Systematic literature review on interactive technological interventions for children with picky eating habits

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Picky eating is a common problem among children, making it difficult for them to maintain healthy eating habits. In recent years, numerous interactive technological interventions have been developed to address this issue. However, finding and selecting relevant literature on this topic is challenging due to the diverse terminology used to describe picky eating behaviors. The main goal was of this research was to develop a search strategy that finds as many articles describing technological, interactive interventions as possible. The goal secondary to this was to gather a selection of these interventions to compare some characteristics and to understand the overall state of research in this field. Using the PRISMA 2020 framework, a structured search was conducted across two databases, and 11 studies were identified that described digital, interactive interventions aimed at improving eating behavior in children.

Additional Key Words and Phrases: Picky eating, children, Intelligent interaction, Human-food interaction

1 INTRODUCTION

Picky eating is defined as: "An unwillingness to eat familiar foods or try new foods, as well as strong food preferences. This can lead to an unbalanced, unhealthy diet, which in turn can cause various health-related issues" [27]. To help overcome these issues, researchers have developed various tools and methods to encourage children to become less picky eaters. Tools such as mobile applications [25] and interactive tableware [18] are examples of such interventions.
Currently, there is no comprehensive overview of all the interventions that have been researched so far. Contributing to this is the fact that picky eating can be described in many different ways, such as fussy eating, selective eating, an eating disorder, or simply an unhealthy diet. The purpose of this research is to develop a search strategy to identify articles describing technological and interactive interventions for children to use during mealtime, aiming to help them overcome picky eating habits. Our secondary goal is to create an overview of these articles and to compare a few characteristics of the interventions and their test settings. This will be done in the form of a systematic literature review as described by Rivera et al. [6].

1.1 Research Question(s)

This study is conducted in order to answer the following research questions:
RQ1: What is an effective search strategy for finding scientific articles on technological and interactive interventions for children with picky eating habits?
RQ2: What are the key characteristics of these interventions and how have they been tested?

2 RELATED WORK

An extensive online search revealed that there are currently no systematic literature reviews on interactive technological tools to help children overcome picky eating. However, there is a 2018 literature review about "playful human food interaction (HFI)" [2]. This literature review contains 34 different papers about HFI. The main differences between [2] and this review are that the former contains studies about HFI in all ages, not just children. Furthermore, not all included studies are on interventions for picky eating; some are on food waste reduction or about how to properly prepare food. [2] also focuses mainly on the metadata of the studies, such as what years the studies were published, which journals the studies were published in, and the type of study performed. However, this review does provide some valuable information about HFI and different ways people interact with food.
There are also studies conducted to compare which type of interactive technological intervention for picky eating works best. A 2024 study performed by Chen et al. [7] explored how successful various technological interventions are at helping parents regulate children's eating behaviour. Their study consisted of observing parent-children interactions during mealtime using a technological probe, and a semi-structured interview asking about technology-related preferences during mealtime. This study found that although screen-based interventions were successful in improving children's eating habits, parents were often concerned about having a screen present during mealtime. This study is interesting for our literature review, as it showcases the effect of interactive digital interventions for children with picky eating habits. However, in contrast to this study, Chen et al. conducts user tests with multiple interventions instead of performing a literature review.
Also relevant to this review are studies that attempt to form a clear definition of picky eating. In their 2015 paper, Taylor et al. [27] review 65 different articles that attempt to identify picky eating in groups of children. They go on to examine common definitions of picky eating and identify methods that have been used to assess picky eating. This study is of great value for our literature review, since it showcases a lot of examples of synonyms for picky eating. However, it does not focus on any interventions for helping children with picky eating behaviors.

3 METHODOLOGY

This review follows the "Preferred Reporting Items for Systematic Reviews" (PRISMA) 2020 guidelines [24], which ensures the methods and results of this review are reported in sufficient detail. Additionally, the overall structure of this review is based on the approach described by Rivera et al. [6].

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3.1 Planning

3.1.1 PICOC. As mentioned in Rivera et al. [6], the first step in a systematic literature review is planning. This stage consists of defining the Population, Intervention, Comparison, Outcome, and Context (PICOC). These criteria help with breaking down the characteristics of this study into searchable keywords and synonyms. These keywords were used in the search strings for the digital libraries.

