To like or not to like

On negotiating taste in children from families with a low socioeconomic position

Amy van der Heijden

Propositions

1. Disattending food preferences expressed by children hinders their taste development.
   (this thesis)

2. Perceiving values that compete with healthy eating as barriers beyond one's own control is typical for populations with a low socioeconomic position.
   (this thesis)

3. Research approaches can be complementary to each other despite their incongruence in epistemological assumptions.

4. Including difficult-to-reach populations in research is indispensable for scientific impact.

5. Enhancing health potential in all socioeconomic groups is more important than overcoming the socioeconomic health gap.

6. Healthy lifestyle is more about contextual enhancers and impediments than about personality and motivation.

Propositions belonging to the thesis, entitled

To like or not to like: On negotiating taste in children from families with a low socioeconomic position

Amy van der Heijden

Wageningen, 8 July 2022

To like or not to like

On negotiating taste in children from families with a low socioeconomic position

Amy van der Heijden

Thesis committee

Promotors
Prof. Dr H. te Molder
Professor of Language and Communication
Vrije Universiteit Amsterdam

Prof. Dr C. de Graaf
Professor of Sensory Science and Eating Behaviour
Wageningen University & Research

Co-promotor
Dr G. Jager
Associate professor, Sensory Science and Eating Behaviour
Wageningen University & Research

Other members
Prof. Dr H. P. Veling, Wageningen University & Research
Prof. Dr S. Wiggins, Linköping University, Sweden
Prof. Dr J. Mesman, Leiden University
Dr A. Kent, Keele University, United Kingdom

This research was conducted under the auspices of the Graduate School VLAG
(Advanced studies in Food Technology, Agrobiotechnology, Nutrition and Health Sciences).

To like or not to like

On negotiating taste in children from families with a low socioeconomic position

Amy van der Heijden

Thesis
submitted in fulfilment of the requirements for the degree of doctor
at Wageningen University
by the authority of the Rector Magnificus,
Prof. Dr A.P.J. Mol,
in the presence of the
Thesis Committee appointed by the Academic Board
to be defended in public
on Friday 8 July 2022
at 4 p.m. in the Omnia Auditorium.

Amy van der Heijden
To like or not to like: On negotiating taste in children from families with a low socioeconomic position, 228 pages.

PhD thesis, Wageningen University, Wageningen, the Netherlands (2022)
With references, with summary in English

ISBN 978-94-6447-145-8
DOI https://doi.org/10.18174/566538

Table of contents

1

General introduction

1.1 'Water is for dogs'

When I started this research project in 2017, a local newspaper article reported a recent policy change in a Dutch primary school. The school had decided that children were only allowed to bring water, sandwiches and fruit to school (Van der Meer, 2017). Other drinks and snacks – usually a lot of sugary juices and cookies, according to the school – were prohibited, in an attempt to enhance the health of the children. This decision caused great commotion among parents of children attending this school. Many parents wanted to decide for themselves what was 'healthy' for their child, and what their child was allowed to eat or drink – including at school. One of the parents, a father, whose child attended this school explained in the newspaper article that his son came home crying after the new rules were set, because his son 'does not like water'. Moreover, the father stated that his son should not have to drink water, as in the father's opinion, 'water is for dogs' (Van der Meer, 2017).

I remember being quite surprised after reading this newspaper article. How could it be that a policy that is beneficial for children's health, was contested by their parents? The commotion that had occurred drove against what nutrition and health experts would argue for, i.e., that drinking water is recommended and the intake of sugary foods and drinks should be limited (Brink et al., 2019). It displays that there are different perceptions of what is 'healthy'. Moreover, the commotion displays that for policy makers from an organization such as the school, it appears self-evident that the perceptions of parents are similar to their own – even to such an extent, that the 'shock' of a discrepancy is newsworthy. Furthermore, the 'clash' between the school and some of the parents reveals a difference in *values*, i.e., what people find important, that they apparently pursue. The school presents arguments reflecting values in the biomedical domain; limiting the intake of sugary drinks and snacks in order to avoid physical discomfort and potentially disease. The arguments by parents suggest values in the domain of autonomy for themselves as well as their children. Their arguments refer to a strong preference for making their own decisions regarding what their child is allowed to eat or drink, the importance of the children's own wishes, and the notion that children should be treated more respectfully (than dogs).

What this anecdote with the newspaper item illustrates, is that what is *good* or *healthy* is not the same for everyone. It is not uncommon that publicly, commotion of this kind – e.g., a conflict between various (groups of) people, reflecting a possible discrepancy in beliefs and values – is linked to differences in socioeconomic position. In a broad sense, this thesis is an in-depth scientific exploration of how people with a low socioeconomic position perceive 'healthiness' and 'tastiness' of foods, and what it means to 'like' a food. I will start by introducing an urgent societal challenge, explore various related scientific knowledge gaps and research objectives for this thesis, explain the approaches and methods I applied to address them, and close this introduction with an outline of the thesis.

1.2 Dietary inequalities and socioeconomic position

It is well-documented in scientific literature that dietary behavior is patterned by socioeconomic position (SEP) (e.g., Hoenink, Waterlander, Beulens, & Mackenbach, 2022). SEP is a relative measure of social class and economic capacity, commonly indicated by level of education, income, and/or occupation (Shavers, 2007; Zarnowiecki, Dollman, & Parletta, 2014). The socioeconomic disparity in dietary behavior entails that populations with a low SEP consume unhealthier diets than populations with a higher SEP. For example, populations with a low SEP consume relatively more energy-dense foods and less fruits, vegetables and fibres, than populations with a higher SEP (Giskes, Avendaño, Brug, & Kunst, 2010; Konttinen, Sarlio-Lähteenkorva, Silventoinen, Männistö, & Haukkala, 2013; Pechey et al., 2013). Research has shown how various factors impact socioeconomic disparities in dietary behavior, including economic access, i.e., being able to afford healthy foods (Monsivais, McLain, & Drewnowski, 2010); knowledge and considerations regarding healthy eating and nutrition, i.e., what people know about (un)healthy foods, and the extent to which this mediates their food choices and eating behavior (Ball, Crawford, & Mishra, 2006); and eating motivations and liking of foods, i.e., reasons for (not) eating healthily such as level of hungriness or price, and the extent to which particular (un)healthy foods are liked or disliked (Pechey, Monsivais, Ng, & Marteau, 2015; Vainik, Dagher, Dubé, & Fellows, 2013).

The socioeconomic disparity in diet quality already emerges in childhood, as children from families with a low SEP consume poorer diets than children from families with a higher SEP (Van der Velde et al., 2019; Mech, Hooley, Skouteris, & Williams, 2016; Zarnowiecki, Dollman, & Parletta, 2014; Zarnowiecki, Parletta, & Dollman, 2014). The diets of primary school-aged children in the Netherlands do not meet the recommended nutritional guidelines, as for example children's consumption of sugary drinks and processed meat is higher than recommended, while the intake of vegetables, legumes, nuts, and oils is lower than recommended (Van der Velde et al., 2019). For example, the median vegetable intake of Dutch children in the study of Van der Velde et al. (2019) was 79 grams per day, while 150 grams per day is recommended. The diets of children from families with a low SEP are relatively even unhealthier (Van der Velde et al., 2019). This is distressing, as research has shown that food preferences and eating patterns learnt in childhood have a major influence on food preferences and eating patterns in later stages of life (e.g., Issanchou, 2017; Anzman-Frasca & Ehrenberg, 2018; Skinner, Carruth, Bounds, Ziegler, & Reidy, 2002; Skinner, Carruth, Bounds, & Ziegler, 2002). Therefore, it is important that children learn to like healthy foods already at a young age and develop healthy eating patterns.

Unhealthy eating patterns, e.g., regular consumption of energy-dense, highly palatable foods and limited consumption of fruits, vegetables and fibres (Giskes et al., 2010; Konttinen et al., 2013) can result in overweight and obesity, especially if there is an imbalance between energy intake and expenditure (e.g., physical activity) (Mitchell et al., 2011). Overweight and obesity pose a major challenge to public health, as they are related to a multitude of (chronic) diseases, such as cardiovascular diseases, diabetes mellitus, kidney diseases and different types of cancer (GBD Obesity Collaborators, 2017). Alarmingly, the global prevalence of overweight and obesity is increasing rapidly, especially in children (Ng et al., 2014; GBD 2015 Obesity Collaborators, 2017; WHO, 2021). To illustrate, the prevalence of overweight and obesity increased by 27.5% in adults between 1980 and 2013, and by as much as 47.1% in children (Ng et al., 2014).In low and middle income countries, the prevalence of overweight and obesity is highest in populations with a high SEP. In contrast, in high income countries including the Netherlands, overweight and obesity prevalence peaks in populations with a low SEP (Dinsa, Goryakin, Fumagalli, & Suhrcke, 2012). The National Institute for Public Health and the Environment established that in 2020, 50% of all Dutch adults was overweight or obese, and 14,7% of the children (RIVM, 2021). Moreover, over

64% of the lower educated people in the Netherlands was overweight or obese, as opposed to 43% of higher educated people (RIVM, 2021), reflecting the observation that in high income countries, overweight and obesity prevalence is higher in populations with a low SEP (Dinsa et al., 2012).

Whereas unhealthy eating is associated with various negative health outcomes, healthy eating can lead to health benefits. The Dutch scientific council for government policy recently reported that populations with a low SEP have a relatively high health potential (Broeders, Das, Jennissen, Tiemeijer, & De Visser, 2018). This means that potentially, the most health benefits can be gained in this group – for example because populations with a low SEP consume relatively unhealthier diets than populations with a higher SEP (Hoenink et al., 2022). Over the past years, the focus of Dutch healthy policy has been on reducing health inequalities between populations with lower and higher SEPs. However, shifting the focus from reducing socioeconomic health inequalities to reaching the most health potential in all populations, across the socioeconomic spectrum, can lead to beneficial (health) outcomes for society as a whole (Broeders et al., 2018). Therefore, the scientific council recommends a 'proportionally universal' health policy targeted at all socioeconomic groups, in which extra support should be provided to more vulnerable groups such as populations with a low SEP, e.g., providing them extra opportunities and capacities to reach their health potential (Broeders et al., 2018, p. 18). Furthermore, the scientific council also recommends children to be prioritized in health policy, since they also have a high health potential regarding the relatively high number of healthy life years that could be gained (Broeders et al., 2018).

1.3 Healthiness, tastiness and liking of foods in populations with a low socioeconomic position

Many dietary improvements and diet-related health benefits can be gained in families with a low SEP, but research has shown that lifestyle interventions hardly reach these families (Beauchamp, Backholder, Magliano, & Peeters, 2014). Lifestyle interventions fail to truly engage populations with a low SEP to participate in attempts to improve, e.g., dietary behavior. This might be due to interventions being insufficiently adapted to the complexity of everyday life in families with a low SEP (Bukman et al., 2014; Bouwman, Te Molder, Koelen, & Van Woerkum, 2009). Everyday life challenges such as poverty (making ends meet), physical or psychological problems, and lacking time interfere with motivation and capability to participate in lifestyle interventions and to engage in lifestyle change, such as eating more healthily (Stuber, Middel, Mackenback, Beulens, & Lakerveld, 2020; Reiss, 2013; Dalstra et al., 2005). Scepticism and mistrust towards research and researchers also is a reason to decline participation (Stuber et al, 2020). Moreover, scientists' notions of what is 'good' or 'healthy', and what is displayed in interventions, may not correspond to beliefs and values among populations with a low SEP (Bukman et al., 2014).

