

# Healthy Meals Interventions in Restaurants/Canteens

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Out-of-home eating is increasing, but evidence about its healthiness is limited. The present systematic review and meta-analysis aimed to elucidate the effectiveness of full-service restaurant and canteen-based interventions in increasing the dietary intake, food availability, and food purchase of healthy meals. Studies from 2000–2020 were searched in Medline, Scopus, and Cochrane Library using the PRISMA checklist. A total of 35 randomized controlled trials (RCTs) and 6 non-RCTs were included in the systematic review and analyzed by outcome, intervention strategies, and settings (school, community, workplace). The meta-analysis included 16 RCTs (excluding non-RCTs for higher quality). For dietary intake, the included RCTs increased healthy foods (+0.20 servings/day; 0.12 to 0.29;  $p < 0.001$ ) and decreased fat intake (–9.90 g/day; –12.61 to –7.19;  $p < 0.001$ ), favoring the intervention group. For food availability, intervention schools reduced the risk of offering unhealthy menu items by 47% (RR 0.53; 0.34 to 0.85;  $p = 0.008$ ). For food purchases, a systematic review showed that interventions could be partially effective in improving healthy foods. Lastly, restaurant- and canteen-based interventions improved the dietary intake of healthy foods, reduced fat intake, and increased the availability of healthy menus, mainly in schools. Higher-quality RCTs are needed to strengthen the results. Moreover, from our results, intervention strategy recommendations are provided.

Keywords: out-of-home eating ; menu choice ; restaurant-based interventions ; family ; food-service ; food behavior ; restaurant ; eating out ; systematic review ; meta-analysis

## 1. Introduction

The change in modern living due to urbanization and globalization <sup>[1]</sup> and the lack of sufficient free time to dedicate to home cooking have increased families' consumption of daily meals out of the home <sup>[2]</sup>. Restaurants, schools, workplace canteens and food stores providing prepared meals are the preferred food services by both children and adult populations <sup>[3][4]</sup>.

Consequently, eating out of home is associated with a unhealthy diet <sup>[5]</sup> due to the lower consumption of fruits and vegetables <sup>[6]</sup>. Furthermore, comparisons of the nutritional profile of foods have shown that meals prepared out of the home are higher in energy density, fat and sodium and lower in calcium and fiber than foods prepared at home <sup>[7]</sup>. Thus, consumers of out-of-home meals may report important long-term health implications, such as obesity <sup>[8]</sup> and related chronic diseases <sup>[9]</sup>. In this regard, people are paying more attention to the healthiness of food when eating out of home <sup>[10]</sup>, demanding higher-quality meals from food businesses that have the responsibility to provide them according to consumers' necessities <sup>[11]</sup>.

For instance, potential strategies for the promotion of healthier meals could be the improvement of the nutritional quality of food in terms of energy, fat and sodium <sup>[12]</sup>, the reduction of portion sizes in meals <sup>[13]</sup> and the provision of nutritional labels <sup>[14]</sup>. The lack of nutritional information on menus, known as the consumer "nutritional knowledge gap", could hinder people's healthy eating intentions when they are eating out of home <sup>[15]</sup>.

However, the literature on the most effective interventions to improve consumers' diet when they are eating out of home is still scarce. Moreover, most nutrition interventions are set in fast-food and chain restaurants mainly placed in urban areas <sup>[16]</sup>, leaving little evidence about independent restaurants and potential intervention strategies <sup>[17][18]</sup>.

Another aspect is identifying suitable solutions for different population targets <sup>[19]</sup>, such as children, adolescents and adults, and in different environments, such as restaurants <sup>[18]</sup>, schools <sup>[20]</sup> and workplace canteens <sup>[21]</sup>.

## 2. Interventions to Promote Healthy Meals in Full-Service Restaurants and Canteens

Eligible interventions were full-service restaurants and canteen-based interventions aimed at increasing dietary intake, food availability, and food purchases in different settings, such as schools, workplaces, and communities. The results from the present systematic review showed that restaurant- and canteen-based interventions are effective in improving healthy dietary intake and food availability, mainly in the school setting, with a beneficial impact on children. However, there is partial evidence for the improvement of food purchases, and more evidence is needed about workplaces and community settings as full-service restaurants. Moreover, when the meta-analysis was performed without considering non-RCT studies, the results were confirmed in dietary intake for increasing healthy food intake and in the reduction of fat intake.