- **Population:** children
  - children are between the ages of 2 and 12
  - children have picky eating habits
- **Intervention:** tools to help overcome picky eating habits
  - tools have to be interactive and technological.
  - they have to be created for children with picky eating habits.
- **Comparison:** different interventions
  - different tools will be compared based on their goal and effectiveness in achieving that goal. This comparison will be done based on aspects and test results mentioned in the papers.
- **Outcome:** change in eating behaviour
  - this change will be measured using the data provided by the papers.
- **Context:** home or school
  - some interventions are created to help children overcome their eating difficulties during mealtime at home, others are created for lunch at school. We evaluate both kinds of interventions.

3.1.2 Search query. Using the PICOC criteria and PRISMA guidelines [24], search queries for the digital libraries Scopus [1]and ACM Digital Library [2] were created. As mentioned above, there are many synonyms for picky eating, and this study aimed to include as many as possible while still maintaining a reasonable search string. After some reiterations, the final strings were settled upon, which can be found in Appendix A.
The final search string for the Scopus library consists of 5 main sections, the first 3 sections were all derived from different aspects of the PICOC criteria. The last 2 sections are used to filter articles that were not relevant for this study. These sections and their corresponding keywords are visualised in figure 1.
When using Scopus, TITLE-ABS-KEY(word) is used to find articles that have a specific word in the title, abstract, or keywords of an article. TITLE(word) is used to find articles that have a specific word in the title of the article. The NOT operator is used to exclude a certain section of words. A star (*) symbol is used to signify that more characters may or may not be following the word (for example: the search TITLE-ABS-KEY(child*) will include articles that have the words child or children in the title, abstract or keywords). Since finding an appropriate search string was one of the biggest challenges for this review, a breakdown of the specific sections is provided.