Part of the problem is that populations with a low SEP are largely underrepresented in research. Therefore, it is crucial to unravel how 'healthy', 'tasty', and 'liking' of foods is perceived and oriented to in the context of the everyday life of families with a low SEP. There are indications that differences exist in beliefs and attitudes with regard to (un)healthiness, (not) tastiness and (dis)liking of foods between people of various SEPs (e.g., Baumann, Szabo, & Johnston, 2017; Inglis & Crawford, 2005; Van Otterloo & Ogtrop, 1989). With regard to conscious (i.e., explicit) and unconscious (i.e., implicit) liking of various foods, for example, it was established that men with a low SEP did not only consume less fruit, but also showed lower implicit liking for fruit than men with a high SEP (Pechey, Monsivais, Ng, & Marteau, 2015). Regarding what is perceived as 'good' or 'tasty', people with a low SEP indicated huge and big dishes as desirable (Baumann et al., 2017), and described that 'good food' should be filling and satisfying (e.g., Hardcastle & Blake, 2016; Stephens et al., 2018). By contrast, people with a higher SEP focused more on aesthetics than quantity (Baumann et al., 2019). Moreover, parents with a low SEP described children as 'good eaters' when they cleaned their plates without complaining, rather than relating 'good eating' to the consumption of 'good' or 'healthy' foods (Backett-Milburn, Wills, Gregory, & Lawton, 2006). A study on food and health related beliefs and experiences in low-income women reported that women perceived health as how 'well' people feel, and the extent to which they could continue a 'normal' daily life (Dibsdall, Lambert, and Frewer, 2002). Some women reported that they believed to adhere to a healthy diet, as long as they consumed fruits and vegetables whenever they felt like doing so; while simultaneously, they did not meet the recommended amount of fruits and vegetables consumption (Dibsdall et al., 2002).

There are also differences in how populations of various SEPs attach meaning to food, derived from various sociological studies. Early research by Van Otterloo & Ogtrop (1989) on perceptions of nutrition, health and taste in mothers of various SEPs showed that for mothers with a low SEP, good taste was a very important motivation to choose certain foods for family meals, whereas mothers with a higher SEP were more motivated by the foods' healthiness, and gave taste a subordinate role. In addition, mothers with a low SEP believed that taste was a fixed given, whereas mothers with a high SEP were convinced that taste could and should be developed and moulded over time (Van Otterloo & Ogtrop, 1989). Moreover, with regard to family meals, mothers could experience friction between a smooth, cosy meal in which family ties were strengthened, and providing healthy foods that their children or partner may dislike (Van Otterloo & Ogtrop, 1989; Hupkens, Knibbe, Van Otterloo, & Drop, 2000). In such situations, mothers with a low SEP were more permissive than mothers with a higher SEP (Hupkens et al., 2000). For mothers with a low SEP, it was more important and rewarding that the meal carried on smoothly than to regulate the consumption of specific foods, whereas mothers with a higher SEP would not easily permit children to 'dislike' a food; they would rather try to change the family's taste (Van Otterloo & Ogtrop, 1989).

Furthermore, recent studies found that for parents with a low SEP, indulging children with foods they like is a way to compromise for (material) hardship in other fields of life (Fielding-Singh, 2017; Pescud et al., 2014). Moreover, food can be used by parents to show love and affection to their children (Pescud & Pettigrew, 2014). In contrast, for parents with a high SEP, rejecting rather than indulging children's food requests is a way to teach children restraint and the 'right' values, in a context of plenty (Fielding-Singh, 2017).

1.4 Research question and objectives

As outlined, populations with a low SEP consume unhealthier diets than populations with a higher SEP (e.g., Hoenink et al., 2022). Populations with a low SEP, especially children, have a high health potential; i.e., relatively many health benefits can be gained in these groups (Broeders et al., 2018). Realizing the health potential in low SEP families with children requires a profound understanding of where opportunities for realizing health potential lie in their everyday life, and how these could be deployed. Therefore, the main research question guiding the research reported in this thesis is: *How can health potential be realized via improving eating behaviors in the everyday life of families with a low socioeconomic position?*

Prior research evidences that there *are* differences between populations with low and higher SEPs with regard to food preference, i.e., what they like, dislike and believe is (not) healthy or (not) tasty (e.g., Baumann et al., 2017; Inglis & Crawford, 2005; Van Otterloo & Ogtrop, 1989). *How* such beliefs and perceptions develop and are oriented to in the course of everyday life remains largely unknown, especially in families with a low SEP. Profound insight in what the meaning is of '(un)healthy' and (not) 'tasty', and what it means to 'like' or 'dislike' a food, in the everyday life of families with a low SEP, could enhance opportunities for realizing health potential in families with a low SEP. Therefore, the following three research objectives were formulated in order to answer the research question.

The first research objective of this thesis is to map the range of implicit and explicit associations between (un)healthiness, (not) tastiness and (dis)liking of foods, in children and parents from families with a low SEP. Prior research indicated that people believe unhealthy foods to be tastier than healthy foods (e.g., Raghunathan, Naylor, & Hoyer, 2006; Vadiveloo, Morwitz, and Chandon, 2013; Burton and Kees, 2012). A study in American adults showed that people implicitly (i.e., unconsciously) believed that unhealthy foods were tastier than healthy foods, even while they explicitly (i.e., consciously) argued that they did not (Raghunathan et al., 2006). The assumption that healthiness and tastiness of foods are inversely related to each other was introduced as the *Unhealthy = Tasty Intuition* (UTI) (Raghunathan et al., 2006). This UTI is related to unhealthy food choices (Hoppert, Mai, Zahn, Hoffman, & Rohm, 2012; Mai & Hoffman, 2015). However, little is known about the UTI in participants with a low SEP. Since there are socioeconomic disparities in diet quality (e.g., Giskes et al., 2010; Konttinen et al., 2013) and in perceptions of what is healthy and tasty (e.g., Baumann et al., 2017; Inglis & Crawford, 2005; Van Otterloo & Ogtrop, 1989), it cannot be assumed that associations between (un)healthiness and (not) tastiness of foods are readily comparable across populations with various SEPs. Moreover, it is unknown whether the UTI is already present in childhood, or whether the intuition develops later in life. Since associating healthy foods with not tasty

contributes to unhealthy food choices (Hoppert et al., 2012; Mai & Hoffman, 2015), such beliefs could be targeted in attempts, i.e. interventions, to stimulate healthy eating in families with a low SEP.

The second research objective is to provide a thorough review of available scientific literature on healthy eating beliefs and the meaning of food in populations with a low SEP. Literature provides valuable information on what, for example, healthy or unhealthy eating means specifically for families with a low SEP; what it means to like or dislike a food; and how meaning is attached to 'good' eating. However, the literature on this subject is fragmented. A thorough review of the available literature can reveal how concepts relating to 'healthy' and 'good' eating are understood in the literature. Furthermore, knowledge gaps and opportunities for future research in this field will be identified.

The third research objective is to unravel how food preferences are oriented to and negotiated in everyday life. Specifically, I will explore how children and parents with a low SEP orient to and negotiate food tastiness (i.e., liking and disliking) and healthiness (i.e., healthy and unhealthy) in conversations during everyday family mealtimes. Prior research on real-life child-parent interactions during mealtimes has highlighted various parenting styles and argumentative strategies used by parents to get their children to eat (Edelson, Mokdad, & Martin, 2016; Fries, Martin, & Van der Horst, 2017; Hughes et al., 2011). For instance, parents of children who consumed a lot of vegetables frequently used a 'reasoning' strategy, including prompts suggesting the tastiness of foods (Edelson et al., 2016). Moreover, prompts suggesting tastiness appear to be more effective than references to nutritional value (Pelchat & Pliner, 1995). However, these studies focused on *parental* strategies, in which the tastiness and healthiness of foods were featured. There is hardly any research on initiatives by *children* to display their food preferences. A pioneering study on displayed food likes and dislikes by children revealed that the interactional space for children to express their preferences is very limited, as parents frequently claimed to know what their children would like or dislike, and countered claims made by their children (Wiggins, 2014). Insight in how tastiness and healthiness of foods are oriented to and negotiated in everyday conversations, including initiatives by children, is essential to gain a profound understanding of how food preferences develop in the context of the everyday life of families with a low SEP.

1.5 Approaches and methods

1.5.1 Combining diverse approaches and methods

A multidisciplinary approach, combining perspectives from different research fields, diverse theoretical approaches, and various research methods, is deployed to address the research objectives. As outlined earlier, it is essential to not only gain understanding of various aspects of food preference in populations with a low SEP, i.e., what they (dis)like, and their beliefs and perceptions regarding what is 'healthy', 'tasty', and 'good' eating, but also to gain a profound understanding of *how* food preferences are oriented to and negotiated in the complex context of everyday life. All deployed theoretical approaches and research methods provide a unique perspective to food preference, and combining them is crucial to acquire an in-depth understanding of food preferences in populations with a low SEP.

A detailed description of the methods applied to study each research objective is provided in each chapter. In the present section, I briefly introduce the different approaches and methods deployed in the empirical studies, explain how they consider food preference research in different ways, and how they provide answers to different questions.

1.5.2 Measuring associations: implicit association tests and paper-and-pencil questionnaires

I use a quantitative, deductive approach to measure implicit and explicit associations between (un)healthiness, (not) tastiness and (dis)liking of foods. Implicit associations are measured with Implicit Association Tests (IATs). The IAT is a computer-based test used to measure the relative strength of implicit associations between target (in this case *healthy foods* and *unhealthy foods*) and attribute concepts (in this case, *tasty* and *not tasty*) (Greenwald, McGhee, & Schwartz, 1998; Greenwald, Nosek, & Banaji, 2003). Furthermore, a variety of rating scales presented on paper-and-pencil questionnaires were developed to assess perceptions of (un)healthiness, (not) tastiness and (dis)liking of foods and to measure explicit associations between those concepts. Moreover, questionnaires were used to assess dietary behavior. The use of IATs and rating scales on paper-and-pencil questionnaires is common in food preference research and applied in previous studies investigating the UTI (Raghunathan et al., 2006; Werle et al., 2013).

The logic behind these measurements is that they are assumed to provide insight in the psychological states and cognitions of the research participants with regard to what is (un)healthy, what is (not) tasty, and (dis)liked. Furthermore, researchers aim to discover relationships between various measured cognitions and, on a more abstract level, psychological concepts. Relationships between cognitions and the psychological concepts that they represent are commonly presented as a theoretical framework; for example, the inverse relationship between food healthiness and tastiness is presented as the unhealthy = tasty intuition (UTI) (Raghunathan et al., 2006). Moreover, such a framework can guide subsequent analyses. For example, research has utilized the UTI as a framework to examine the influence of these concepts on behavior, in this case food choice (Hoppert et al., 2012; Mai & Hoffman, 2015). The assumption that people's cognitions can be accessed and measured, and that these represent psychological concepts (that are pre-defined by scientists, e.g., 'attitudes'), is common within cognitive psychology. Many theoretical frameworks have been developed over the years, in which psychological concepts are defined and connected in a logical, sometimes even causal way, and used as a framework to explain or predict other psychological concepts or behavior; including eating behavior and food choice. Examples of such theoretical frameworks include, but are not limited to, the theory of planned behavior (Ajzen, 1985; 1991; Shepherd, 1999), social cognitive theory (Bandura, 1986, 1998; Anderson, Winett, & Wojcik, 2007), and the health belief model (Hochbaum, Rosenstock, & Kegels, 1952; Vassallo et al., 2009). These theories assume rational decision-making based on various psychological concepts, possibly influenced by contextual factors (such as practical barriers). Some theories also take unconscious cognitive processes and their influence on behavior into account, such as dual processing theories (Kahneman, 2003; Evans, 2008; Blom et al., 2021). Finally, models have been developed specifically to explain and predict eating behavior and food choice (e.g., Shepherd, 1989).

This type of food preference research yields valuable insights as it helps to understand eating behavior and food choice, and psychological concepts and mechanisms underlying such decisions. However, it is also accompanied by multiple issues that limit the extent of the provided insights, which cannot be ignored. The meaning of measured concepts, such as what is 'healthy', 'tasty', and what is means to 'like' a food, is pre-defined by a researcher; however, there may be a misalignment between what those concepts mean to researchers, and

what they mean to their participants (Wiggins, 2001; Wiggins & Potter, 2003). In addition, research participants are limited to indicate their 'food preference' in the lexical choices and answer formats (e.g., defined scales) of the researcher. This is problematic, because targeted concepts are isolated and taken out of the context of everyday life; it is assumed that they represent nothing else than cognitive states or sensory experiences, and the possibility that these concepts may be used for any other purpose in everyday life, woven into a specific context and point in time, is overlooked (Wiggins, 2001; Wiggins & Potter, 2003). Furthermore, the extent to which, e.g., an expression of 'liking' a food represents an enduring food preference over time or an immediate, one-time hedonic evaluation is not easily distinguishable in everyday practice (Wiggins, 2001; Wiggins & Potter, 2003). Therefore, an alternative qualitative approach to food preference research that considers food preference in a broader perspective, i.e., in the context of how people orient to it in everyday life, strengthens the research field and our understanding of food preference.