Demonstrated effectiveness in increasing the intake of healthy food items (whole grains, dairy products and alternatives) and nutrients such as fiber [22][23][24][25][26][27][28][29][30][31][32][33][34] mainly in children, demonstrating that schools are a favorable environment for the promotion of healthy dietary intake. Furthermore, an increase in daily caloric intake occurred in favor of the CG [35][25][27][28][31][32][33], and effectiveness was observed for decreasing the consumption of other nutrients such as saturated fat and fat in the IG [36][24][25][32][33]. For food availability outcome, the intervention studies included in the meta-analysis were also demonstrated to be effective in reducing the risk, for the intervention schools, of offering unhealthy foods and beverages on canteen menus [37][38][39].

For interventions in the dietary intake outcome category, the present results showed effectiveness mainly in school settings, which was the preferred setting for interventions targeting these outcomes. When targeting children, an important factor to be considered in nutrition interventions is food presentation in terms of color and smell, which should be appetized to trigger food selection and consumption. Thus, repeated exposure to healthier foods presented in attractive ways could help children become more accustomed to and consume it [40]. Focusing on adults, changing dietary habits to achieve a healthier lifestyle is made more difficult by the perceived barriers, such as: lack of cooking skills and willpower; time scarcity; the need to give up one's favorite foods [41]; and social, cultural and economic conditions [42]. However, although the evidence about workplace settings is very limited in the present review, workplace interventions have the potential to change consumers' dietary behavior through the working lifespan [43].

Regarding the intervention strategies applied to improve dietary intake, the implementation of establishment-based interventions is different in the three evaluated settings. Specifically, the strategies that showed higher effectiveness in schools were the addition of healthier menu options combined with on-site support, training for the school canteen staff, performance monitoring and feedback reports (Table 1). However, in the community setting, including after school programs and recreation centers, the provision of monetary incentives, rewards, and recognition for the participating food service are effective, while these methodologies are ineffective in schools.

**Table 1.** Strategy recommendations derived from effective interventions included in the systematic review.

Setting	Outcome Categories		
	Food Availability	Dietary Intake	Food Purchase
School	The involvement of the students' families, as a consumer-based strategy, together with the application of multiple establishment-based strategies, seemed to be effective in improving food availability in the school setting.	The application of consumer-based strategies together with the implementation of a menu with healthier options and limitation of the unhealthier ones, applied alone or in combination with other establishment-based strategies, seemed to be effective in improving dietary intake in the school setting. On the other hand, the provision of monetary incentives/rewards/recognition for the participating school canteen was not effective.	The application of consumer-based strategies together with the implementation of a menu with healthier options and limitation of the unhealthier ones, applied alone or in combination with other establishment-based strategies, seemed to be effective in improving food purchases in the school setting.
Community	No recommendation can be provided about both consumer- and establishment-based strategies.	The application of consumer-based strategies, together with establishment-based strategies such as the provision of monetary incentives/rewards/recognition for the participating restaurant or canteen, seemed to be effective in improving dietary intake in the community setting.	The application of multiple establishment-based strategies, including monetary incentives/rewards/recognition for the participating restaurant or canteen, seemed to be effective in improving food purchases in the community setting.

Setting	Outcome Categories		
	Food Availability	Dietary Intake	Food Purchase
Workplace	Outcome not evaluated.	The application of consumer-based strategies together with the implementation of a menu with healthier options and limitation of the unhealthier ones, as an establishment-based strategy, seemed to be effective in improving dietary intake in the workplace setting; however more evidence is needed.	No recommendation can be provided about both consumer- and establishment-based strategies

According to the interventions in the food availability outcome category, none of them were set in workplaces, and little evidence resulted in the community setting <sup>[44]</sup>, whereas effectiveness was reported in the school setting <sup>[45][46][37][47][23][44][38][39][48][49]</sup>. In schools, regarding the intervention strategies applied for food availability outcomes, the involvement of the participants' families, namely students and their parents in school-based interventions, through invitations to meetings, activities and the distribution of information letters, was the most effective consumer-based strategy <sup>[37][38][49]</sup>. Similarly, in a recent review focusing on family-based interventions to improve children's diets, the family involvement strategy through the provision of information, advice and monitoring was also reported to be effective in improving the food environment of school canteens, demonstrating that parents are an important component when children are targeted <sup>[50]</sup>.

