**Appendix A.** References of studies included in the meta-analysis (*n* = 19)

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**Appendix B.** References of studies excluded by category (*n* = 72)

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62. Reported dietary data different from FV (e.g. fat, dairy intake) (n=7)
63. Kroeze, W., Oenema, A., Campbell, M., & Brug, J. (2008). The efficacy of Web-based and print-delivered computer-tailored interventions to reduce fat intake: results of a randomized, controlled trial. *Journal of nutrition education and behavior*, *40*(4), 226-236.
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70. Did not use control group (n=4)
71. Elizondo-Montemayor, L., Gutiérrez, N. G., Moreno Sánchez, D. M., Monsiváis Rodríguez, F. V., Martínez, U., Nieblas, B., & Lamadrid-Zertuche, A. C. (2014). Intervención para promover hábitos saludables y reducir obesidad en adolescentes de preparatoria. *Estudios sociales (Hermosillo, Son.)*, *22*(43), 217-239.
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75. Used data reported in another study (n=1)
76. Plaete, J., Crombez, G., Van der Mispel, C., Verloigne, M., Van Stappen, V., & De Bourdeaudhuij, I. (2016). Effect of the web-based intervention MyPlan 1.0 on self-reported fruit and vegetable intake in adults who visit general practice: a quasi-experimental trial. *Journal of medical Internet research*, *18*(2).
77. No pretest assessment (n=2)
78. Turnin, M. C., Tauber, M. T., Couvaras, O., Jouret, B., Bolzonella, C., Bourgeois, O., ... & Hanaire-Broutin, H. (2001). Evaluation of microcomputer nutritional teaching games in 1,876 children at school. *Diabetes and Metabolism*, *27*(4), 459-465.
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80. Validation of an app to report FV intake (n=1)
81. Bissell, K., Conlin Maxwell, L., Zhang, X., Bie, B., & McLemore, D. (2017). Let go of my iPad: Testing the effectiveness of new media technologies to measure children’s food intake and health behaviors. *Mass Communication and Society*, *20*(4), 550-572.

**Table A1.** Search Strategy (sample strategy)

|  |  |  |
| --- | --- | --- |
| **Database** | **Keyword Combination** | **Search number** |
| **English Search** |
| **Pubmed** | Fruit\* OR vegetable\* OR diet OR dietary OR eating behavior OR food intake OR nutrition OR food habits [MeSH Terms] | #1 |
| Technology OR mobile OR eHealth OR computer\* OR text message\* OR SMS OR interactive OR Internet\* OR IT OR smartphone OR application OR PDA OR iPod OR iPad OR tablet OR CD-ROM OR multimedia OR telemedicine[MeSH Terms] | #2 |
| Modification OR effectiveness OR intervention OR program OR RCT OR random\* | #3 |
| #1 AND #2 | #4 |
| #3 AND #4 | #5 |
| #5 AND NOT patient\* OR disease OR diabetes OR cardiovascular OR hypertension | #6 |
| #6 AND NOT (meta-analysis[Title] OR review[Title]) |  |
| diet, modification, technology, intervention | #7 |
| ehealth, nutrition, effectiveness | #8 |
| nutrition education, technology, intervention | #9 |
| mobile, effectiveness, food habits | #10 |
| food habits AND computer-based AND intervention | #11 |
| food habits, text messages, intervention  | #12 |
| food habits, ehealth, intervention  | #13 |
| food habits, mobile health, intervention  | #14 |
| food habits, interactive program, intervention  | #15 |
| food habits, mobile, effectiveness  | #16 |
| food intake, ehealth, effectiveness  | #17 |
| (fruit\* OR vegetable\* [Title/Abstract]) AND mobile AND program  | #18 |
| (fruit\* OR vegetable\* [Title/Abstract]) AND mobile AND intervention  | #19 |
| (fruit\* OR vegetable\* [Title/Abstract]) AND eHealth AND intervention | #20 |
| **Spanish Search** |
| **SciELO** | (ab:(fruta)) OR (ab:(verdura)) OR (ab:(dieta)) OR (ab:(dietario)) OR (ab:(ingesta alimentaria)) OR (ab:(habitos alimentarios)) OR (ab:(nutricion)) | #1 |
| (ab:(internet)) OR (ab:(ehealth)) OR (ab:(esalud)) OR (ab:(educacion)) OR (ab:(movil)) OR (ab:(tecnologia)) OR (ab:(computadora)) OR (ab:(computador)) OR (ab:(sms)) OR (ab:("mensaje de texto")) OR (ab:(tableta)) OR (ab:(multimedia)) OR (ab:(aplicacion)) | #2 |
| ((ab:(intervencion)) OR (ab:(programa)) OR (ab:(modificacion)) OR (ab:(efectividad)) OR (ab:(ensayo)) OR (aleatorizado) OR ("grupo control")) OR (ab:(eficiencia)) OR (ab:(efectividad)) | #3 |
| #1 AND #2 | #4 |
| #3 AND #4 | #5 |