1.5.3 Analysing child-parent interactions: discursive psychology and conversation analysis

To study how food preferences, including food healthiness, are oriented to and negotiated in everyday life, I deploy discursive psychology (DP) and conversation analysis (CA) to analyse child-parent interactions during everyday family meals. DP and CA are qualitative, inductive methodologies for the analysis of real-life talk-in-interaction (Potter; 2021; Edwards & Potter, 1992; Potter & Hepburn, 2005; Wiggins, 2017; Schegloff, 2007; Sidnell & Stivers, 2013). As the analytic focus is on real-life talk-in-interaction, 'naturalistic data' in the form of audio and video recordings of naturally occurring conversations provide very suitable empirical materials for DP and CA analyses (Wiggins, 2017; Potter & Hepburn, 2005). Using video recordings also allows the researcher to observe and analyze non-lexical expressions (e.g., who produced a laugh or sneeze) and non-verbal gestures (e.g., eye gazes or hand gestures) that are relevant for the interaction (Wiggins, 2017). The analysis of everyday interaction can reveal common-sense and taken for granted interactional and societal norms (Garfinkel, 1967), including norms with regard to food preference. As taken for granted norms are not always consciously oriented to, they may not be reported in for example an interview or questionnaire (Versteeg, 2018).

The analytical principles of DP and CA are largely overlapping and assume that talk-in-interaction is action-oriented, meaning that, consciously or not, speakers achieve interactional goals (actions) through talk, and particular versions of reality are constructed in everyday interaction (Wiggins, 2017; Sidnell & Stivers, 2013; Potter & Hepburn, 2005). A leading question in DP and CA analyses is *'why that now?'*. This question embodies the nature of DP and CA analyses, which ultimately is to understand which specific actions are accomplished in interaction, through which practices, and within which particular context (Wiggins, 2017; Potter & Hepburn, 2005; Sidnell & Stivers, 2013). Examples of social actions include, but are not limited to, complimenting, offering, accounting, refusing, shifting responsibility, requesting, claiming a particular identity, disputing, complaining, and so on. Since DP is interested in psychology *as it is lived by people* (Wiggins, 2017), it is important to note that the analytic focus is on the way in which people make sense of *each other* in their interactional context; not to be confused with researchers' own interpretations of what interactants' intended actions in an interaction might be (Wiggins, 2017; Potter & Hepburn, 2005). For this purpose, the 'next-turn proof procedure' (Sacks, Schegloff, & Jefferson, 1974) guides analyses of how and which social actions are accomplished. The next-turn proof procedure entails that researchers' accounts of what is going on in an interaction are based on participants' *own* displayed understanding of *each other*, which can be derived from how participants in interaction treat each other's utterances in their next turns at talk or in the subsequent unfolding interaction (Wiggins, 2017; Sidnell & Stivers, 2013; Potter & Hepburn, 2005).

Major differences exist between the discursive and the cognitive psychological approach to food preference research. Whereas in the cognitive psychological approach it is commonly pursued to understand people's psychological states, i.e., to understand what is going on in the minds of people such as their beliefs or attitudes regarding food and eating, the discursive psychological approach is not concerned with understanding people's cognitions (Wiggins, 2017). Rather, DP explores 'how psychological constructs are enacted and made relevant in interaction, and the implications of these for social practices' (Wiggins, 2017, p. 42). In other words, it is assumed that language and talk-in-interaction are action-oriented, which in the context of food preference research means that researchers could study *how* the psychological construct *food preference*, such as liking or disliking foods, is produced by participants in real-life interaction, in *which* particular way, to accomplish *which* specific actions (Wiggins, 2017). Thus,

DP is concerned with 'psychology *as it is lived* by people in everyday life' (Wiggins, 2017, p. 4). Whereas in cognitive psychology it is assumed that language and talk are 'windows to the mind', through which psychological states and cognitions can be accessed, DP assumes that language and talk are always situated within a particular (interactional) context, a rhetorical framework, and a (temporal) sequence of interaction, and are thus not a direct representation of cognitions (Wiggins, 2017; Potter & Hepburn, 2005).

To clarify how the psychological construct 'food preference' can be enacted and made relevant in interaction and implications thereof for social practices, I provide an example below. This example shows how people can *use* and *treat* food preference in everyday interaction to accomplish a social action. This transcript (in Dutch, with English translation) is extracted from a real-life interaction between a mother, Mum, and her six-year-old daughter Leila during one of their evening meals. Leila is struggling to eat her peas. Subsequently, the following interaction occurs (Van der Heijden, Te Molder, Huma, & Jager, 2022, p. 9).

1.	LEI:	Mam:a?
		Mumm:y?
2.	MUM:	J:a?
		Y:es?
3.	LEI:	*[((points at peas))*
4.	LEI:	[ºIk lus et nietº
		[º**I don't like it**º
5.	MUM:	Hmm, (.) maar=dan >ga je wel proeven<
		Hmm, (.) but=then >you will still taste<

Leila makes her food preference relevant in the interaction by producing a dislike of the peas, 'I don't like it'. The analytical focus here is not to try to understand the psychological states of either Leila or Mum, i.e., to know what Leila or Mum are thinking at this point (which would be impossible based solely on this conversation), but rather to analyse the *social action* that is accomplished by making food preference relevant in the interaction, i.e., producing a dislike of

the peas, as it is *understood and treated by the interactants*. Mum's response, which is a directive to Leila to taste the peas (in line 5), displays that the social action accomplished by Leila, as it is understood and treated by Mum, is *refusing*, and even more specifically, *refusal of the peas*.

1.6 Recruitment study population and data collection

Recruiting populations with a low SEP for research poses a serious challenge. Conventional recruitment methods including, e.g., paper or social media advertisements, or mass e-mailing potential research participants, do not work well with this target group (Stuber et al., 2020). Such methods require potential participants to contact researchers themselves in order to participate, and hardly yield any responses – if any at all. Alternative, active recruitment strategies, such as using an existing network and deploying a personal approach, are required to increase the likelihood of successfully recruiting the target group (Stuber et al., 2020). In addition, researchers frequently encounter mistrust or scepticism towards the researcher and the research itself, prioritization of other challenges in life over participating in research, embarrassment of personal circumstances, anxiety about being 'judged' on the answers filled in in on a questionnaire, or a lack of interest – all reasons to decline participation. Furthermore, low literacy and/or troubles travelling to research locations (due to, e.g., a lack of time and/or money) can pose practical problems to participate (Stuber et al., 2020). Successfully recruiting populations with a low SEP for research therefore requires a careful strategy, perseverance and time from researchers.

For the research reported in this thesis, participants with a low SEP were recruited at multiple food banks throughout the Netherlands. Between June and December 2018, I volunteered at several food banks in the Netherlands. This allowed me to get in touch with families with a low SEP. On these occasions, I could personally explain the research to them and invite them to participate.

For the study on associations between (non-)healthiness, (not) tastiness and (dis) liking of foods, I was able to recruit 44 parent-child dyads, of which 37 were included in the analysis. I made a personal appointment with each dyad to visit them in their home, where both the child and the parent could complete the various computer-based IATs and paper-and-pencil questionnaires.

For the study on child-parent interactions during mealtimes, I invited all families from the first study by telephone. Nine families agreed to participate. One additional family was recruited via snowballing. I made an appointment with each of these families to deliver video recording materials to their homes and to provide an explanation of how the mealtimes could be best recorded (for example how to place the cameras, so that all family members' faces can be seen). Each family received two cameras and various stands on loan. The families and I would discuss on the spot which type of stands were most suitable for their home situation. Recordings were made by the families between April 2019 and March 2020 (no researcher was present during the recording). This resulted in a total of 79 audio and video recorded evening mealtimes, with a total duration of 29 hours. Qualitative analyses following principles of discursive psychology and conversation analysis require a very precise, elaborate and time-consuming analysis in which many interactional details are included, such as pauses or silences, overlaps in talk, emphasis, and intonation, as these are highly relevant for how interactants understand each other and the accomplished social actions (Wiggins, 2017). The collected amount of data allows for identifying interactional patterns and making robust claims about them.

1.7 Thesis aim and outline

The aim of this thesis is to provide insight in what the meaning is of '(un) healthy' and (not) 'tasty', and what it means to 'like' or 'dislike' a food, in the everyday life of families with a low SEP. These insights can be deployed to realize health potential in families with a low SEP. For this purpose, I deploy a unique, multidisciplinary approach including multiple complementary theoretical approaches and research methods. This allows for the investigation of the subject from different perspectives, and for an exploration of what insights each approach and method can provide, and what they cannot. The combination of targeting families with a low SEP, largely underrepresented in current research, and mixed approaches and methods including the analysis of naturally occurring conversations, introduces the thesis as scientifically and societally relevant in times where unhealthy dietary habits and diet-related illnesses are rapidly increasing, socioeconomic dietary and health inequalities persist, and the health potential in populations with a low SEP is increasingly acknowledged (Hoenink et al., 2022; Broeders et al., 2018). In order to maximize the societal value and

impact of the research results, I aimed to write this thesis in such a way that it is valuable for a broad audience, including but not limited to, e.g., nutrition scientists, psychologists, communication scientists, and policy makers.

The order of chapters represents the chronological timeline of the research, and reflects my scientific journey. Each chapter builds on the previous. In chapter 2, I map implicit and explicit associations between (un)healthiness, (non) tastiness and (dis)liking of foods in primary school-aged children and parents from families with a low SEP. It is shown that on implicit level, children as well as parents associated healthy foods and tastiness more strongly with each other than healthy foods and not tasty. Various possible explanations are explored and much needed options for in-depth follow-up research are proposed. In chapter 3, I report a scoping review on healthy eating beliefs and the meaning of food in populations with a low SEP. The fragmented available literature on this subject was systematically reviewed, and various meanings that populations with a low SEP attributed to 'healthy' and 'good' eating are highlighted. Moreover, it is indicated how populations with a low SEP perceive limited control over what is eaten in light of experienced competing values. In chapter 4, I analyse child-parent interactions during everyday family meals. It is shown how primary school-aged children from families with a low SEP orient to food preference, i.e., produce likes and dislikes of foods, and how these likes and dislikes are understood and treated by their parents. In chapter 5, I analyse additional child-parent interactions during everyday family meals. In these analyses, it is shown how healthy eating is oriented to and interactionally constructed in families with a low SEP, by identifying interactional patterns regarding how, when, by whom and with what function claims about healthy eating are produced. In chapter 6, I provide a general discussion of the main research findings. Moreover, the recruitment of and data collection in families with a low SEP, as well as the various approaches and methods deployed throughout this thesis are elaborately reflected upon. Implications for theory and practice are discussed.

2

Healthy is (not) tasty?

Implicit and explicit associations between food healthiness and tastiness in primary school-aged children and parents with a lower socioeconomic position

Authors: Amy van der Heijden, Hedwig te Molder, Cees de Graaf, Gerry Jager

Published as: Van der Heijden, A., Te Molder, H., De Graaf, C., & Jager, G. (2020). Healthy is (not) tasty? Implicit and explicit associations between food healthiness and tastiness in primary school-aged children and parents with a lower socioeconomic position. *Food Quality and Preference, 84*, 103939. doi.org/10.1016/j.foodqual.2020.103939

Abstract

Many people implicitly (automatically) believe that unhealthy foods are tastier than healthy foods, even when they explicitly (deliberately) report that they don't. It is unclear whether this 'unhealthy=tasty intuition' is already present in childhood. Children from families with a lower socioeconomic position (SEP) consume poorer diets than children from families with a higher SEP. Paradoxically, populations with a lower SEP are underrepresented in research and least reached by lifestyle interventions. This study explored implicit and explicit associations between healthiness, tastiness and liking of foods in primary school-aged children and parents with a lower SEP.

These associations and an estimate of dietary intake were assessed with implicit association tests and paper-and-pencil questionnaires, developed and adapted specifically for this target group. Participants were recruited at Dutch food banks.