Children's improvements in food availability are important because their adherence persists in adulthood, whereas unhealthy food availability reinforces children's preference for nutrient-poor and ultra-processed foods <sup>[51]</sup>. The increase in healthy food availability in school settings is directly correlated with healthy food purchases, with the final aim of changing children's dietary intake <sup>[52]</sup>.

On the other hand, the implementation of healthier food availability in the community setting is more difficult due to the barriers stakeholders encounter, such as the lack of demand by customers and the increased cost associated with healthy fresh foods with a short shelf life <sup>[53][54][55]</sup>, but financial support and resources such as guidelines and training from established associations could help achieve such improvements <sup>[53]</sup>. Thus, future interventions aimed at increasing the availability of healthier food options in community settings should also target an increase in consumers' demands for healthy meals, as well as assure food services of the low risk of changes in their profits <sup>[56]</sup>.

For the interventions in the food purchase outcome category, partial effectiveness was reported mainly in schools through the implementation of multiple consumer- and establishment-based strategies, including the involvement of participants' families <sup>[57][22][58][38][59][60][61]</sup>; thus, family certainly has a good influence on children's food selection <sup>[62]</sup>.

On the other hand, little evidence about effective strategies in community and workplace settings was apparent; however, in community settings such as restaurants and food stores, the provision of information and communication to consumers may not be enough to achieve behavior changes such as the selection of healthier food options <sup>[63][64]</sup>, whereas multiple strategies targeting changes in the food environment could be fundamental for improving customers' food purchases <sup>[44]</sup>.

Moreover, effective consumer- and establishment-based strategies were derived from the included interventions to develop methodological recommendations, by outcome and setting, for the implementation of future restaurant and canteen-based interventions ([Table 1](#)).

## References

- Jia, X.; Liu, J.; Chen, B.; Jin, D.; Fu, Z.; Liu, H.; Du, S.; Popkin, B.M.; Mendez, M.A. Differences in nutrient and energy contents of commonly consumed dishes prepared in restaurants v. at home in Hunan Province, China. *Public Health Nutr.* 2018, 21, 1307–1318.
- Jabs, J.; Devine, C.M. Time scarcity and food choices: An overview. *Appetite* 2006, 47, 196–204.
- Myhre, J.B.; Loken, E.B.; Wandel, M.; Andersen, L.F. Eating location is associated with the nutritional quality of the diet in Norwegian adults. *Public Health Nutr.* 2014, 17, 915–923.
- Lake, A.A.; Burgoine, T.; Stamp, E.; Grieve, R. The foodscape: Classification and field validation of secondary data sources across urban/rural and socio-economic classifications in England. *Int. J. Behav. Nutr. Phys. Act.* 2012, 9, 37.
- Suggs, L.S.; Della Bella, S.; Rangelov, N.; Marques-Vidal, P. Is it better at home with my family? The effects of people and place on children's eating behavior. *Appetite* 2018, 121, 111–118.