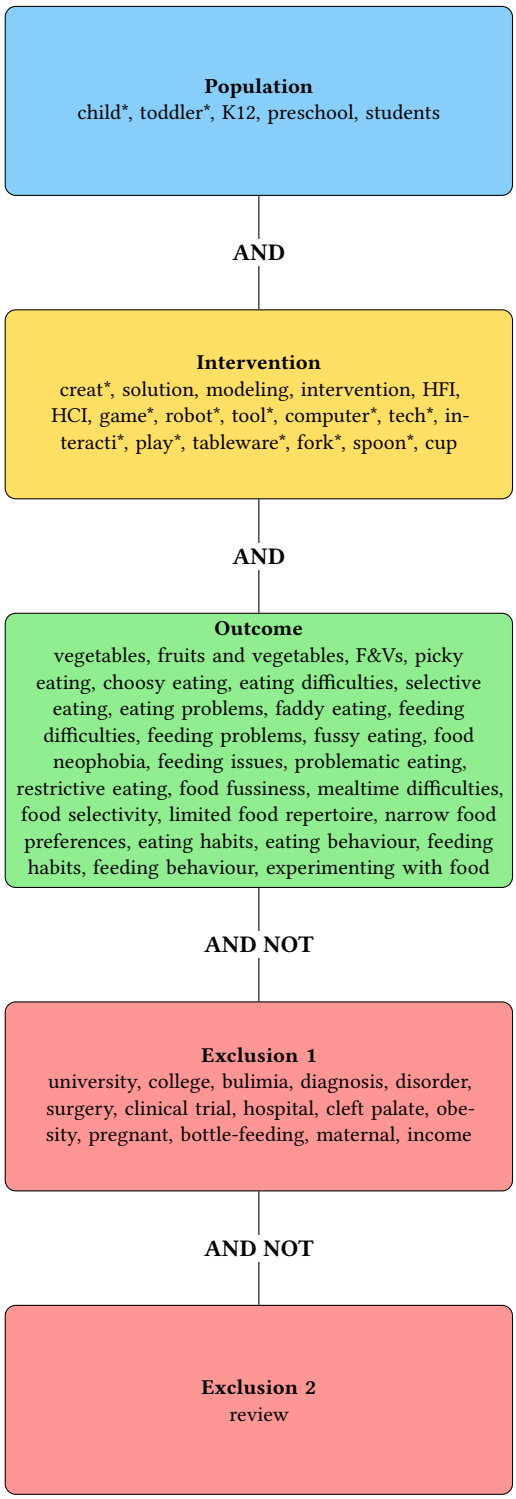

Fig. 1. Search string visualisation

[1]https://www.scopus.com/
[2]https://dl.acm.org/

Population:
Since the population for this review is children, mainly between the ages of 2 and 12, words such as child(ren) and toddler(s) are included in the search. To ensure the inclusion of articles about this population that do not feature these two words, other terms were included, such as the term "K12", which stands for "kindergarten to 12th grade." It is an expression often used to refer to school-aged children in the United States and Canada [8]. The term "preschool" refers to the period in a child's life that ordinarily precedes attendance at elementary school [22]. Since this study is interested in children starting at age 2, it is an appropriate term to include.
The term "students" was accepted because after reviewing results of previous search strings, it was found that many papers do not mention the terms children or toddlers, but rather talk about "elementary school students", "primary school students", or simply "students between the ages of x and y". There was some hesitation to add this term to the search string at first, since the addition allowed for the inclusion of articles about university and college students in the search as well. However, after removing the terms "university" and "college" in a later section of the search string, this was no longer an issue.
Intervention:
Since this study focuses on interactive and digital interventions, it is important that the title of each article includes a term reflecting this. "creat*", "solution", "modeling" and "intervention" were all chosen because they are terms often included to describe solutions or interventions. "HFI" and "HCI" are acronyms for "Human Food Interaction" and "Human Computer Interaction". Since the interventions this research is interested in are in these fields, they were included in the search. "game*", "robot*", "tool*", "computer*" and "tech* "are all terms that are often used in the titles of articles that showcase digital interventions such as computer games or robots. "interacti*" and "play*" and two terms that are used to describe interactive interventions. By using the *, both the word interactive and interaction are found. Some articles prefer the terms "playful" or "playable", which is why "play*" is also included. Lastly, "tableware*", "fork*", "spoon*" and "cup" are all included to make sure interventions that focus on augmented tableware are included. An example of such an intervention is the sensor-embedded fork by Kadomura et al. [17].
Outcome:
As mentioned previously, there are many different terms used to describe picky eating behaviors. To ensure that the search captured as many relevant studies on interventions for these eating difficulties as possible, it was important to include a wide range of reasonable synonyms in the search string. "vegetables", "fruits and vegetables" and "F&Vs" were included in the search to ensure that articles talking specifically about children disliking certain vegetables were included. The term "F&Vs" is shorthand for fruits and vegetables, used in many studies such as [9]. "picky eating" until "narrow food preferences" are all ways to refer to picky eating. Most of these terms were found by reading existing literature on picky eating, such as Taylor et al. [27]. Some terms, such as "eating difficulties" and "mealtime difficulties" are not exclusively used for picky eating, but for a wide range of food-related issues. The term "food neophobia" is described by Dovey et al. [10] as the reluctance to eat, or the avoidance of, new foods [13]. Lastly, "eating habits", "eating behaviour", "feeding habits", "feeding behaviour" and "experimenting with food" were all added as more general terms to include papers that do not mention any synonyms for picky eating in the abstract, title or keywords but do describe interventions for these behaviours.
Exclusions:
These last 2 sections were added to exclude many papers that were not relevant to the search. As previously mentioned, "university" and "college" were excluded to ensure that the search yielded mostly papers on children. "bulimia" until "obesity" were all excluded since this review is not interested in medical articles. "pregnant", "bottle-feeding" and "maternal" were excluded because this review is not interested in the feeding difficulties of infants. Although excluding the word "infant" entirely was not possible since it rejected many articles that mention how feeding difficulties in children often start at infancy. "income" was excluded from the search since the first few iterations of the query yielded many results for papers that mention food scarcity in low-income areas or countries. Finally, "review" was excluded from the title as this study is only interested in articles describing interventions and not literature reviews.

A search was also conducted in the ACM Digital Library. The string used for this search is very similar to the SCOPUS string and can also be found in Appendix A.

3.1.3 study selection. The final search was conducted on May 27th, 2025. Using the search strings above, 1101 papers were found. These papers had to be screened for usability for this review; this was done using the Parsif.al[3] tool and Microsoft Excel. The study selection process followed the 2020 PRISMA guidelines [24]. In the first section of the selection process, duplicate articles were removed and all titles and abstracts of the leftover articles were screened. This removal of duplicates was done using Parsif.al, which has a feature to import studies and automatically remove duplicate titles. The studies were selected according to the following inclusion and exclusion criteria.

Inclusion criteria:

- Article must be about picky eating habits
- Article must propose a digital, interactive intervention
- Intervention must be aimed at human children mainly between the ages of 2 and 12
- Intervention must be tested
- Article must be written in English
- Article must be a conference paper or journal article

Exclusion criteria:

- Article is a medical article, such as those describing interventions for children with cleft palate or diabetes

To meet the selection criteria, interventions had to be interactive, meaning they needed to actively engage the child. A movie intended to improve eating habits was not considered interactive. Additionally, interventions had to be digital for non-arbitrary reasons. For example, apps that just provided information in text form were rejected, as they could have just as easily been delivered in a non-digital format.