Results of 37 parent-child dyads indicated that children and parents implicitly associated healthy foods and tastiness more strongly with each other than healthy foods and not tasty (D = -0.19, p = .03 and D = -0.46, p < .001, respectively). Explicitly, parents showed similar results, while children rated pictures of unhealthy foods as tastier than pictures of healthy foods.

Following the discrepancy between our hypotheses, results, and more unhealthy eating habits that often prevail in families with a lower SEP, potential explanations are discussed. We address the possibility that an internalised social norm was exposed, rather than an intrinsic belief. We propose that this research calls for in-depth qualitative research on food-related preferences and norms in the everyday life of low SEP families.

2.1 Introduction

2.1.1 Background

The present study investigated implicit and explicit associations between food healthiness, tastiness and liking, as held by primary school-aged children and parents with a lower socioeconomic position (SEP).

In the Netherlands, diet quality is suboptimal in primary school-aged children (e.g., Van der Velde et al. (2019)). This is also the case in other high income countries (WHO, 2016). This is problematic, because food choices and preferences developed in early childhood greatly affect food preferences and eating practices later in life (Anzman-Frasca & Ehrenberg, 2018; Issanchou, 2017; Skinner, Carruth, Bounds, Ziegler, & Reidy, 2002; Skinner, Carruth, Bounds, & Ziegler, 2002).

Children of families with a low socioeconomic position (SEP) consume even poorer diets than children of families with a higher SEP (Mech, Hooley, Skouteris, & Williams, 2016; Van der Velde et al., 2019; Zarnowiecki, Dollman, & Parletta, 2014; Zarnowiecki, Parletta, & Dollman, 2014). Socioeconomic disparities in dietary patterns can be attributed to various factors, including economic access (Monsivais, McLain, & Drewnowski, 2010), knowledge and attitudes towards nutrition (Ball, Crawford, & Mishra, 2006), and food motivation and liking (Pechey, Monsivais, Ng, & Marteau, 2015; Vainik, Dagher, Dubé, & Fellows, 2013). Interventions aimed at a general audience are often less effective in lower SEP groups than in higher SEP groups; the lower SEP groups are least reached (Beauchamp, Backholder, Magliano, & Peeters, 2014; Bukman et al., 2014; Waters, Galichet, Owen, & Eakin, 2011). One of the reasons why interventions aiming to improve dietary patterns fail to truly engage low SEP groups to change their eating behaviours, could be that interventions are based on a normative idea of what it means to eat 'well, tasty, and healthy', which does not necessarily correspond to the perceptions and experiences of low SEP individuals or families. SEP plays a moderating role in beliefs and attitudes and learned associations between which foods are healthy or not, tasty or not, and liked or disliked (Baumann, Szabo, & Johnston, 2017; Inglis & Crawford, 2005; Van Otterloo & Ogtrop, 1989). A study by Pechey et al. (2015) for example showed that participants with a lower SEP liked fruit less at the implicit (automatic) level, while no difference in fruit liking was found between lower and higher SEP participants at the explicit (controlled, deliberately thought trough) level. A qualitative study using in-depth

interviews found that mothers across different SEP groups had different definitions for 'healthy eating', although they agreed that fruits and vegetables are healthy, in contrast to soda drinks and fast food (Fielding-Singh & Wang, 2017). Exploring from a sociological perspective, other qualitative studies interviewed mothers about their view on a 'good' or 'proper' meal (Charles & Kerr, 1988; Hupkens, Knibbe, Van Otterloo, & Drop, 2000; Van Otterloo & Ogtrop, 1989). It was found that mothers sometimes experience conflicts between providing a proper, healthy meal, although children may dislike these foods, and having the family dinner in a pleasant atmosphere, since it is a moment where family ties are strengthened. It turned out that mothers with a middle and higher SEP were more strict in such situations about what should and should not be eaten than mothers with a lower SEP (Charles & Kerr, 1988; Hupkens et al., 2000; Van Otterloo & Ogtrop, 1989).

2.1.2 The Unhealthy = Tasty Intuition

Raghunathan, Naylor, and Hoyer (2006) showed that in American adults, an Unhealthy = Tasty Intuition (UTI) exists. This intuition represents people's view that healthiness and tastiness are inversely related to each other. It means that people implicitly believe that unhealthy foods are tastier than healthy foods. This implicit belief was found even in people who explicitly reported they did not agree with it (Raghunathan et al., 2006).

Other studies about perceived healthiness and tastiness of foods, although not specifically investigating the UTI, found results that are in line with the UTI, for example Vadiveloo, Morwitz, and Chandon (2013), Burton and Kees (2012), and Finkelstein and Fishbach (2010). For example, in a study about food evaluations participants evaluated foods with nutrient-content claims as healthier than foods with taste claims, regardless of product type. In addition, participants evaluated advertisements with nutrient-content claims better for foods they perceived as healthy, while advertisements with taste claims were evaluated better for foods that participants perceived as unhealthy, since these combinations were thought to match better than the opposite possibilities (Choi, Paek, & Whitehill King, 2012).

There is, however, also evidence contradicting the UTI (Irmak, Vallen, & Robinson, 2011; Werle, Trendel, & Ardito, 2013). Werle et al. (2013) conducted a study in France and found a healthy = tasty intuition; French participants associated

healthy foods relatively stronger with tasty, and unhealthy foods with not tasty. The authors suggested that the found difference between the American and French study could be attributed to intercultural differences in food perceptions. In the USA, a utilitarian view of food consumption is common; food is a biological need, but food is also is a source of worry, and people have a more negative view of foods in general. In France, on the other hand, an experiential view of food consumption prevails, and there is a focus on pleasure, social interaction, culinary issues and quality (Werle et al., 2013). Following the inconsistencies in UTI evidence, it seems that people's belief in the UTI depends on various factors, of which differences in (eating) cultures or social differences regarding nutrition or eating goals are components. However, *how* such differences in food perceptions exactly relate to the UTI, what the underlying mechanisms are for associating (un)healthy foods with tastiness or not tasty, is still unclear.

It is clear, though, that an unhealthy = tasty intuition contributes to unhealthy food choices (Hoppert, Mai, Zahn, Hoffmann, & Rohm, 2012; Mai & Hoffman, 2015), which warrants further investigation of the UTI phenomenon. It is also likely that social disparities such as SEP shape the explicit and implicit associations between the healthiness and the tastiness of foods, given that diets of people with a lower SEP are often unhealthier than diets of people with a higher SEP. For example, people with a lower SEP consume less fibres, vegetables and fruits and more energy-dense foods (Appelhans et al., 2012; Giskes, Avendaño, Brug, & Kunst, 2010; Konttinen, Sarlio-Lähteenkorva, Silventoinen, Männistö, & Haukkala, 2013; Pechey et al., 2013). To date, research that focused specifically on investigating the UTI, has only been done in higher SEP adult participants (Raghunathan et al., 2006; Werle et al., 2013). Therefore, it is important to investigate these associations in groups with low SEP, instead of inferring them from studies in groups with middle or higher SEP. A belief that unhealthy foods are tastier than healthy foods, may be a concept to target in future interventions aiming to improve diet quality in this group. It is especially relevant to study children from families with low SEP, as they are the ones that could benefit most from improved dietary habits.

Because in general, parents are the ones who raise their children, it seems possible that parents transfer their own associations to their children. If so, future interventions should consider a holistic approach that includes parents as well

as children. To date, little is known about the correlation between children's and parents' associations regarding healthiness and tastiness of food. Loehlin (2005), who studied correlations between children's and parents' attitudes toward multiple topics, reported on average small correlations, but with substantial variability depending on the (sensitivity of the) topic.

Previous research on the relation between implicit and explicit measures showed that the correlation between these two is usually small to moderate, and depends on various factors such as the spontaneity of explicit self-reports and the conceptual correspondence between the implicit and explicit measures (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). However, it is unknown how implicit and explicit measures of specifically low SEP participants correlate.

2.1.3 Aims and hypotheses

The aim of the current study was to investigate implicit and explicit associations between healthiness, tastiness and liking of foods in low SEP primary school-aged children and their parents. In addition, the relation between implicit and explicit measures was investigated, and the extent to which implicit and explicit associations of parents and children correlated. The study included 37 parent-child dyads who performed two implicit association tests (IATs) and filled out paper-and-pencil questionnaires about food healthiness, tastiness and liking, and about dietary habits. It was hypothesized that, in line with the UTI, children and parents would associate unhealthy foods and tasty more strongly with each other than healthy foods and tasty. In addition, a small correlation between scores on implicit and explicit measures was expected (cf. findings of Hofmann et al. (2005)). The magnitude of correlations between children's and parents' associations is difficult to predict, because this depends on multiple variables such as the topic of the association.

2.2 Materials and methods

2.2.1 Design and procedure

The study had a cross-sectional design. Parents and children completed two computer-based implicit association tests (IATs) (Greenwald, McGhee, & Schwartz, 1998). After completing the IATs, participants completed paper-and-pencil questionnaires measuring explicit belief in the UTI. Parents also filled out questionnaires about their own and their child's demographics and their dietary habits. Parents and children were tested individually, but the parent could stay in the room with the child if desired. The researcher was present in the room to provide explanation about the tasks if necessary. This study was approved by the Medical Ethical Review Board of Wageningen University & Research, the Netherlands (METC-WU, file number NL64893.081.18).

2.2.2 Participants

44 Parent-child dyads were recruited via multiple food banks and a charity organization in the Netherlands, both from urban and rural areas. One of the researchers (AvdH) volunteered to help at several community food banks, which enabled her to personally contact and speak with potential participants about the study. In addition, personal letters were sent from the charity organization, to inform potential participants about the study. Participants could then contact the researchers if interested. Parents were eligible for inclusion if they had at least one child of primary school age (5 − 12 years) and had a low SEP. Children were eligible for inclusion if they were between 5 − 12 years of age. Low SEP was defined as having low or medium education and a low income. Education level and income are commonly used indicators for SEP (e.g. Bere, Van Lenthe, Klepp, & Brug, 2008). The definitions of Statistics Netherlands were used to define low or medium education and low income (CBS, n.d.-a, n.d.-b). As income could be a sensitive topic to low SEP participants, the researchers chose not to ask participants directly about their income but to recruit via channels implicating that participants' income was low. To illustrate, families recruited via the charity organization in Rotterdam lived in low SEP neighbourhoods. In addition, people who attend the food bank need to be up or under the national minimum income limit to be allowed to visit the food bank. To avoid stigmatization, level of education was not assessed immediately at the first encounter at the food bank, but at a later stage, simultaneously with data collection. As a result, it could only be established whether participants met the low education-criterion after data collection. Seven parents indicated that they attended higher education. Because these parent-child dyads did not belong to the target group, they were not included in any analyses. 37 Parent-child dyads were included in the analysis. Some participants did not complete all the tasks due to fatigue. Therefore, for each measure the exact number of analysed participants is indicated.

To maximize willingness to participate in the study and to minimize drop-out, data collection took place at participants' homes, where the researchers visited them. Parents received a gift voucher for their participation and children were given a small present Participants provided written informed consent for their participation in the study (informed consent for the children was provided by their parents).

2.2.3 Measures

Implicit measures

To measure implicit associations between healthiness and tastiness of foods, participants completed an Implicit Association Test (IAT) (Greenwald et al., 1998; Greenwald, Nosek, & Banaji, 2003). This tool has also been used in earlier studies examining the UTI (Raghunathan et al., 2006; Werle et al., 2013). The IAT is a classification task where participants sort attribute stimuli ('tasty' versus 'not tasty' symbols) and target stimuli (images of 'healthy foods' versus 'unhealthy foods') into the correct categories as fast as possible, by pressing keyboard response keys. These response keys correspond to combinations of target and attribute categories. The IAT measures reaction times to stimuli in different target and attribute category combinations, thereby indicating relative strength of association between target and attribute concepts. If participants respond faster in one combination of target and attribute categories than in the other, it is assumed that their implicit association between those concepts is stronger than their implicit association between the concepts in the condition where they responded slower (measured in ms). Such shown bias is called the IAT effect and is expressed in the IAT-D score as a measure of effect size (Greenwald et al., 1998; Greenwald et al., 2003). For additional in-depth explanation of the functioning of and reasoning behind the IAT, see for example Lane, Banaji, Nosek, & Greenwald (2007) and Nosek, Greenwald, & Banaji (2007).

