., Phillips, T. E., Zuraikat, F. M., & Paque, R. (2015). Emolabeling increases healthy food choices among grade school children in a structured grocery aisle setting. *Appetite*, 92, 173-177. <https://doi.org/10.1016/j.appet.2015.05.024>
41. Privitera, G. J., Phillips, T. E., Misenheimer, M., & Paque, R. (2014). The effectiveness of “emolabeling” to promote healthy food choices in children preschool through 5th grade. *International Journal of Child Health and Nutrition*, 3(1), 41-47. <https://doi.org/10.6000/1929-4247.2014.03.01.5>
42. Privitera, G. J., Vogel, S. I., & Antonelli, D. E. (2013). Performance on a food health assessment using emoticons with pre-literacy-aged children. *American Journal of Educational Research*, 1(3), 110-114. <https://doi.org/10.12691/education-1-3-9>
43. Rausch Herscovici, C., Kovalskys, I., & De Gregorio, M. J. (2013). Gender differences and a school-based obesity prevention program in Argentina: a randomized trial. *Revista Panamericana de Salud Pública*, 34, 75-82.
44. Russell, C. G., & Worsley, A. (2007). Do children's food preferences align with dietary recommendations?. *Public health nutrition*, 10(11), 1223-1233. <https://doi.org/10.1017/S1368980007699546>
45. Siegel, R. M., Anneken, A., Duffy, C., Simmons, K., Hudgens, M., Lockhart, M. K., & Shelly, J. (2015). Emoticon use increases plain milk and vegetable purchase in a school cafeteria without adversely affecting total milk purchase. *Clinical Therapeutics*, 37(9), 1938-1943. <https://doi.org/10.1016/j.clinthera.2015.07.016>
46. Smith, R., Kelly, B., Yeatman, H., & Boyland, E. (2019). Food marketing influences children's attitudes, preferences and consumption: a systematic critical review. *Nutrients*, 11(4), 875. <https://doi.org/10.3390/nu11040875>
47. Skinner, J. D., Carruth, B. R., Bounds, W., & Ziegler, P. J. (2002). Children's Food Preferences: A Longitudinal Analysis. *Journal of the American Dietetic Association*, 102(11), 1638-1647. [https://doi.org/10.1016/S0002-8223\(02\)90349-4](https://doi.org/10.1016/S0002-8223(02)90349-4)
48. Starke, A. D., Willemsen, M. C., & Trattner, C. (2021). Nudging healthy choices in food search through visual attractiveness. *Frontiers in Artificial Intelligence*, 4, 621743. <https://doi.org/10.3389/frai.2021.621743>

49. Vandenbroele, J., Vermeir, I., Geuens, M., Slabbinck, H., & Van Kerckhove, A. (2020). Nudging to get our food choices on a sustainable track. *Proceedings of the Nutrition Society*, 79(1), 133-146. <https://doi.org/10.1017/S0029665119000971>
50. Velázquez, A. L., Alcaire, F., Vidal, L., Varela, P., Næs, T., & Ares, G. (2021). The influence of label information on the snacks parents choose for their children: Individual differences in a choice based conjoint test. *Food Quality and Preference*, 94, 104296. <https://doi.org/10.1016/j.foodqual.2021.104296>
51. Wardle, J., & Huon, G. (2000). An experimental investigation of the influence of health information on children's taste preferences. *Health Education Research*, 15(1), 39-44. <https://doi.org/10.1093/her/15.1.39>
52. Weinmann, M., Schneider, C., & Vom Brocke, J. (2016). Digital nudging. *Business & Information Systems Engineering*, 58(6), 433-436. <https://doi.org/10.1007/s12599-016-0453-1>
53. Wingert, K., Zachary, D. A., Fox, M., Gittelsohn, J., & Surkan, P. J. (2014). Child as change agent. The potential of children to increase healthy food purchasing. *Appetite*, 81, 330-336. <https://doi.org/10.1016/j.appet.2014.06.104>
54. UNICEF. (2021). The state of food security and nutrition in the world 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all.

UTJECAJ MARKETINŠKIH AKTIVNOSTI NA ODABIR ZDRAVE HRANE KOD DJECE

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Sažetak

Svrha: Unutar područja marketinga i istraživanja potrošača, prethodne studije često su se bavile odlukama djece o hrani na fragmentiran način, bilo gledajući isključivo na stavove ili ponašanja. Takav pristup ograničava cjelovito shvaćanje djece kao potrošača. Ova studija ispituje kako marketinške radnje (konkretno, korištena riječ tvrdnja) pomažu potaknuti djecu da preferiraju zdravije izbore. Metodološki pristup: U simuliranom zadatku odabira hrane sudjelovalo je ukupno 215 djece u dobi od 6 do 9 godina, a sudionici su bili djeca iz dvije zagrebačke škole. Od roditelja djece zatražen je pismeni informirani pristanak za sudjelovanje njihovog djeteta u istraživanju. Rezultati i implikacije: Rezultati naglašavaju značajnu ulogu specifičnih riječi kao što su „zdravo“, „popularno“ i „ukusno“ te emotikona „smajlic“, „srce“, „mišić“ u utjecaju na dječje izbore hrane. Korištenje ovih tvrdnji povećava vjerojatnost da će djeca odlučivanje za zdravije prehrambene opcije. Ovi uvidi imaju praktične implikacije za osmišljavanje intervencija koje promiču zdravije prehrambene navike kod djece. Ograničenja: Korištenje hipotetskih izbora hrane možda neće u potpunosti prikazati dječja ponašanja u stvarnom okruženju. Istraživanje alternativnih strategija označavanja osim tvrdnji riječima omogućilo bi usporedbe i identifikaciju učinkovitih metoda za motiviranje zdravih izbora. Doprinos: Ovo istraživanje uvelo je novi pristup ispitivanjem učinkovitosti tvrdnji i emooznaka kao strategije označavanja za poboljšanje izbora zdrave hrane. Dobiveni rezultati unapređuju naše razumijevanje temeljnih mehanizama koji pokreću dječje odluke o hrani i postavljaju temelje za intervencije usmjerene na poticanje zdravog ponašanja u području izbora hrane.

Ključne riječi: marketinške aktivnosti; djeca; izbor zdrave hrane; tvrdnje na etiketama; označavanje.