[3]https://parsif.al/

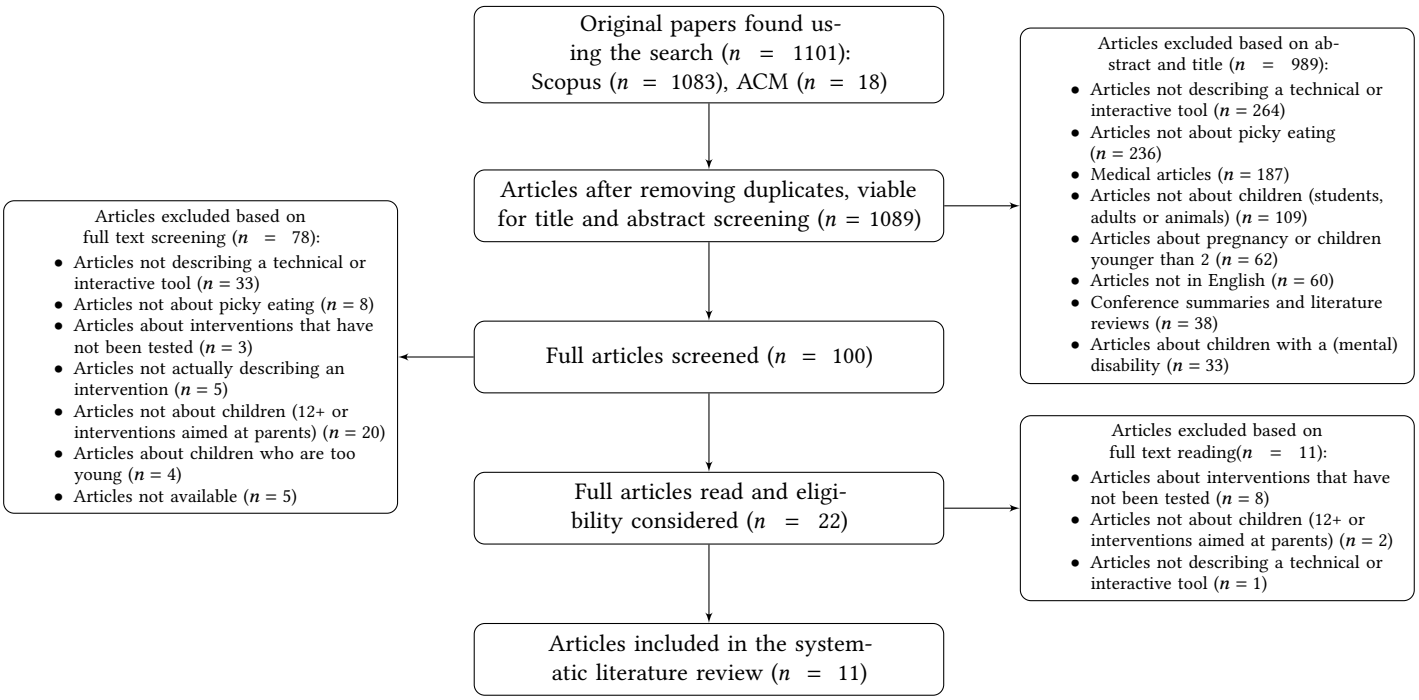

Fig. 2. Study selection flowchart

Once all titles and abstracts were read, papers that had not yet been rejected were screened in their entirety. As seen in Figure 2, this step consisted of screening 78 articles. Most of these articles were rejected because the interventions they proposed were not digital or interactive. Many were also rejected because the children the intervention was tested on were too old. Once all the papers had been screened, the last phase of the study selection commenced. This phase consisted of reading 22 papers in their entirety. In this phase, it was found that many of the interventions that were thought to be tested based on their abstracts mentioned no testing procedures in the full paper. Furthermore, 2 of these interventions claimed to be tested but no test results were shown in the article. Finally, after this last selection phase, 11 articles were considered eligible for this review. The 11 selected papers can be found in Appendix B

3.2 Data extraction form

A data extraction matrix was developed to systematically capture information from the 11 selected articles. The matrix consisted of three main sections, each with specific subsections. The first section contained general article characteristics: the article title, author(s) and the year it was written. This section is self-explanatory, and will not be discussed further. The second section focused on details regarding testing procedures, and the third addressed the characteristics of the intervention and its effectiveness.
Table 1 describes the data extraction matrix, there are four subsections concerning testing: the age of children tested, the number of children tested, the test setting and whether or not a working prototype was tested. Since this review only included interventions that have been tested, these categories should all be able to be filled in, and should cover a broad range of testing aspects.
The next section of the matrix covers the general characteristics of each intervention. The type of intervention, whether or not the intervention was designed with the parents in mind, the goal of the intervention and whether or not the intervention is claimed to be effective.