**Table A1 *(continued)*.** Search Strategy (sample strategy)

|  |  |  |
| --- | --- | --- |
|  | **Korean Search** |  |
| **RISS** | (과일 OR 채소) 모바일 AND 중재  | #1 |
| (과일 OR 채소) 기술 AND 중재  | #2 |
| (과일 OR 채소) 이헬스 AND 중재  | #3 |
| (과일 OR 채소) 컴퓨터 AND 중재 | #4 |
| (과일 OR 채소) 문자 AND 중재 | #5 |
| (과일 OR 채소) SMS AND 중재 | #6 |
| (과일 OR 채소) 웹기반 AND 중재 |  |
| (과일 OR 채소) 온라인 AND 중재 | #7 |
| (과일 OR 채소) 스마트폰 AND 중재 | #8 |
| (과일 OR 채소) 앱 AND 중재 | #9 |
| (과일 OR 채소) eHealth AND 중재 | #10 |
| (과일 OR 채소) AND (기술 OR 모바일 OR 컴퓨터 OR SMS OR온라인 OR 스마트폰 OR 앱 OR eHealth) AND (중재 OR 효과 OR 프로그램 OR 영양교육) | #11 |
| (식행동) AND (기술 OR 모바일 OR 컴퓨터 OR SMS OR온라인 OR 스마트폰 OR 앱 OR eHealth) AND (중재 OR 효과 OR 프로그램 OR 영양교육) | #12 |
| (섭취) AND (기술 OR 모바일 OR 컴퓨터 OR SMS OR온라인 OR 스마트폰 OR 앱 OR eHealth) AND (중재 OR 효과 OR 프로그램 OR 영양교육) | #13 |
| (식습관) AND (기술 OR 모바일 OR 컴퓨터 OR SMS OR온라인 OR 스마트폰 OR 앱 OR eHealth) AND (중재 OR 효과 OR 프로그램 OR 영양교육) | #14 |

*Note:* Additionally, for the search in PUBMED results were filtered by articles published since 1999 and studies conducted in Humans.