The same IAT was used for parents as well as for children, and was adapted to fit the cognitive skills and attention span of children and to overcome possible functional illiteracy in both children and parents. Based on existing IATs designed specifically for primary school-aged children (Babcock, MaloneBeach, Hannighofer, & Woodworth-Hou, 2016; Baron & Banaji, 2006; Cheetham, Turner-Cobb, & Gamble, 2016; Cvencek, Greenwald, & Meltzoff, 2011; Rutland, Cameron, Milne, & McGeorge, 2005), the number of trials in each block was limited

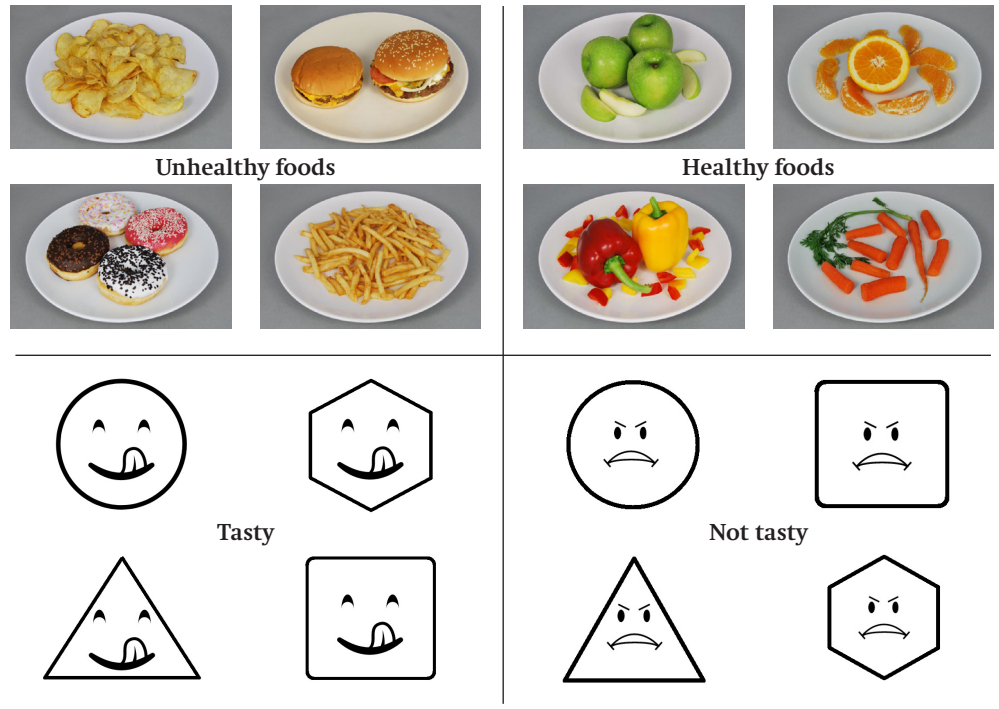

Figure 1 | Stimuli used in the Healthy-Unhealthy IAT.

Note: Standardized food images were provided by Charbonnier, van der Laan, Viergever, and Smeets (2016), who validated the images for perceived caloric content, perceived healthiness and liking among adults and children in the Dutch context. Smiley faces depicting tasty and not tasty had different shapes, following Rutland et al. (2005).

to 32 trials in the critical blocks and 16 in the practice blocks. In addition, color-coded response keys, visual reminders for each target and attribute concept, and images depicting tastiness instead of words describing tastiness were used, and the amount of stimuli per category was limited to four. Existing IATs were not designed specifically for low SEP participants. It cannot be assumed that traditional (child-)IATs are capable of demonstrating a significant IAT effect in this group. Therefore, participants also performed a base measurement, following Baron and Banaji (2006). The base measurement is an IAT with non-social categories of which the expected effect is known, to confirm the functioning of the IAT. Following the logic of Baron and Banaji (2006), if the expected effect is found in the base measurement, but no effect is found in the healthy-unhealthy IAT, this can more confidently be interpreted as a genuine lack of an effect in the healthy-unhealthy IAT, rather than an inability of the latter to demonstrate

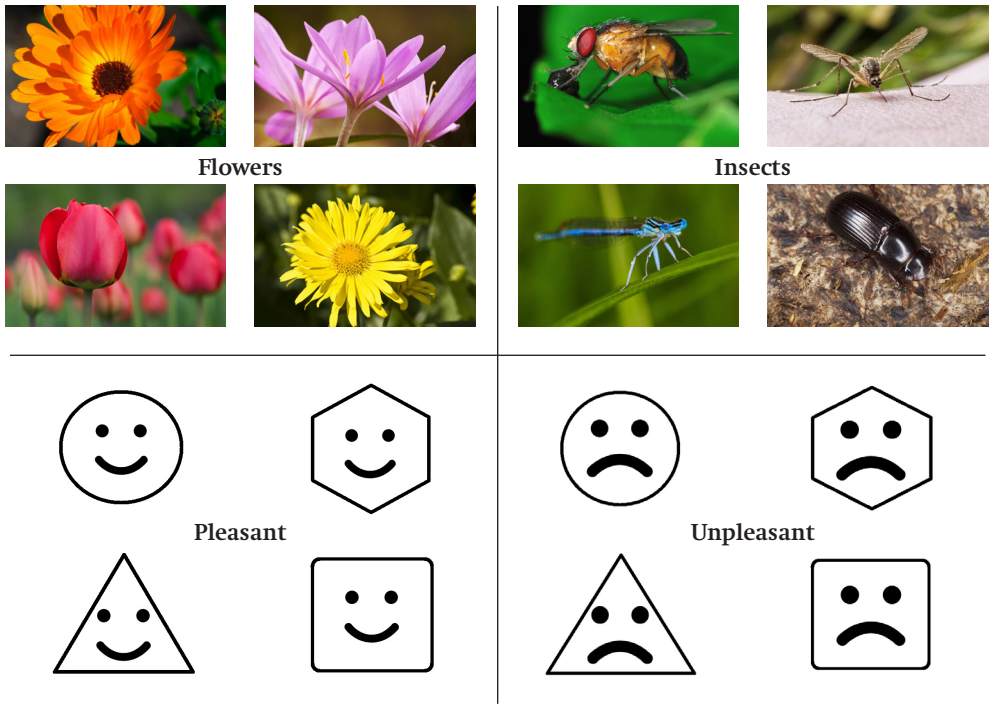

Figure 2 | **Stimuli used in the Flower-Insect IAT.**

Note: Pictures were adapted from the image database of Wageningen University & Research.

an effect. The flower-insect IAT designed by Greenwald et al. (1998) was used as base measurement in this study. It is known that flowers usually elicit more positive attitudes than insects (Baron & Banaji, 2006; Greenwald et al., 1998). See Figure 1 and 2 for used stimuli in the IATs. Both IATs were pilot tested among two seven-year-old girls (personal contacts of the researcher) on clarity and comprehensibility.

Explicit measures

Parents and children performed three paper-and-pencil tasks to assess explicit associations between (un)healthiness and (un)tastiness of foods. All tasks were provided in Dutch. First, for each of the healthy and unhealthy food pictures used in the healthy-unhealthy IAT, participants were asked to rate how tasty they thought these foods would be, and how much they liked to eat this food. Both questions were answered on five-point scales. Answer options varied from 'not tasty at all' (scored as 1) to 'very tasty' (scored as 5) and from 'do not like to eat this food at all' (scored as 1) to 'like to eat this food very much' (scored as 5).

Answer options were accompanied by smiley faces that depicted not tasty at all to very tasty, or by thumbs down or thumbs up. Answer scales for children are often expressed in smiley faces, to make the answer options more clear (Divert et al., 2017; Guinard, 2001; Vereecken, Covents, Parmentier, & Maes, 2012).

Second, to assess explicit belief in the UTI, we used two items developed for this purpose by Raghunathan et al. (2006, pp. 173-174): 'Things that are good for me rarely taste good' and 'There is no way to make food healthier without sacrificing taste'. The statements were translated to Dutch, keeping the translation as close to the original statements as possible, and were answered on a 5-point scale following Werle et al. (2013). The answer options varied from 'not true at all' (scored as 1) to 'completely true' (scored as 5).

In addition, three feeling thermometers (Figure 3) measured how 'cold' (negative) or 'warm' (positive) participants felt towards healthy foods, tasty foods and foods they liked, on a 100-point scale. Feeling thermometers are commonly used measures for explicit attitudes (Greenwald et al., 2003; Nosek, Banaji, & Greenwald, 2002).

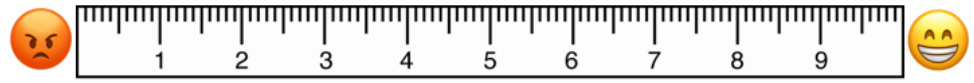

Figure 3 | **Feeling thermometer.**

Dietary habits questionnaire

To explore if participants' implicit and explicit associations between healthy and tasty food were reflected in their actual dietary habits, parents were asked to fill out a short questionnaire about their children's dietary intake. The questionnaire, developed by Hooft van Huysduynen et al. (2014), was adapted from the Dutch Healthy Diet – Food Frequency Questionnaire (Van Lee et al., 2016), which measures adherence to Dutch guidelines for healthy nutrition (Netherlands Nutrition Center, 2011). The questionnaire provides an indication whether the children adhered to Dutch guidelines regarding intake of fruits, vegetables, whole grains, fish, dairy, sugary drinks, snacks (such as biscuits and crisps), and salt. A question about fruit intake was, for example, 'How many days a week does your child eat fruit?' (answer options varied from 'hardly ever' to 'every

day') and 'On the days that your child eats fruit, how many portions a day?' (answer options varied from 'a half portion a day, for example one mandarin or half an apple' to 'three or more portions a day'). Regarding the parents' own diets only fruit and vegetable intake was assessed.

Statistical analyses

IAT-D scores were calculated following the improved scoring algorithm by Greenwald et al. (2003). In addition, Cohen's *d* (Cohen, 1988) was calculated as measure of effect size in each IAT, by dividing the difference between the mean response latency in the congruent and incongruent blocks by the pooled standard deviation of these blocks. IAT effects were tested for significance using one-sample t-tests.

In the food pictures rating task, the tastiness and liking scores (median) for the unhealthy and healthy foods were compared, using Wilcoxon signed-rank tests.

Following Werle et al. (2013), the two scores measuring explicit belief in the UTI were averaged. A one-sample Wilcoxon signed-rank test determined whether a deviation from the neutral point, indicating a bias, was significant.

Friedman's ANOVA determined whether the median of the three scores on the feeling thermometers significantly differed from each other. Follow-up tests (Wilcoxon pairwise comparisons) specified which differences were significant.

For the dietary habits questionnaire, the scoring method of the Dutch Healthy Diet index (DHD-index) was used to generate a score for each group of food products (van Lee et al., 2016; van Lee et al., 2012). This resulted in a score between 0 and 10 for each measured food group, where 0 is non-adherence to the intake guidelines of that food group and 10 is complete adherence. For children, the cut-off values were based on the cut-off values for 8-year-old children from the Generation R study (Van der Velde et al., 2019).

Correlation analysis, using Pearson's *r* and Spearman's rho (r_s), determined correlations between implicit and explicit measures, between children's and parents' scores, and between the healthy-unhealthy IAT-D score, belief in the UTI and the DHD-index scores of children and parents.

The threshold for statistical significance was $p \leq .05$, unless otherwise indicated. Mean and standard deviation are reported for parametric tests. For nonparametric tests the median is reported, as is common for this type of tests (Field, 2013).

2.3 Results

2.3.1 Participant characteristics

Table 1 shows the characteristics of participating parents and children.

Table 1 | Participant characteristics.

	Parents	Children
Mean age (years) (± SD)	37 (6.42)	9 (1.72)
Age range (years)	27 - 52	5 - 13
Gender (number) (percentage)	9 men (24.3%) 28 women (75.7%)	18 boys (48.6%) 19 girls (51.4%)
Country of birth (number) (percentage)	27 The Netherlands (73.0%) 2 Iraq (5.4%) 2 Morocco (5.4%) 1 Afghanistan (2.7%) 1 Belgium (2.7%) 1 Tunisia (2.7%) 1 Curacao (2.7%) 1 Poland (2.7%) 1 Syria (2.7%)	33 The Netherlands (89.2%) 2 Belgium (5.4%) 1 Iraq (2.7%) 1 United Arab Emirates (2.7%)
Level of education (number) (percentage)	22 Lower education (59.5%) 15 Medium education (40.5%)	37 In primary school (100%)

2.3.2 Implicit measures

Table 2 shows the response times and effect sizes of the IATs. A positive D score in the flower-insect IAT indicated a stronger association between flowers and positive, and insects and negative. A negative D score in the healthy-unhealthy IAT indicated a stronger association between healthy foods and tasty, and unhealthy foods and not tasty.