4 RESULTS

The data extracted from the 11 selected articles can be found in Table 2.

4.1 Characteristics of included studies

As seen in the table, the interventions span a wide age range. The study by Kadomura et al. [18] spans the widest age range, with children tested between the ages of 1 and 14. The intervention proposed in this study was tested by 5 children, aged 1, 2, 4, 6, and 14. This article also describes a preliminary survey performed to establish what kinds of eating problems children have; for this study, they sent questionnaires out to 300 parents of children aged 3-6. Because of this, we included the intervention since it is mainly focused on children between the ages of 2 and 12.
Approximately 45% of interventions have been tested on less than 10 children. The article that has the most testing participants is "Gamification in nutrition education" by Rosati et al. [26]. Their testing procedures included 126 children, 60 of which were in the control group and did not interact with the educational game "The story of Sofy", the other 66 children did.

Table 1. Data extraction matrix categories

Category	Explanation
Age of children tested	The range from the age of the youngest child tested to the oldest child tested.
Number of participants	The number of children or parent-child dyads who have tested the intervention.
Test setting	Location where testing took place, usually home, school or laboratory
Working prototype tested?	Describes in what state the prototype was tested. Some interventions worked as wizard of oz whereas others were tested as fully functional products
Type of intervention	Categories include: "interactive tableware", "computer game", "robot" etc.
Design also for parents	Can either be yes, no or partially. Some interventions have a social focus where parents are included in the functionality of the intervention.
Goal of intervention	Interventions can have various goals, such as encouraging children to eat more vegetables or educating children on healthy eating habits.
Effectiveness	Can either be yes or no. The effectiveness of an intervention was based on reported test outcomes and conclusions drawn in the paper.

Testing took place primarily at home or in schools. School-based interventions (n=3) were often part of broader educational programs focused on healthy eating, such as the robot described by Baroni et al. [3]. The testing setting for "FunEat" by Zhao et al. [29] was unclear; while the authors mentioned recruiting participants via a school, the actual location of the testing was not specified.

The majority of interventions (n=8) did not feature a social aspect that required parents to be involved during use. An exception to this was "TangibleTale" described by Wang et al. [28], in which parents were required to actively participate in telling a story.

The type of intervention varied across studies, with interactive tableware being the most frequent (n=4). Computer games (n=2) and mobile applications (n=2) were also common. Some studies, such as the sensor-embedded fork developed by Kadomura et al. [17], combined interactive tableware with a digital application. In this case, the study was noted as interactive tableware in the extraction matrix.

Because all interventions focused on picky eating, the objectives of the interventions were similar. All interventions either focused on educating children on healthier diets (n=4), persuading them to eat foods they disliked (n=3), or motivating them to change their eating habits for the better (n=4).

All papers analyzed claim their proposed intervention has achieved the goals they set out. While the intervention by Kadomura et al. [18] is claimed to be effective, the authors note that the novelty effect may have played a part in its effectiveness.

Table 2. paper matrix

Ref	Age of Children Tested	Number of participants	Test Setting	State of Prototype Tested	Design also for Parents	Type of Intervention	Goal of Intervention	Effective?
[18]	1-14	5	Home	working prototype tested	No	Interactive tableware	Educating children about healthy diets	Yes (careful)
[26]	7-8	126	School	working prototype tested	No	Interactive computer game	Educating children about healthy diets	Yes
[11]	3-6	74	School	working app tested	No	Interactive mobile application	Persuading children to eat vegetables they dislike	Yes
[12]	3-8	8	Home	working prototype tested	Partially, parents helped children use the intervention	Projector	Persuade children to eat disliked food	Yes
[3]	8-9	80	School	Wizard of Oz testing	No	Robot	Motivate children to change eating habits	Yes
[28]	3-6	12	Home	working prototype tested	Yes, parents have to interact with the story	Mobile app and toys	Helping children develop healthy eating habits	Yes
[5]	4-6	12	Lab	Working prototype tested	No	Multi-sensory game	Educating children about healthy diets	Yes
[1]	7-13	68	Camp	Working prototype tested	No	Computer game	Encouraging children to increase fruit/veg consumption	Yes
[29]	5-6	4	Unclear	Working prototype tested	No	Interactive tableware	Helping children develop healthy eating habits	Yes
[17]	2-8	5	Home	Working product tested	Partially	Interactive tableware	Educating children about healthy diets	Yes
[20]	4-7	4	Lab	Working prototype tested	No	Interactive tableware	Helping children develop healthy eating habits	Yes

5 DISCUSSION

5.1 Discussion of methods

This study primarily focused on the development and application of a search strategy, as well as defining clear inclusion and exclusion criteria, to identify relevant literature on digital interventions for picky eating. This search strategy is not without imperfections, and opportunities for improvement exist.