6. Fulkerson, J.A.; Larson, N.; Horning, M.; Neumark-Sztainer, D. A review of associations between family or shared meal frequency and dietary and weight status outcomes across the lifespan. *J. Nutr. Educ. Behav.* 2014, 46, 2–19.
7. Lin, B.; Guthrie, J. Nutritional Quality of Food Prepared at Home and Away from Home, 1977–2008, EIB-105; U.S. Department of Agriculture, Economic Research Service: Washington, DC, USA, 2012.
8. Swinburn, B.; Caterson, I.; Seidell, J.; James, W. Diet, nutrition and the prevention of excess weight gain and obesity. *Public Health Nutr.* 2004, 7, 123–146.
9. WHO and FAO Diet, Nutrition, and the Prevention of Chronic Diseases (Report of a joint WHO and FAO Expert Consultation). WHO Tech. Rep. Ser. 2003, 916, 1–160.
10. Zang, J.; Luo, B.; Wang, Y.; Zhu, Z.; Wang, Z.; He, X.; Wang, W.; Guo, Y.; Chen, X.; Wang, C.; et al. Eating Out-of-Home in Adult Residents in Shanghai and the Nutritional Differences among Dining Places. *Nutrients* 2018, 10, 951.
11. Penney, T.; Burgoine, T.; Monsivais, P. Relative Density of Away from Home Food Establishments and Food Spend for 24,047 Households in England: A Cross-Sectional Study. *Int. J. Environ. Res. Public Health* 2018, 15, 2821.
12. Patel, A.A.; Lopez, N.V.; Lawless, H.T.; Njike, V.; Beleche, M.; Katz, D.L. Reducing calories, fat, saturated fat, and sodium in restaurant menu items: Effects on consumer acceptance. *Obesity* 2016, 24, 2497–2508.
13. Freedman, M.R.; Brochado, C. Reducing Portion Size Reduces Food Intake and Plate Waste. *Obesity* 2010, 18, 1864–1866.
14. Kerins, C.; McSharry, J.; Hayes, C.; Perry, I.J.; Geaney, F.; Kelly, C. Barriers and facilitators to implementation of menu labelling interventions to support healthy food choices: A mixed methods systematic review protocol. *Syst. Rev.* 2018, 7, 1–8.
15. Unilever Food Solutions World Report Menu: Seductive Nutrition; Unilever Food Solutions: London, UK, 2012; pp. 1–16.
16. Hillier-Brown, F.C.; Summerbell, C.D.; Moore, H.J.; Routen, A.; Lake, A.A.; Adams, J.; White, M.; Araujo-Soares, V.; Abraham, C.; Adamson, A.J.; et al. The impact of interventions to promote healthier ready-to-eat meals (to eat in, to take away or to be delivered) sold by specific food outlets open to the general public: A systematic review. *Obes. Rev.* 2017, 18, 227–246.
17. Wright, B.; Bragge, P. Interventions to promote healthy eating choices when dining out: A systematic review of reviews. *Br. J. Health Psychol.* 2018, 23, 278–295.
18. Valdivia Espino, J.N.; Guerrero, N.; Rhoads, N.; Simon, N.-J.; Escaron, A.L.; Meinen, A.; Nieto, F.J.; Martinez-Donate, A.P. Community-Based Restaurant Interventions to Promote Healthy Eating: A Systematic Review. *Prev. Chronic Dis.* 2015, 12.
19. Public Health England. Strategies for Encouraging Healthier ‘O ut of Home’ Food Provision A Toolkit for Local Councils Working with Small Food Businesses; Public Health England: London, UK, 2017.
20. Pérez-Rodrigo, C.; Klepp, K.-I.; Yngve, A.; Sjöström, M.; Stockley, L.; Aranceta, J. The school setting: An opportunity for the implementation of dietary guidelines. *Public Health Nutr.* 2001, 4, 717–724.
21. Smith, S.A.; Lake, A.A.; Summerbell, C.; Araujo-Soares, V.; Hillier-Brown, F. The effectiveness of workplace dietary interventions: Protocol for a systematic review and meta-analysis. *Syst. Rev.* 2016, 5, 1–6.
22. Cohen, J.F.W.; Richardson, S.A.; Cluggish, S.A.; Parker, E.; Catalano, P.J.; Rimm, E.B. Effects of Choice Architecture and Chef-Enhanced Meals on the Selection and Consumption of Healthier School Foods. *JAMA Pediatr.* 2015, 169, 431.
23. Seward, K.; Wolfenden, L.; Finch, M.; Wiggers, J.; Wyse, R.; Jones, J.; Yoong, S.L. Improving the implementation of nutrition guidelines in childcare centres improves child dietary intake: Findings of a randomised trial of an implementation intervention. *Public Health Nutr.* 2018, 21, 607–617.
24. Lassen, A.D.; Thorsen, A.V.; Sommer, H.M.; Fagt, S.; Trolle, E.; Biloft-Jensen, A.; Tetens, I. Improving the diet of employees at blue-collar worksites: Results from the Food at Work intervention study. *Public Health Nutr.* 2010, 14, 965–974.
25. Muzaffar, H.; Nikolaus, C.J.; Ogolsky, B.G.; Lane, A.; Liguori, C.; Nickols-Richardson, S.M. Promoting Cooking, Nutrition, and Physical Activity in Afterschool Settings. *Am. J. Health Behav.* 2019, 43, 1050–1063.
26. Lee, R.M.; Giles, C.M.; Craddock, A.L.; Emmons, K.M.; Okechukwu, C.; Kenney, E.L.; Thayer, J.; Gortmaker, S.L. Impact of the Out-of-School Nutrition and Physical Activity (OSNAP) Group Randomized Controlled Trial on Children's Food, Beverage, and Calorie Consumption among Snacks Served. *J. Acad. Nutr. Diet.* 2018, 118, 1425–1437.
27. Siega-Riz, A.M.; El Ghormli, L.; Mobley, C.; Gillis, B.; Stadler, D.; Hartstein, J.; Volpe, S.L.; Virus, A.; Bridgman, J. The effects of the HEALTHY study intervention on middle school student dietary intakes. *Int. J. Behav. Nutr. Phys. Act.*