**Table A2.** Behavior Change Technique definitions

|  |  |  |
| --- | --- | --- |
| Item (technique) | Definition | Examples |
| 1. Provide information on consequences of behavior in general
 | Informing the individual about the possible consequences of the given behavior in general, and not personalized for the individual’s characteristics. | Providing pamphlets with information about the consequences of a diet low in fruits and vegetables. |
| 1. Provide information on consequences of behavior to the individual
 | Informing about the benefits and/or consequences of performing or not performing a specific behavior, tailoring the characteristics of the individual or group. | Information to pregnant women on the benefits of consuming an adequate intake of folic acid. |
| 1. Provide normative information about others’ behavior
 | Providing information about other people’s behavior(s) among a particular population, and whether the behavior(s) is common or uncommon. | Providing information about the average intake of peers. |
| 1. Goal setting (behavior)
 | The individual is asked to set a behavioral change or behavior implementation, aimed to help to achieve an outcome. This technique does not refer to specifics about how, when, or where the behavior will be done. | Stop shopping unhealthy snacks. |
| 1. Goal setting (outcome)
 | The individual is asked to set a goal that can be obtained as a benefit of performing a specific behavior. This goal can be a result of one or more behaviors. | Lose weight, reduce blood glucose levels. |
| 1. Action planning
 | Different from techniques 5 and 6, this technique involves a specific plan of action for the set goal, including at least when (frequency or duration), and/or where to act. | Walking at least 30 minutes, 4 days a week, around the neighborhood. |
| 1. Barrier identification/problem solving
 | The individual is encouraged to identify the potential barriers to perform the given behavior, and identify contingence actions. | Barrier: eating sweets when feeling stressed.Action: having healthy snacks at home instead of sweets. |
| 1. Set graded tasks
 | Set small goals, with a logical sequence over time or difficulty, that will help the individual to achieve to target behavior. | Reduce the consumption of soda from 5 glasses a day to 2 glasses a day in the first week. |
| 1. Prompt review of behavioral goals
 | A previously set behavioral goal is reviewed, and accordingly, modifications of goals and/or new strategies to achieve them are established. | The individual has started to consume water daily, but the amount is insufficient. Suggestions for increasing the daily consumption are provided. |
| 1. Prompt rewards contingent on effort or progress towards behavior
 | Using praise or rewards (including self-reward) for efforts made towards performing a behavioral goal or showing progress in a preparatory step. | Sending congratulatory messages to the individual for eating more vegetables than the day before. |

**Table A2 *(continued)*.** Behavior Change Technique definitions

|  |  |  |
| --- | --- | --- |
| Item (technique) | Definition | Examples |
| 1. Provide rewards contingent on successful behavior
 | Using praise or rewards (can be material) to reinforce an individual’s successful performance of the behavioral goal. This may include self-reward. | Providing monetary incentives to individuals who successfully quit smoking. |
| 16. Prompt self-monitoring of behavior | The individual is asked to keep track of the target behavior, and this must be a clear component of the intervention. | Keeping a diary of the frequency and quantity of fruits and vegetables consumption. |
| 19. Provide feedback on performance | Providing the individual information that might help to improve the target behavior, based on the individual’s recorded behavior. Comments on the individual’s performance and discrepancies in relation to other’s performance is also included. | If the goal is to reduce fat consumption, the individual might need feedback on adequate cooking techniques. |
| 21. Provide instruction on how to perform the behavior | Verbal or written instructions provided to the individual on how to perform the target or preparatory behavior. | Providing healthy meals recipes booklet. |
| 22. Model/Demonstrate the behavior | Opposite to technique 21, this technique involves *showing* to the individual how to perform the behavior. | Providing cooking classes. |
| 24. Environmental restructuring | The individual is encouraged to make changes to their environment that might contribute to the successful performance of the target behavior. | Get rid of all sweets at home. |
| 26. Prompt Practice | The individual is encouraged to put into practice the behavior of interest numerous times during the intervention. | The individual is asked to practice refusing unhealthy snacks as homework between sessions.  |
| 28. Facilitate social comparison | Refers to enabling explicit comparisons with other’s behavioral performance. | Presenting testimonial videos to encourage the person to try the target behavior. |
| 29. Plan social support/social change | The individual is encouraged to make a plan on how to receive social support from other people in order to successfully perform the target behavior/outcome. | Making a contract with a friend who will commit to exercise together with him/her. |
| 35. Relapse prevention/coping planning | Refers to identifying situations that might prevent the individual from maintaining the changed behavior, and setting alternatives to prevent these situations. | Avoiding attending events where the individual will be exposed to other’s smoking. |

Note. Adapted from “A refined taxonomy of behavior change techniques to help people change their physical activity and healthy eating behaviours: the CALO-RE taxonomy” by S. Michie, 2011, *Psychology & health, 26*, p. 1479. Copyright 2011 by European Health Psychology Society.

**Figure A1.** Sample and intervention characteristics of studies included in the meta-analysis