By limiting the search to intervention types mentioned in the title, and not keywords or abstracts, there is a risk of the exclusion of relevant articles that do not describe the intervention type in their titles. Although this search strategy used many terms often used in titles for articles describing digital, interactive interventions, it can not guarantee that all articles were found. This limit to only searching the title is strict, but this decision was intentionally made to ensure a reasonable number of articles for the review. The decision to search for the population and outcome in the title, abstract and keywords was made to find a large amount of potentially relevant studies, since authors often describe the target group and goal of the intervention in these sections rather than in the title.

The exclusion of medical terms such as "diabetes" from the search introduces the risk of excluding articles that discuss the prevention of medical conditions by promoting healthy eating habits in children. However, since 18.91% of articles excluded in the first screening were medical, it was clear limitations on the search string had to be made. The term "adult" was not excluded in the string out of fear of excluding articles that mention that adults or parents were present during testing, or interventions that were aimed at both children and parents.

As previously mentioned, the number of terms to describe picky eating behaviours might result in the exclusion of some relevant studies. Although this study attempted to find as many synonyms as possible, it is possible some terms were missed. However, this study is confident in the number of synonyms and relevant terms used in the search.

5.2 Discussion of results

Most studies seem to focus on children between the ages of 3 and 8 years, which is in line with the study performed by Nicklaus [23] which describes that this period covers the developmental phase of food neophobia. According to [23], children's variety in food choices increases from infancy, peaks at around two and a half years old, and then slightly drops again until about eight years of age, when picky eating behavior tends to fade. It would make sense then for the interventions studied to focus on children in this stage.

Of the 11 interventions reviewed, 5 were tested on fewer than 10 children, and 2 others involved only 12 participants. While there is no universally accepted standard for the number of participants required in such studies, Brown et al. suggest that a minimum of 30 participants is a reasonable benchmark for pilot testing [4]. In contrast, Julious [16] argues that as few as 12 participants may be sufficient in early-stage research. Regardless of the guideline followed, the 5 interventions in this review with fewer than 12 participants should be interpreted with caution, as their small sample sizes limit the generalization of their findings.

An explanation for the sample sizes may be found in the testing setting. In this study's findings, there appears to be a strong correlation between test setting and number of participants tested, with school and camp-based testing having a larger number of participants than home-based testing. This is in line with chapter 5 of the book "Recruitment of Research participants" by Manohar et al. [21], which states that schools are a valuable venue for recruiting both children and parents for research. The chapter goes on to explain that this is because schools have a large and diverse range of participants, and school attendance is mandatory.

Only 3 studies analyzed have a (partial) social focus that includes parents, which is peculiar, since studies such as Koivisto et al. [19] stress the importance of parent-child mealtime interaction for food acceptance. Claiming that parental involvement during mealtime may have implications for the development of food preferences in children.

Since all 11 studies analyzed claim their intervention is successful, there is preliminary evidence to suggest that digital and interactive interventions can have a positive impact on children's picky eating habits. However, it is important to consider that 5 of the interventions were tested on fewer than 12 children, which calls for a cautious interpretation of the evidence presented in these studies. It is also worth noting that some interventions, such as the playful tray by Lo et al. [20], have only been tested once. This paper describes in its results that it would be beneficial for future research to be conducted into the long-term effectiveness of the intervention. Another paper with an intervention that was only tested once is Educatableware by Kadomura et al. [17]. This paper also mentions the novelty effect in their findings, claiming that this effect may have played a part in the effectiveness of the intervention.

5.3 Suggestions for future work

As a result of this study's focus on search strategy, no in-depth analysis of the extracted data was performed at this stage. For future research, a detailed analysis of the gathered data could provide valuable insights into the effectiveness and characteristics of the various interventions. For this analysis, it is recommended to expand the data extraction matrix such that there are more variables to analyze. Recommendations for these expansions include: gender of participants, study design, and duration of the intervention.