28. Trude, A.C.B.; Surkan, P.J.; Cheskin, L.J.; Gittelsohn, J. A multilevel, multicomponent childhood obesity prevention group-randomized controlled trial improves healthier food purchasing and reduces sweet-snack consumption among low-income African-American youth. *Nutr. J.* 2018, 17, 96.
29. Yoong, S.L.; Grady, A.; Seward, K.; Finch, M.; Wiggers, J.; Lecathelinais, C.; Wedesweiler, T.; Wolfenden, L. The Impact of a Childcare Food Service Intervention on Child Dietary Intake in Care: An Exploratory Cluster Randomized Controlled Trial. *Am. J. Health Promot.* 2019, 33, 991–1001.
30. Yoong, S.L.; Grady, A.; Wiggers, J.H.; Stacey, F.G.; Rissel, C.; Flood, V.; Finch, M.; Wyse, R.; Sutherland, R.; Salajan, D.; et al. Child-level evaluation of a web-based intervention to improve dietary guideline implementation in childcare centers: A cluster-randomized controlled trial. *Am. J. Clin. Nutr.* 2020, 111, 854–863.
31. Burgess-Champoux, T.L.; Chan, H.W.; Rosen, R.; Marquart, L.; Reicks, M. Healthy whole-grain choices for children and parents: A multi-component school-based pilot intervention. *Public Health Nutr.* 2008, 11, 849–859.
32. Geaney, F.; Kelly, C.; Di Marrazzo, J.S.; Harrington, J.M.; Fitzgerald, A.P.; Greiner, B.A.; Perry, I.J. The effect of complex workplace dietary interventions on employees' dietary intakes, nutrition knowledge and health status: A cluster controlled trial. *Prev. Med.* 2016, 89, 76–83.
33. Williams, C.L.; Bollella, M.C.; Strobino, B.A.; Spark, A.; Nicklas, T.A.; Tolosi, L.B.; Pittman, B.P. "Healthy-start": Outcome of an intervention to promote a heart healthy diet in preschool children. *J. Am. Coll. Nutr.* 2002, 21, 62–71.
34. Taylor, J.C.; Zidenberg-Cherr, S.; Linnell, J.D.; Feenstra, G.; Scherr, R.E. Impact of a multicomponent, school-based nutrition intervention on students' lunchtime fruit and vegetable availability and intake: A pilot study evaluating the Shaping Healthy Choices Program. *J. Hunger Environ. Nutr.* 2018, 13, 415–428.
35. De Souza, R.A.G.; Mediano, M.F.F.; de Moura Souza, A.; Sichieri, R. Reducing the use of sugar in public schools: A randomized cluster trial. *Rev. Saude Publica* 2013, 47.
36. Haerens, L.; Deforche, B.; Maes, L.; Cardon, G.; Stevens, V.; De Bourdeaudhuij, I. Evaluation of a 2-year physical activity and healthy eating intervention in middle school children. *Health Educ. Res.* 2006, 21, 911–921.
37. Nathan, N.; Yoong, S.L.; Sutherland, R.; Reilly, K.; Delaney, T.; Janssen, L.; Robertson, K.; Reynolds, R.; Chai, L.K.; Lecathelinais, C.; et al. Effectiveness of a multicomponent intervention to enhance implementation of a healthy canteen policy in Australian primary schools: A randomised controlled trial. *Int. J. Behav. Nutr. Phys. Act.* 2016, 13, 1–9.
