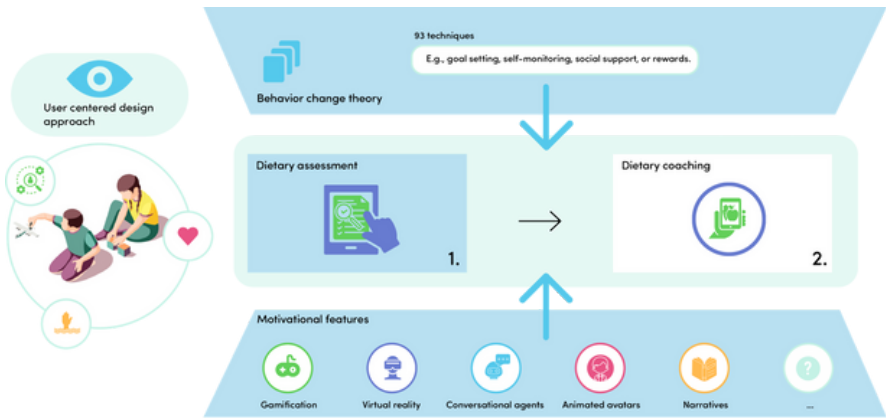


FoodPAD: development of a novel dietary assessment app for Dutch 8-10 year old children

Project summary

FoodPAD is a child-centered dietary assessment tool in development, designed for Dutch children aged 8-10 years. The tool aims to support flexible, self-reported dietary intake assessment in research settings, with potential links to personalized dietary advice in the future. This PhD project focuses on formative research, participatory design, and early-stage development of FoodPAD. By integrating children's and stakeholders' perspectives across nutrition, design, and technology disciplines, FoodPAD aims to bridge disciplinary gaps and contribute to more integrated, user-informed solutions in children's dietary assessment research.

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Dear consortium partners,

Year 2 of the FoodPAD project has come to an end. This newsletter provides a brief update, including the publication of our second paper. If you're interested in a more in-depth overview, we can schedule a meeting to discuss the progress.

We closed the year by sharpening the project's focus. Moving forward, FoodPAD will now center on developing a child-centered dietary assessment app, designed for flexible use across research settings. While initial coaching elements remain, the main priority shifts to assessing dietary intake using participatory, child-centered methods. From September, we will start a follow-up study to co-evaluate the child-informed search strategy with children (see below) and start developing a functional prototype in the second half of the year. To support this next phase, I completed a two-month secondment at the Health Promotion group at Ghent University, learning more about co-creation methods and facilitation.

Thank you for your continued support. I look forward to another year of meaningful collaboration!

Kind regards,
Zoë van der Heijden, PhD Candidate Human Nutrition & Health

Second paper published

In November 2024, the second paper of the project was published in *Health Psychology and Behavioral Medicine* (DOI: [10.1080/21642850.2024.2430965](https://doi.org/10.1080/21642850.2024.2430965)).

This scoping review mapped digital behavioral dietary interventions for children and adolescents, focusing on delivery modes, development approaches, behavioral theories, and outcomes. Apps were most common (37%), followed by web-based (29%), computer-based (27%), text-message (5%), and combined approaches (2%). The review highlights methodological variations and calls for more rigorous designs in evaluations and the use of co-design approaches among diverse pediatric populations in development.

Third dataset complete

The third dataset of the project has been completed. In this study, we explored the design of a child-centered search strategy to facilitate rapid and accurate search in a novel dietary assessment tool, focusing on food group categorization and illustrations. A total of 43 children (aged 8-10) from Gelderland participated in creative interviews, during which they grouped 63 familiar food item cards into self-defined categories, assigned names to these groups, and created accompanying icons.

On average, the children created 10.0 (± 4.6) piles. The foods clustered into 15 overarching categories, primarily reflecting "taxonomic-professional" (29.3%) and "specific-food item" categorization (17.0%) strategies. Thematic analysis of drawings revealed two main themes: *what* children illustrate (e.g., serving utensils, multiple food examples) and *how* they illustrated (e.g., use of color and language cues). These findings may inform the design of a child-friendly food search structure in a dietary assessment tool for children of this age group.

The manuscript is currently in preparation.

Data collection fourth study underway

Data collection is currently ongoing for the fourth study of the project. Developing and designing novel technologies for children - such as a dietary assessment app - requires active collaboration across multiple disciplines. Yet, such tools are often developed from a single disciplinary perspective, which risks overlooking key aspects of usability, engagement, and scientific validity. Therefore, this semi-structured interview study brings together professionals from UX/UI design (n=4), behavior (n=4), motivation (n=4), and nutrition (n=4) - to explore user requirements and potential solutions to usability challenges in digital self-reported dietary assessment for children.

Data collection is currently in progress.