This current research has identified only 11 articles; however, various modifications to the inclusion and exclusion criteria could be implemented to achieve a larger number of results. The following parts of this discussion will be about these potential modifications. It should be noted that many potentially interesting papers featuring an interactive intervention were excluded because their interventions were not digital. In future reviews, it may be worthwhile to expand the scope to also include these interventions. One noteworthy example of this type of intervention, which was also found by the search Query, is "Miffy eats the rainbow" by Gooier et al. [9]. A picky eating intervention that consisted of a story to trigger modeling behaviour and stickers as a reward for eating disliked fruits and vegetables. Many of these interventions were found using

the current search strategy, so no major changes would have to be made.

The search also found several studies focusing on school-based programs aimed at teaching children healthier eating habits. One example is the "Food Dudes" intervention, which is used in schools across Ireland [14]. This program was not included in the review because it relies on a series of videos that are not interactive. In some cases, the videos were even replaced by letters, meaning the intervention was not digital. Despite being excluded, these types of school-based interventions often report positive effects on children's eating behaviors, making them an interesting target for future research.

Other studies focused on interventions aimed at parents to help them encourage better mealtime behaviors in their children. These types of interventions were not included in this review since their primary focus is not on children. An example of such an intervention is "MAMAS" a digital and interactive intervention described by Jo et al. [15]. This study describes a mealtime assistant mobile application that monitors parent-child mealtime conversation and food intake. Interventions such as these could also be interesting to study in future work, as they are digital and interactive but focus on a new demographic.

In summary, while this study successfully identified relevant digital interventions aimed at children, further work is needed to analyze these interventions in detail, as well as to explore related but currently excluded interventions.

6 CONCLUSION

This systematic literature review set out to identify and analyze digital, interactive interventions designed to reduce picky eating habits in children. Using a search strategy crafted following PRISMA guidelines, 11 relevant studies were identified, each proposing various technological tools ranging from interactive tableware and mobile applications to computer games and robots.

These articles were found using a Scopus and ACM digital library search string, which was crafted using PICOC criteria and many reiterations. The search string is not without limitations, but this study is confident in claiming it has managed to include most relevant articles. Thus, RQ1 is successfully answered.

To answer RQ2, a data extraction form was created and a small data analysis was performed. The findings from the 11 articles suggest that most interventions target children between the ages of 3 and 8, a developmental period closely linked to food neophobia, as described by Nicklaus [23]. This is a crucial stage where children's willingness to try new foods decreases, making it an appropriate age range for picky eating interventions. Despite differences in types of interventions, goals, and testing settings, all reviewed articles claimed that their interventions successfully met their objectives. Suggesting that technological, interactive interventions are successful in helping children overcome picky eating habits.

Parental involvement was surprisingly low in most interventions, with only a minority requiring active parental participation. This lack of interventions with a social aspect highlights a potential gap in the research.

Finally, many promising interventions, particularly non-digital, school-based, or parent-focused approaches, were excluded based on this review's strict inclusion criteria, suggesting that expanding the scope of future reviews could provide valuable additional insights.

7 AI ASSISTANCE DISCLOSURE

This paper has been written with the help of Writefull, an overleaf writing assistant which helps rephrase written sentences and correct grammatical errors. AI was not used to generate any new content or ideas. All scientific content, the search strategy, paper analysis, discussion, and conclusions are my own work.

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A SEARCH QUERIES

A.1 Scopus

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(TITLE-ABS-KEY( "child*" OR "toddler*" OR "K12" OR "preschool"
OR "students") AND TITLE( "creat*" OR "solution" OR "mod-
eling" OR "intervention" OR "HFI" OR "HCI" OR "game*"
OR "robot*" OR "tool*" OR "computer*" OR "tech*" OR
"Interacti*" OR "play*" OR "tableware*" OR "fork*" OR
"spoon*" OR "cup") AND TITLE-ABS-KEY("vegetables" OR
"fruits and vegetables" OR "F&Vs" OR "picky eating"
OR "choosy eating" OR "eating difficulties" OR "se-
lective eating" OR "eating problems" OR "faddy eat-
ing" OR "feeding difficulties" OR "feeding problems" OR
"fussy eating" OR "food neophobia" OR "feeding issues"
OR "problematic eating" OR "restrictive eating" OR "food
fussiness" OR "mealtime difficulties" OR "food selec-
tivity" OR "limited food repertoire" OR "narrow food
preferences" OR "Eating habits" OR "Eating behaviour"
OR "Feeding habits" OR "Feeding behaviour" OR "experi-
menting with food") AND NOT TITLE-ABS-KEY("university"
OR "college" OR "bulimia" OR "diagnosis" OR "disorder"
OR "surgery" OR "clinical trial" OR "hospital" OR "cleft
palate" OR "obesity" OR "pregnant" OR "bottle-feeding"
OR "Maternal" OR "income") AND NOT TITLE("review"))
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A.2 ACM Digital Libary