38. Wolfenden, L.; Nathan, N.; Janssen, L.M.; Wiggers, J.; Reilly, K.; Delaney, T.; Williams, C.M.; Bell, C.; Wyse, R.; Sutherland, R.; et al. Multi-strategic intervention to enhance implementation of healthy canteen policy: A randomised controlled trial. *Implement. Sci.* 2017, 12, 6.
39. Yoong, S.L.; Nathan, N.; Wolfenden, L.; Reilly, K.; Janssen, L.; Preece, S.; Butler, P.; Wiggers, J.; Sutherland, R.; Delaney, T.; et al. CAFÉ: A multicomponent audit and feedback intervention to improve implementation of healthy food policy in primary school canteens: A randomised controlled trial. *Int. J. Behav. Nutr. Phys. Act.* 2016, 13, 1–11.
40. Stroebele, N.; De Castro, J.M. Effect of ambience on food intake and food choice. *Nutrition* 2004, 20, 821–838.
41. McMorrow, L.; Ludbrook, A.; Macdiarmid, J.I.; Olajide, D. Perceived barriers towards healthy eating and their association with fruit and vegetable consumption. *J. Public Health* 2017, 39, 330–338.
42. Amore, L.; Buchthal, O.V.; Banna, J.C. Identifying perceived barriers and enablers of healthy eating in college students in Hawai'i: A qualitative study using focus groups. *BMC Nutr.* 2019, 5, 1–11.
43. Amine, E.K.; Baba, N.H.; Belhadj, M.; Deurenberg-Yap, M.; Djazayery, A.; Forrestre, T.; Galuska, D.A.; Herman, S.; James, W.P.T.; M'Buyamba Kabangu, J.R.; et al. Diet, nutrition and the prevention of chronic diseases. *World Health Organ. Tech. Rep. Ser.* 2003.
44. Wolfenden, L.; Kingsland, M.; Rowland, B.C.; Dodds, P.; Gillham, K.; Yoong, S.L.; Sidey, M.; Wiggers, J. Improving availability, promotion and purchase of fruit and vegetable and non sugar-sweetened drink products at community sporting clubs: A randomised trial. *Int. J. Behav. Nutr. Phys. Act.* 2015, 12, 35.
45. Cohen, J.F.W.; Rimm, E.B.; Bryn Austin, S.; Hyatt, R.R.; Kraak, V.I.; Economos, C.D. A food service intervention improves whole grain access at lunch in rural elementary schools. *J. Sch. Health* 2014, 84, 212–219.
46. Grady, A.; Wolfenden, L.; Wiggers, J.; Rissel, C.; Finch, M.; Flood, V.; Salajan, D.; O'Rourke, R.; Stacey, F.; Wyse, R.; et al. Effectiveness of a web-based menu-planning intervention to improve childcare service compliance with dietary guidelines: Randomized controlled trial. *J. Med. Internet Res.* 2020, 22, 1–16.
47. Nik Rosmawati, N.H.; Wan Manan, W.M.; Noor Izani, N.J.; Nik Nurain, N.H.; Razlina, A.R. Impact of food nutrition intervention on food handlers' knowledge and competitive food serving: A randomized controlled trial. *Int. Food Res. J.* 2017, 24, 1046–1056.