Table 2 | Summary of IAT results.

Subjects (n)	IAT	Congruent Target/ Attribute combination	Mean response time in ms (±SD)	Incongruent Target/ Attribute combination	Mean response time in ms (±SD)	Effect size (D)	p-value	Cohen's d
Parents (37)	Flowers-Insects	Flowers + positive Insects + negative	849 (346)	Flowers + negative Insects + positive	987 (370)	0.37	p<0.001	-0.36
Children (36)	Flowers-Insects	Flowers + positive Insects + negative	1044 (343)	Flowers + negative Insects + positive	1154 (419)	0.21	p=0.04	-0.16
Parents (36)	Healthy-Unhealthy	Unhealthy + tasty Healthy + not tasty	1059 (316)	Unhealthy + not tasty Healthy + tasty	836 (228)	-0.46	p<0.001	0.45
Children (33)	Healthy-Unhealthy	Unhealthy + tasty Healthy + not tasty	1181 (469)	Unhealthy + not tasty Healthy + tasty	1131 (635)	-0.19	p=0.03	0.17

2.3.3 Explicit measures

In figure 4 the results of the food pictures rating task are shown. Children gave significantly higher tastiness scores to the unhealthy food pictures than to the healthy food pictures, $T = 101$, $z = -2.887$, $p = .004$, $r = -.34$. Parents gave significantly higher tastiness scores than liking scores to unhealthy food pictures, $T = 87.5$, $z = -3.175$, $p = .001$, $r = -.37$. Children also gave significantly higher tastiness scores than liking scores to the unhealthy food pictures, $T = 77$, $z = -2.886$, $p = .004$, $r = -.34$. Both parents and children disagreed with the statements measuring explicit belief in the UTI, Mdn = 2.00, $T = 62$, $z = -3.953$, $p = .000$, and Mdn = 2.25, $T = 117$, $z = -2.197$, $p = .028$, respectively.

There was a significant difference between parents' three feeling thermometer scores, $c^2_F(2) = 16.243$, $p = .000$. Children's scores on the three feeling thermometers also significantly differed, $c^2_F(2) = 36.383$, $p = .000$. Figure 5 shows the results of the feeling thermometers and the follow-up tests (Wilcoxon pairwise comparisons).

2.3.4 Dietary habits questionnaire

Table 3 shows the mean and median intake, the cut-off values and the mean DHD-index scores of children and parents on the intake of fruits, vegetables, whole grains, fish, sugary drinks and snacks. For the other measured food

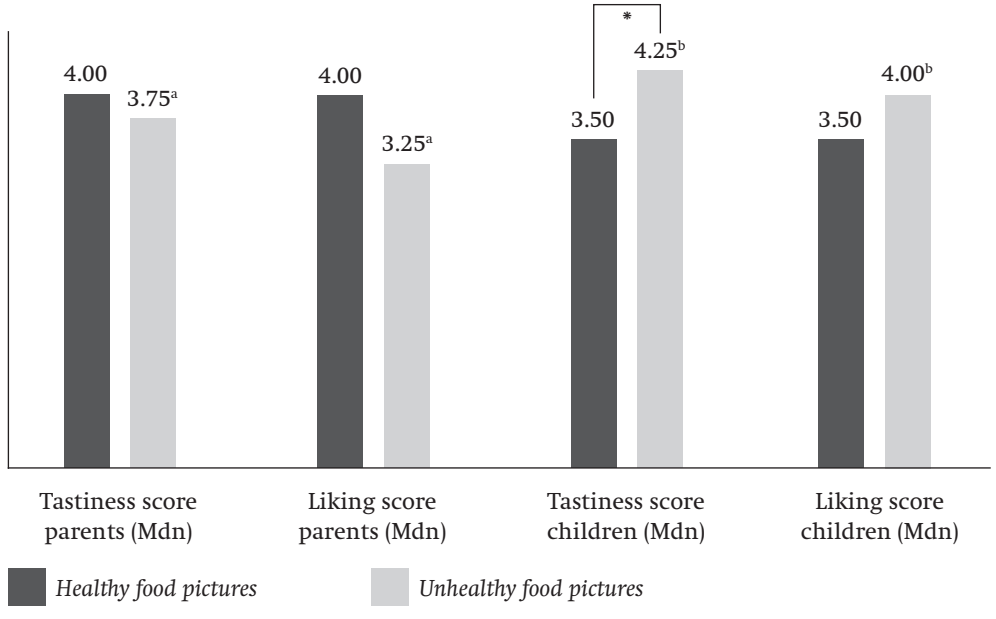

Figure 4 | Tastiness and liking scores of healthy and unhealthy food pictures.

Note: Significant difference in one category indicated with an asterisk, significant differences between categories indicated with a letter. Bonferroni correction was applied to correct for multiple tests on the same data, therefore the threshold for statistical significance in the food pictures rating task was p ≤ .0125.

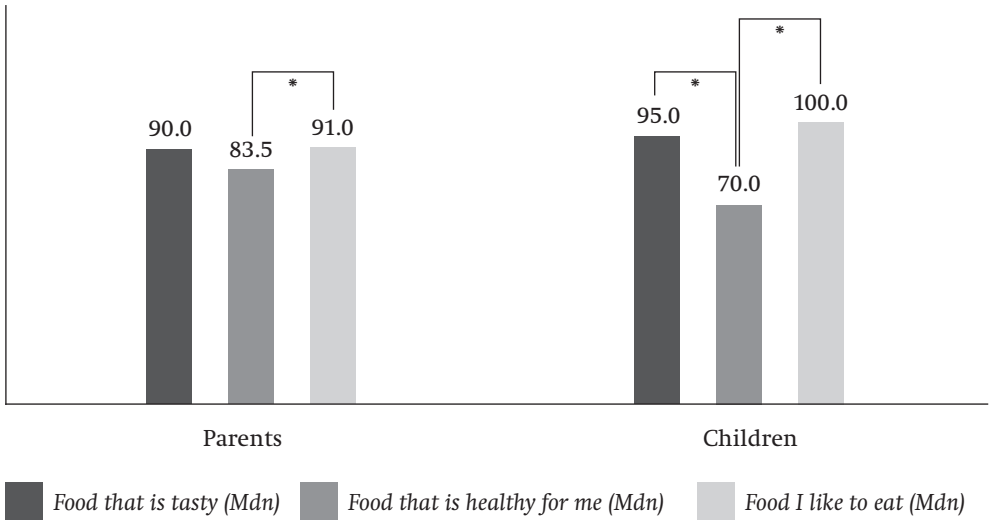

Figure 5 | Feeling thermometer scores.

Note: Significant differences indicated with an asterisk. Parents' score for 'food I like to eat' was significantly higher than the score for 'food that is healthy for me', T = -.681, p = .012, r = -.34. Children scored 'food that is tasty' significantly higher than 'food that is healthy for me', T = -.946, p = .000, r = -.47. Children scored 'food I like to eat' also significantly higher than 'food that is healthy for me', T = -1.162, p = .000, r = -.58.

groups and dietary behaviours (dairy, salt, the number of days children eat breakfast and the number of days children consume three main meals a day) data was insufficient (missing data and/or insufficient information on intake) and is therefore not included in the analysis. For parents, only fruit and vegetable intake were assessed.

2.3.5 Correlations between children's and parents' scores, and between implicit and explicit measures and dietary habits

At the implicit level, a significant correlation was found between children's and parents' scores in the healthy-unhealthy IAT, r = .398, 95% BCa CI [.051, .701], p = .024. In the flower-insect IAT there was no significant correlation between children's and parents' scores, r = .217, 95% BCa CI [-.077, .516], p = .204.

At the explicit level, multiple significant correlations were found. Correlations between scores in the food pictures rating task are shown in Table 4. It is notable that the significant correlations in the food pictures rating task are between

tastiness and liking scores of either parents or children, but not between parents and children's scores. In addition, a significant correlation between children's and parents' scores was found in the questionnaire on explicit belief in the UTI, r_s = .368, 95% BCa CI [.006, .667], p = .027. When the scores of the three feeling thermometers were combined a significant correlation was found between children's and parents' scores, r_s = .368, 95% BCa CI [.185, .525], p = .000. However, zooming in on children's and parents' scores for each feeling thermometer separately (healthy foods, tasty foods, and foods that they like), the correlations were not significant.

No significant correlation was found between implicit and explicit measures for parents (r_s = .103, 95% BCa CI [-.252, .444], p = .550) nor children (r_s = .176, 95% BCa CI [-.164, .478], p = .327), which was investigated by correlating the D score of the healthy-unhealthy IAT with the mean score of the questionnaire measuring explicit belief in the UTI. In addition, after Bonferroni correction no significant correlations (p < .001) were found between the D-score of the healthy-unhealthy IAT (implicit measure), the mean explicit belief in the UTI score (explicit measure) and the DHD-index scores (dietary habits), for parents (Table 5) nor children (Table 6).

Table 3 | Mean and median intake, cut-off values and index scores of food groups.

	n children	Median intake children in grams	Mean intake children in grams (±SD)	Intake range children in grams	Cut-off value children	Index score children (±SD) [a]	n parents	Median intake parents in grams	Mean intake parents in grams (±SD)	Intake range parents in grams	Cut-off value parents	Index score parents (±SD) [a]
Fruits	36	101	128 (74)	0 - 294	>150 grams/day	7.0 (2.7)	36	67	92 (92)	0 - 353	200 grams/ day	4.1 (3.7)
Vegetables	36	92	87 (42)	0 - 161	>150 grams/day	5.7 (2.6)	34	92	104 (43)	38 - 214	200 grams/ day	5.2 (2.1)
Whole grains (bread)	34	105	86 (65)	0 - 210	>90 grams/ day	6.6 (4.5)						
Fish	37	26	49 (55)	0 - 210	>60 grams/ week	5.4 (4.3)						
Sugary drinks	37	400	421 (261)	0 - 800	<150 grams/day	1.7 (3.4)						
Snacks (savoury, biscuits, candy)	35	3	3 (3)[c]	0 - 11	<1 portion/ week	n.a.[b]						

Note: a: Index scores vary between 0 (no adherence) and 10 (complete adherence); b: For snacks, no index score is available; the total of snack choices per week is calculated. Cut-off values for children were based on Van der Velde et al. (2019), cut-off values for parents were based on van Lee et al. (2012); c: Snacks were measured in portions per week instead of grams.

Table 4 | Spearman's rho correlations in the food pictures rating task.

		1	2	3	4	5	6	7	8
1	Tastiness score unhealthy foods (parents)		.064	-.347	-.024	-.651*	-.104	.684*	-.030
2	Tastiness score unhealthy foods (children)	.064		-.042	-.380	-.056	-.147	.072	.689*
3	Tastiness score healthy foods (parents)	-.347	-.042		.114	.607*	.104	-.611*	-.246
4	Tastiness score healthy foods (children)	-.024	-.380	.114		.106	.573*	.112	-.557*
5	Liking score healthy foods (parents)	-.651*	-.056	.607*	.106		.172	-.530*	-.074
6	Liking score healthy foods (children)	-.104	-.147	.104	.573*	.172		-.068	-.093
7	Liking score unhealthy foods (parents)	.684*	.072	-.611*	.112	-.530*	-.068		-.029
8	Liking score unhealthy foods (children)	-.030	.689*	-.246	-.557*	-.074	-.093	-.029	

Note: After applying Bonferroni correction to correct for multiple tests, the threshold for statistical significance was p < .001. Significant correlations are indicated with an asterisk.

Table 6 | Spearman's rho correlations among children's healthy-unhealthy IAT D-score, mean explicit belief in the UTI score, and DHD-index scores.