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"query": {Abstract:((("K12" OR child* OR preschool* OR
student* OR toddler*) AND ("dietary" OR "picky eat-
ing" OR "choosy eating" OR "eating difficulties" OR
"selective eating" OR "eating problems" OR "faddy eat-
ing" OR "feeding difficulties" OR "feeding problems" OR
"fussy eating" OR "food neophobia" OR "feeding issues"
OR "problematic eating" OR "restrictive eating" OR "food
fussiness" OR "mealtime difficulties" OR "food selec-
tivity" OR "limited food repertoire" OR "narrow food
preferences" OR "eating habits" OR eating behaviour*
OR "feeding habits" OR feeding behaviour* OR "experi-
menting with food") AND NOT (university OR college OR
anorexia OR bulimia OR diagnosis OR disorder OR surgery
OR "clinical trial" OR hospital OR "cleft palate" OR
obesity OR pregnant OR "bottle-feeding" OR maternal OR
income)) AND Title:((modelling OR intervention* OR game*
OR robo* OR *bot OR tool* OR computer* OR interacti*
OR play* OR tableware* OR fork* OR spoon* OR cup OR
tech* OR creat*) AND NOT "review")} AND "filter": {"ACM
Content": DL}}
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B ARTICLES

Table 3. paper matrix

Ref	Title	Authors	Year
[18]	EducaTableware: Sound emitting tableware for encouraging dietary education	Kadomura, Azusa and Tsukada, Koji and Siio, Itiro	2014
[26]	Gamification in nutrition education: the impact and the acceptance of digital game-based intervention for improving nutritional habits	Rosati, Riccardo and Regini, Letizia and Pauls, Aleksandra and Strafella, Elisabetta and Raffaelli, Francesca and Frontoni, Emanuele	2024
[11]	Using repeated visual exposure, rewards and modelling in a mobile application to increase vegetable acceptance in children	Farrow, Claire and Belcher, Esme and Coulthard, Helen and Thomas, Jason M. and Lumsden, Joanna and Hakobyan, Lilit and Haycraft, Emma	2019
[12]	FoodWorks: tackling fussy eating by digitally augmenting children's meals	Ganesh, Sangita and Marshall, Paul and Rogers, Yvonne and O'Hara, Kenton	2014
[3]	Designing motivational robot: How robots might motivate children to eat fruits and vegetables	Baroni, Ilaria and Nalin, Marco and Coti Zelati, Mattia and Oleari, Elettra and Sanna, Alberto	2014
[28]	TangibleTale: Designing Tangible Child–Parent Interactive Storytelling for Promoting Eating Behaviors	Wang, Zhiqi and Liu, Mingxuan and Yan, Zihan and Xu, Xuhai Orson and Luo, Danli and Nathalie, Gigi and Li, Jiaji and Yang, Cheng and Tao, Ye and Wang, Guanyun	2024
[5]	"See, Hear, Touch, Smell, and,...Eat!": Helping Children Self-Improve Their Food Literacy and Eating Behavior through a Tangible Multi-Sensory Puzzle Game	Cai, Xueyan and Jin, Kecheng and Shi, Shang and Huang, Shichao and Huang, Ouying and Wang, Xiaodong and Cheng, Jiahao and Lin, Weijia and Yao, Jiayu and Hu, Yuqi and Zhang, Chao and Yao, Cheng	2024
[1]	Using virtual pets to increase fruit and vegetable consumption in children: A technology-assisted social cognitive theory approach	Ahn, Sun Joo and Johnsen, Kyle and Moore, James and Brown, Scott and Biersmith, Melanie and Ball, Catherine	2016
[29]	FunEat: An Interactive Tableware for Improving Eating Habits in Children	Zhao, Y., Yu, C., Nie, J., Dong, M., Sang, Y., Ying, F., Wang, G.	2021
[17]	Persuasive technology to improve eating behavior using a sensor-embedded fork	Kadomura, Azusa and Li, Cheng-Yuan and Tsukada, Koji and Chu, Hao-Hua and Siio, Itiro	2014
[20]	Playful tray: Adopting ubicomp and persuasive techniques into play-based occupational therapy for reducing poor eating behavior in young children	Lo, Jin-Ling and Lin, Tung-Yun and Chu, Hao-Hua and Chou, Hsi-Chin and Chen, Jen-Hao and Hsu, Jane Yung-Jen and Huang, Polly	2007