48. Story, M.; Snyder, M.P.; Anliker, J.; Weber, J.L.; Cunningham-Sabo, L.; Stone, E.J.; Chamberlain, A.; Ethelbah, B.; Suchindran, C.; Ring, K. Changes in the nutrient content of school lunches: Results from the Pathways study. *Prev. Med.* 2003, 37, S35–S45.
49. Morshed, A.B.; Davis, S.M.; Keane, P.C.; Myers, O.B.; Mishra, S.I. The Impact of the CHILE Intervention on the Food Served in Head Start Centers in Rural New Mexico. *J. Sch. Health* 2016, 86, 414–423.
50. Black, A.P.; D'Onise, K.; McDermott, R.; Vally, H.; O'Dea, K. How effective are family-based and institutional nutrition interventions in improving children's diet and health? A systematic review. *BMC Public Health* 2017, 17, 1–19.
51. Baker, P.; Friel, S. Food systems transformations, ultra-processed food markets and the nutrition transition in Asia. *Global. Health* 2016, 12.
52. Clinton-McHarg, T.; Janssen, L.; Delaney, T.; Reilly, K.; Regan, T.; Nathan, N.; Wiggers, J.; Yoong, S.L.; Wyse, R.; Grady, A.; et al. Availability of food and beverage items on school canteen menus and association with items purchased by children of primary-school age. *Public Health Nutr.* 2018, 21, 2907–2914.
53. Young, K.; Kennedy, V.; Kingsland, M.; Sawyer, A.; Rowland, B.; Wiggers, J.; Wolfenden, L. Healthy food and beverages in senior community football club canteens in New South Wales, Australia. *Health Promot. J. Aust.* 2012, 23, 149–152.
54. Economos, C.D.; Foltz, S.C.; Goldberg, J.; Hudson, D.; Collins, J.; Baker, Z.; Lawson, E.; Nelson, M. A community-based restaurant initiative to increase availability of healthy menu options in somerville, Massachusetts: Shape up somerville. *Prev. Chronic Dis.* 2009, 6, 1–8.
55. Kim, M.; Budd, N.; Batorsky, B.; Krubiner, C.; Manchikanti, S.; Waldrop, G.; Trude, A.; Gittelsohn, J. Barriers to and Facilitators of Stocking Healthy Food Options: Viewpoints of Baltimore City Small Storeowners. *Ecol. Food Nutr.* 2017, 56, 17–30.
56. Boelsen-Robinson, T.; Blake, M.R.; Backholer, K.; Hettiarachchi, J.; Palermo, C.; Peeters, A. Implementing healthy food policies in health services: A qualitative study. *Nutr. Diet.* 2019, 76, 336–343.
57. Delaney, T.; Wyse, R.; Yoong, S.L.; Sutherland, R.; Wiggers, J.; Ball, K.; Campbell, K.; Rissel, C.; Lecathelinais, C.; Wolfenden, L. Cluster randomized controlled trial of a consumer behavior intervention to improve healthy food purchases from online canteens. *Am. J. Clin. Nutr.* 2017, 106, 1311–1320.
58. Habib-Mourad, C.; Ghandour, L.A.; Moore, H.J.; Nabhani-Zeidan, M.; Adetayo, K.; Hwalla, N.; Summerbell, C. Promoting healthy eating and physical activity among school children: Findings from Health-E-PALS, the first pilot intervention from Lebanon. *BMC Public Health* 2014, 14, 1–11.
59. Bogart, L.M.; Cowgill, B.O.; Elliott, M.N.; Klein, D.J.; Hawes-Dawson, J.; Uyeda, K.; Elijah, J.; Binkle, D.G.; Schuster, M.A. A randomized controlled trial of Students for Nutrition and exercise: A community-based participatory research study. *J. Adolesc. Health* 2014, 55, 415–422.
60. Quinn, E.L.; Johnson, D.B.; Podrabsky, M.; Saelens, B.E.; Bignell, W.; Krieger, J. Effects of a behavioral economics intervention on food choice and food consumption in middle-school and high-school cafeterias. *Prev. Chronic Dis.* 2018, 15.
61. Bogart, L.M.; Elliott, M.N.; Uyeda, K.; Hawes-Dawson, J.; Klein, D.J.; Schuster, M.A. Preliminary healthy eating outcomes of SNaX, a pilot community-based intervention for adolescents. *J. Adolesc. Health* 2011, 48, 196–202.
62. Taylor, J.P.; Evers, S.; McKenna, M. Determinants of Healthy Eating in Children and Youth. *Can. J. Public Health* 2005, 96 (Suppl. 3), S22–S29.
63. Ayala, G.X.; Castro, I.A.; Pickrel, J.L.; Lin, S.-F.; Williams, C.B.; Madanat, H.; Jun, H.-J.; Zive, M. A Cluster Randomized Trial to Promote Healthy Menu Items for Children: The Kids' Choice Restaurant Program. *Int. J. Environ. Res. Public Health* 2017, 14, 1494.
64. Martínez-Donate, A.P.; Riggall, A.J.; Meinen, A.M.; Malecki, K.; Escaron, A.L.; Hall, B.; Menzies, A.; Garske, G.; Nieto, F.J.; Nitzke, S. Evaluation of a pilot healthy eating intervention in restaurants and food stores of a rural community: A randomized community trial. *BMC Public Health* 2015, 15.