		1	2	3	4	5	6	7	8
1	Healthy-Unhealthy IAT D-score		.123	-.116	.269	-.045	-.131	.118	.019
2	Mean explicit belief in UTI score	.123		.069	.074	-.088	-.270	.105	.030
3	Fruits DHD-index score	-.116	.069		.062	.086	.081	.253	.021
4	Vegetables DHD-index score	.269	.074	.062		.085	.066	*.395*	*-.474*
5	Whole grains (bread) DHD-index score	-.045	-.088	.086	.085		-.126	.105	*-.442*
6	Fish DHD-index score	-.131	-.270	.081	.066	-.126		.314	-.236
7	Sugary drinks DHD-index score	.118	.105	.253	*.395*	.105	.314		*-.439*
8	Snacks (savoury, biscuits, candy) DHD-index score	.019	.030	.021	*-.474*	*-.442*	-.236	*-.439*	

Note: After applying Bonferroni correction to correct for multiple tests, the threshold for statistical significance was p < .001. No significant correlations were found. For indicative purposes, correlations significant before Bonferroni correction (p < .05) are shown in italics.

Table 5 | Spearman's rho correlations among parents' healthy-unhealthy IAT D-score, mean explicit belief in the UTI score, and DHD-index scores.

		1	2	3	4
1	Healthy-Unhealthy IAT D-score		.121	-.197	.054
2	Mean explicit belief in UTI score	.121		-.205	-.118
3	Fruits DHD-index score	-.197	-.205		-.218
4	Vegetables DHD-index score	.054	-.118	-.218	

Note: After applying Bonferroni correction to correct for multiple tests, the threshold for statistical significance was p < .001. No significant correlations were found. Before Bonferroni correction also no significant correlations (p < .05) were found.

2.4 Discussion

2.4.1 Main findings

This study explored implicit and explicit associations between liking, healthiness and tastiness of foods in primary school-aged children and their parents with a low SEP. It was hypothesized that in line with the UTI (Raghunathan et al., 2006), children and parents would associate unhealthy foods and tastiness more strongly with each other than healthy foods and tastiness. In addition, a modest relationship was expected between implicit and explicit measures both for children and parents, and between associations held by children and their parents.

In contrast to our hypotheses, both children and parents implicitly associated healthy foods and tastiness, and unhealthy foods and not tasty, more strongly with each other than unhealthy foods and tastiness, and healthy foods and not tasty, indicating a 'healthy = tasty intuition'. No relationship was found between implicit and explicit measures. A relationship between children's and parents' associations was found for some measures, but not for others. Parents' and children's associations between healthiness and tastiness of food moderately corresponded at the implicit level, while at the explicit level a modest relationship was found in two of the three tasks. In the food pictures rating task multiple correlations were found. These were, however, not between parents and children but between tastiness and liking ratings of either parents or children.

The explicit measures provided mixed results. Parents and children indicated that they did not agree with the UTI, when asked specifically; they did not believe that unhealthy foods would be tastier than healthy foods. However, children rated pictures of unhealthy foods as tastier than pictures of healthy foods, which is in line with the UTI. Parents did not show a difference in tastiness or liking ratings between the healthy and unhealthy foods. On the feeling thermometers, children rated 'food that is tasty' and 'food I like to eat' higher than 'food that is healthy for me', which is in line with the UTI. Parents only rated 'food I like to eat' higher than 'food that is healthy for me'.

Taken together, children's explicit answers were mainly in line with the UTI, while their implicit scores suggested the opposite 'healthy = tasty intuition'. Parents' answers mainly indicated a healthy = tasty intuition at the implicit and partly at the explicit level. Given these findings and considering taste is an important predictor of food choice (Garcia-Bailo, Toguri, Eny, & El-Sohemy, 2009; Hasselbalch, Heitmann, Kyvik, & Sørensen, 2008; Hoppert et al., 2012), associating healthy foods with tasty would imply healthy eating habits as well. However, the results from the dietary habits questionnaire in this study and previous studies show that this is often not the case in low SEP families (Mech et al., 2016; Zarnowiecki, Dollman, et al., 2014). We assessed parents' and children's dietary habits to estimate whether measured associations were reflected in actual eating behaviour. The dietary habits questionnaire showed that children's and parents' intake of all measured food groups did not meet the dietary guidelines (Netherlands Nutrition Center, 2011; Van der Velde et al., 2019; Van Lee et al., 2012). Compared to the results of the national food consumption survey in the Netherlands (Van Rossum et al., 2016), parents in our study consumed less fruits and vegetables than the average Dutch adult from the food consumption survey. Notably, the reported vegetable intake of their children is higher than the mean and median intake reported in 4 to 8-year-old children in the food consumption survey (Van Rossum et al., 2016).

2.4.2 Interpretation

People generally prefer sweet, salty and umami tastes and fatty foods (Beauchamp & Mennella, 2011; Drewnowski & Greenwood, 1983). Given these innate preferences and consistent reports on less healthy dietary patterns in low SEP groups compared to higher SEP groups, it seems unlikely that the parents and their children in this study actually hold the intrinsic belief (conviction) that healthy foods are tastier than unhealthy foods. An alternative explanation might be that these associations reflect the changes in social norms on what it means to eat 'well'. Nowadays, health and healthy eating are an important topic of societal debate in the Netherlands. It is plausible that a social norm prevails, that implies that healthy food is better and more desirable (injunctive norm: what is typically approved in society (Reno, Cialdini, & Kallgren, 1993)). It seems plausible that this social norm is so thoroughly embedded in society and people internalised it on such a deep level, that it even shows in implicit, automatic responses such as in an IAT. A possibility is that the norm that healthy is better and people 'should' feel that way, became more embedded and internalised in people over time. For example, while some years ago the consumption of energy-dense foods such as fatty hamburgers and fries did not provoke a (negative) societal reaction, this may increasingly become the case in present and future years now that the prevalence and visibility of food-related conditions such as obesity and diabetes is increasing, with all its consequences. In other words, the social norm regarding what kind of food is 'good' may be shifting over the years. In turn, such developments may enhance different results in studies measuring associations and attitudes regarding foods.

Regarding the assessment of dietary habits, the reported fruit intake of the children in our study seems relatively high compared to the Dutch national food consumption survey (Van Rossum et al., 2016). Considering that in our study only 'fruit' is asked, while the national food consumption survey combines 'fruits, nuts and olives', we would expect a lower mean fruit intake in our study, since nuts and olives are not considered. Possible explanations are, first, that genuine answers were given and the reported intake is adequate. Alternatively, parents may report a truthful quantity when it comes to their own consumption, but overestimate their children's consumption of fruits and vegetables. Perhaps it is easier to remember one's own food intake, than the intake of one's child. Finally, although speculative, parents may have felt pressured to give socially acceptable answers (also discussed in paragraph 4.3.1). It is known that the intake of fruits and vegetables is usually over reported when assessing dietary intake; likely because intake of fruits and vegetables is generally considered as a healthy habit (Agudo, 2005). In light of this, parents may over report fruit and vegetable intake especially when it comes to their children, which may originate from a desire to be considered a 'good parent'.

2.4.3 Methodological considerations

Social acceptability

Several methodological considerations need to be taken into account, as they may provide additional alternative explanations for the findings. Social acceptability is likely to play a role in explicit self-report measures (Schwarz & Oyserman, 2001). Social acceptability may explain (part of) the difference between parents' and children's scores in the food pictures rating task. Perhaps parents provided answers that they deemed would be acceptable, or desirable, in terms of societal norms, while children gave more 'genuine' or 'spontaneous' opinions about each of the foods. With regard to Body Mass Index (BMI), it is also known that self-reported weight and height are often inaccurate and that BMI calculated from self-reported weight and height is lower than when directly measured (Flegal et al., 2019). This may be partly due to social acceptability as well. However, parents and children may perceive accurate measurement of weight and height by the researchers as stigmatizing. Therefore, BMI was not assessed in this study.

The IAT measures implicit, automatic associations and is resistant to providing 'fake' scores (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Therefore, it is unlikely that participants deliberately provided socially acceptable responses. However, at a subconscious level, IAT effects are malleable and affected by what is socially acceptable. An IAT effect can be larger or smaller depending on whether the test was taken in private or in public (Boysen, Vogel, & Madon, 2006). Notably, this occurs outside of participants' awareness. This may imply that the result of the healthy-unhealthy IAT was directed to the more socially acceptable 'healthy = tasty' association, since the researcher was present in the room with the participants, thereby creating a less 'private' situation.

The lack of correlation between implicit and explicit measures can also be (partly) due to social acceptability. Hofmann et al. (2005) reported that correlations between implicit and explicit measures increase with increasing spontaneity of self-reports and with increasing conceptual correspondence between measures. Eating behaviour can be a sensitive topic, since people generally know that healthy eating is promoted (Agudo, 2005) and what would thus be an 'acceptable' answer. Such sensitivity may enhance less spontaneous, and more socially acceptable answers.

Complexity of the IAT

It is known that the IAT outcome is influenced by particular stimuli that are used (Bluemke & Friese, 2006; Govan & Williams, 2004). Roefs et al. (2011) explain that one should consider whether IAT effects are expected based on the target and attribute categories, or based on the specific examples used as stimuli. Elaborating on this, there is a possibility that our healthy-unhealthy IAT did not measure tasty or not tasty, as intended, but rather a more positive or negative attitude towards healthy and unhealthy foods. Although the smiley faces used in our IAT were adapted to display tasty or not tasty, it cannot be excluded that participants interpreted these stimuli as positive or negative, or happy or not happy, rather than specifically tasty or not tasty. A possible difference in interpretation of the smiley faces between parents and children may have contributed to the difference in measured IAT effect between children and parents. Beyond this consideration, being positive about healthy foods could be both an intrinsic belief as well as a social norm. In addition, the target categories of the healthy-unhealthy IAT are complex and prone to ambiguity, due to mixed feelings, competing motives or fluctuations in food preferences (Olsen (1999). For example, in general a hamburger is considered unhealthy, but it may taste good, and it can contain lettuce and tomatoes, which are healthy. This kind of ambiguity may influence the outcomes and makes food-related IATs less straightforward than a flower-insect IAT.

Question wording

It is known that question wording, format and context can influence the given answers (Schwarz, 1999). In the feeling thermometers and in the questions about specific belief in the UTI, more general terms were used ('healthy food', 'tasty food') while in the food pictures rating task opinions are asked about pictures of specific foods. The latter may be more subject to personal taste, which

in turn is more prone to different opinions, than the other two. This may explain why correlations between parents and children were found in the feeling thermometers and the questions about specific belief in the UTI, but not in the food pictures rating task. In addition, some questions were formulated objectively, while others were formulated subjectively. For example, in the feeling thermometers participants were asked to score food that *is* tasty (more in general), while in the food pictures rating task, participants scored how tasty *they* thought a particular food was (specific, personal opinion). Such differences may influence how participants perceive the question, even unconsciously, and which answers are given.

2.4.4 Strengths, limitations, and implications for future research and practice

The current study included low SEP parents and children. This target group is difficult to reach and largely underrepresented in research. This study provides a unique preliminary insight into food associations in low SEP parents and children, and on the use of implicit measures in this target group. A potential limitation is that the magnitude of IAT effects is positively related to participants' age (Nosek, Greenwald, & Banaji, 2007). Effect sizes in our study were indeed smaller in children than in adults, which implies reduced power regarding the children's measures as compared to the parents' measures. Therefore, the results from the children should be interpreted with care. Due to the limited number of participants and subsequent limited statistical power, results from this study cannot be generalized. It was, however, practically unfeasible to recruit more parent-child dyads for this study, given the effort and time needed to contact this group and get them involved in research participation.

It is recommended that the study is replicated in larger samples, to ensure sufficient statistical power and gain more robust results. If low SEP parents and children associate healthy foods with tasty, this would be valuable information in designing interventions to improve diet quality in this target group. In addition, it is recommended that the study is replicated in populations with middle and high SEP, to compare associations between healthiness and tastiness of foods and accompanying methodological considerations across SEP populations. Replications are encouraged to take measures in order to counter any of the discussed methodological considerations. For example, response patterns and social acceptability could be measured in the questionnaires, to assess the extent to which the explicit measures are distorted. In addition to replication,

qualitative research could provide deeper understanding of associations between healthy foods and (not) tastiness. Research in which real, everyday life situations are observed, could open up this black box by providing in-depth insights in for example beliefs, norms, values, and (hidden) moralities of low SEP families with regard to what is (considered) healthy, tasty or not tasty, and why. A recent study showed that adolescents of both higher and lower SEP labeled healthy eating as morally superior, and that this belief was related to self-identification as a good, moral person (Fielding-Singh, 2019). This self-identification was especially present among higher SEP adolescents, while such self-identification was a challenge for lower SEP adolescents who shared the belief that healthy eating was morally superior, but experienced financial limitations (Fielding-Singh, 2019). Insights on social aspects of food-related beliefs, like this example, could shed more light on the meaning of the in the current study discovered association: is it a genuine association, or could it be a representation of something else, perhaps an internalized social norm, an expression of what is morally acceptable? This detailed information is useful for future interventions that intend to use insights on associations between healthy foods and (not) tastiness. It could provide more clarity on which concepts to target, such as specific values or motives regarding healthy and tasty food held by low SEP parents and children.

2.5 Conclusion

The findings of this research suggest that primary school-aged children and parents with a lower socioeconomic position associate healthy foods and tastiness more strongly with each other than that they associate healthy foods with not tasty, indicating a 'healthy = tasty intuition'. This was most obvious at the implicit level, and in contrast with the expected unhealthy = tasty intuition. Our study is not the first to show an opposite association. However, it is still unknown as to why this is, especially in a target group where often more unhealthy eating habits prevail. It is possible that low SEP parents and children genuinely associate healthy foods and tastiness with each other. Alternatively, people might orient to and confirm a social norm, that could have been so embodied over time to such an extent that it is now even expressed at the implicit level. One can pose the question whether the expression of a (changed) social norm would be a good development, or whether that means that it becomes more difficult to reach people's true intrinsic beliefs and potentially positively influence those beliefs. A normative explanation also gives reason for methodological considerations. Are the established tools the best tools to unravel genuine beliefs and food preferences in low SEP families, since it appears that it is much more complex than merely the measurement of 'facts' about what is healthy and what is tasty? We propose that this research poses an urgent invitation for in-depth qualitative studies on the mechanisms behind implicit and explicit food-related beliefs, preferences and habits in the everyday life of low SEP families.

Acknowledgements
The standardized food images used in the healthy-unhealthy IAT were provided by the Image Sciences Institute, UMC Utrecht, and created as part of the Full-4Health project (www.full4health.eu), funded by the European Union Seventh Framework Program (FP7/2007-2013) under grant agreement nr. 266408, and the I.Family project (http://www.ifamilystudy.eu), grant agreement nr. 266044. We acknowledge and thank food banks in the Netherlands who facilitated us in recruiting participants for the study, as well as the charity organization Big Brothers Big Sisters of Rotterdam. We would like to thank the dieticians of the department Human Nutrition and Health of Wageningen University and Research for assisting in the analysis of the dietary habits questionnaire.

Funding This work was supported by the Edema-Steernberg Foundation, Wageningen, The Netherlands. The funding source had no involvement in the study design, the collection, analysis and interpretation of data, in the writing of the report and in the decision to submit the article for publication.

3

Healthy eating beliefs and the meaning of food in populations with a low socioeconomic position

A scoping review

Authors: Amy van der Heijden, Hedwig te Molder, Gerry Jager, Bob C. Mulder

Published as: Van der Heijden, A., Te Molder, H., Jager, G., & Mulder, B. C. (2021). Healthy eating beliefs and the meaning of food in populations with a low socioeconomic position: A scoping review. *Appetite, 161*, 105135. doi.org/10.1016/j.appet.2021.105135

Abstract

Profound understanding of healthy eating beliefs in populations with a low socioeconomic position (SEP) can benefit attempts to improve diet quality in this population, but literature on this subject is fragmented. The purpose of this scoping review was to systematically map healthy eating beliefs and the meaning of food and eating in populations with a low SEP. Systematic search of electronic databases yielded 35 relevant publications that were included in a qualitative synthesis. Populations with a low SEP perceived healthy eating as important, although they expressed various meanings of 'healthy' and 'good' eating. Lack of time and money posed perceived barriers to healthy eating, as well as social influences, and desired identities that can be expressed by specific foods. Traditions were important influences on food and eating practices. Eating behavior was perceived as one's own responsibility and desirably within one's own control. Parents expressed the role of food to regulate children's (eating) behavior. In conclusion, perceived limited control over what is eaten due to various barriers as described by populations with a low SEP, may also be viewed as competing values. Deeper understanding of reasons and thoughts underlying healthy eating beliefs and what it means to eat 'well' is largely lacking in this domain. The findings call for an in-depth exploration of the origin and construction of beliefs regarding 'healthy' and 'good' eating in populations with a low SEP.

3.1 Introduction

The prevalence of overweight and obesity continues to increase, as does its associated disease burden (GBD 2015 Obesity Collaborators, 2017). It is well-documented that diet quality is patterned by socioeconomic position (SEP). Populations with a lower SEP usually consume poorer diets, displayed in e.g. lower intake of fruits, vegetables and fibres and higher intake of energy-dense foods, as compared to populations with a higher SEP (Giskes, Avendaño, Brug, & Kunst, 2010; Konttinen, Sarlio-Lähteenkorva, Silventoinen, Männistö, & Haukkala, 2013).

Lifestyle interventions may contribute to improving diet quality; however, populations with a low SEP are often less well reached by lifestyle interventions than populations with a higher SEP (Beauchamp, Backholder, Magliano, & Peeters, 2014). The complexity of the everyday lives of people with a low SEP can interfere with their engagement in lifestyle interventions and lifestyle change, and can pose a barrier to healthy eating (Bouwman, Te Molder, Koelen, & Van Woerkum, 2009; Bukman et al., 2014). For example, people with a low SEP encounter poverty, and physical and mental health problems more often than their higher SEP counterparts (Dalstra et al., 2005; Reiss, 2013).

In addition, healthy lifestyle perceptions of populations with a low SEP, e.g., what it means to them to eat healthily, may differ from the definition of a healthy lifestyle according to science (Bukman et al., 2014). For example, low-income women in the study of Dibsdall, Lambert, and Frewer (2002) perceived health as the extent to which a normal daily life could be continued, and in spite of not following the guidelines regarding fruit and vegetable intake, some women believed they were eating healthily and consumed enough fruits and vegetables because they ate them whenever they felt like doing so. A better understanding of beliefs and perceptions regarding healthy eating in populations with a low SEP is important for developing lifestyle interventions that better fit with their everyday life, potentially increasing interventions' effectiveness (Bukman et al., 2014).

Literature provides valuable information about beliefs and perceptions towards food and healthy eating in populations with a low SEP, and shows that these cannot simply be extrapolated from beliefs in populations with a higher SEP.

To illustrate, a recent study showed how parents with either a low or a high SEP attach meaning to providing food to children (Fielding-Singh, 2017). For parents with a lower SEP, food can function as a counteractant against other areas of scarcity (Fielding-Singh, 2017). Whereas limited financial resources restrict parents' options to provide material matters to their children, 'food can be an important exception: low-SES parents can often oblige adolescents' inexpensive food requests ... thereby emotionally satisfying adolescents and bolstering parents' own sense of worth as responsible caregivers' (Fielding-Singh, 2017, p. 425). In contrast, for parents with a high SEP, the symbolic value of food is in its meaning as a tool to teach adolescents restraint and delayed gratification. In a context of plenty, parents with a high SEP regularly reject children's calls for specific foods, because 'high-SES parents find a sense of worth as caregivers in curtailing adolescents' dietary wishes that parents deem unhealthy' and parents are 'cultivating adolescents' palettes for the 'right' foods and signaling to themselves and to others that they are transmitting the 'right' values' (ibid., p. 425).

However, literature is fragmented and a clear overview of how populations with a low SEP attach meaning to food and eating is lacking. The multidimensionality and complexity of what healthy eating means to populations with a low SEP may contribute to a fragmented body of literature on this subject. To illustrate, Stronks et al. (2018) explained that 'health' can be viewed as a multidimensional concept, with descriptive and evaluative components such as norms and values. Similar to 'health', 'healthy eating' can be approached as a multidimensional concept, and beliefs may exist in a descriptive dimension (e.g. materialistic factors: nutrients in a food), and an evaluative dimension including norms (normative beliefs such as to what extent, and under which circumstances, is it socially acceptable to eat e.g. deep-fried foods?), and values (e.g. how important is it to adhere to nutritional guidelines?), that can vary across populations with different SEPs. While some studies focus primarily on the descriptive dimension of healthy eating beliefs, e.g., Calnan (1986), others go beyond descriptives and focus on the evaluative dimension, paying more attention to how meaning is attached to food and eating, e.g. Teuscher et al. (2015).

A scoping review was conducted to systematically map healthy eating beliefs and unravel how meaning is attached to food and eating in populations with a low SEP. The scoping review included articles studying healthy eating beliefs in the descriptive as well as the evaluative dimension. Additionally, the scoping review allows for the identification of possible knowledge gaps in this area, and for clarification of how the concepts of eating- and food-related beliefs are defined and understood in current literature (Munn et al., 2018).

3.2 Methods

3.2.1 Protocol

The PRISMA extension for scoping reviews (PRISMA-ScR) (Tricco et al., 2018) was used to guide the search and selection process, and to structure the review.

3.2.2 Eligibility criteria

English peer-reviewed journal articles that met the following criteria were eligible for inclusion in the scoping review: a) primary focus on how people attach meaning to food (as product) and/or eating (as activity); b) study conducted in a population with a low SEP; c) in western context; d) primary analysis of empirical work.

Studies on specific patient populations were not included, since illness-related food beliefs were not considered representative for general food beliefs. Studies in non-western populations were not included, due to major differences in eating cultures and practices compared to western populations (e.g. Cunha, Cabral, Moura, & de Almeida, 2018). The focus of this review is primarily on eating as activity and/or food as product. Articles on food-related behaviors such as preparation, purchasing or child feeding styles were therefore not included.

3.2.3 Selection process, data charting and analysis

The databases Scopus, PubMed, MEDLINE, Web of Science, APA PsycInfo and SocINDEX were searched to identify potentially relevant sources of information. The search was conducted in February 2020. The search strategy was set up by analyzing terms used in relevant literature, discussion among the authors, and consultation of an experienced librarian. The search identified articles that held words related to 'socioeconomic' in the title, and additionally held words related to beliefs, meaning, food and eating in the abstract and/or keywords. The full search strategy for one of the databases (Scopus) can be viewed in Additional file 1. The search results of all databases were exported to EndNote X9 and duplicates were removed with guidance of an experienced librarian.

The titles and abstracts of the initial search results were screened on relevance and eligibility criteria by AH. Publications that potentially met the eligibility criteria were kept and the exclusions were checked by BM. Remaining publications were screened full text by AH and BM on eligibility. Any disagreements were solved by consensus. Publications that met the eligibility criteria were included in the scoping review.

AH and BM jointly developed a form to extract relevant data from the included publications, and independently charted the data. Data were extracted on publication characteristics (author(s), year, country, study aim, theoretical foundation, methodology, participant characteristics, results and conclusion) and on results that were relevant for the research question related to the scoping review (beliefs attached to food and eating, used concepts and descriptions, and assessment of SEP). The Critical Appraisal Skills Programme (CASP) qualitative checklist was used to provide an assessment of the quality of the included publications (Critical Appraisal Skills Programme, 2018), with the exception of two quantitative articles. The CASP checklist consists of ten items that can be answered with 'yes', 'no' or 'can't tell', where a higher number of questions answered with 'yes' indicates a higher quality of the study. The quality of included studies was assessed to evaluate the overall quality of literature on this subject, but did not influence the data synthesis. Results of the data extraction and critical appraisal were discussed and any discrepancies were solved through consensus.

Analysis of the results entailed an iterative process of identification and categorization of recurring themes in the literature that contribute to understanding how people with a low SEP attach meaning to food and eating and related beliefs that they hold. The results were synthesized and are presented in a thematic, narrative format.

3.3 Results

3.3.1 Selection of sources of evidence

The initial database search yielded 8767 publications, of which 3547 were left after duplicates were removed. Title and abstract screening led to the exclusion of 3483 records. The remaining 64 publications were reviewed full-text,

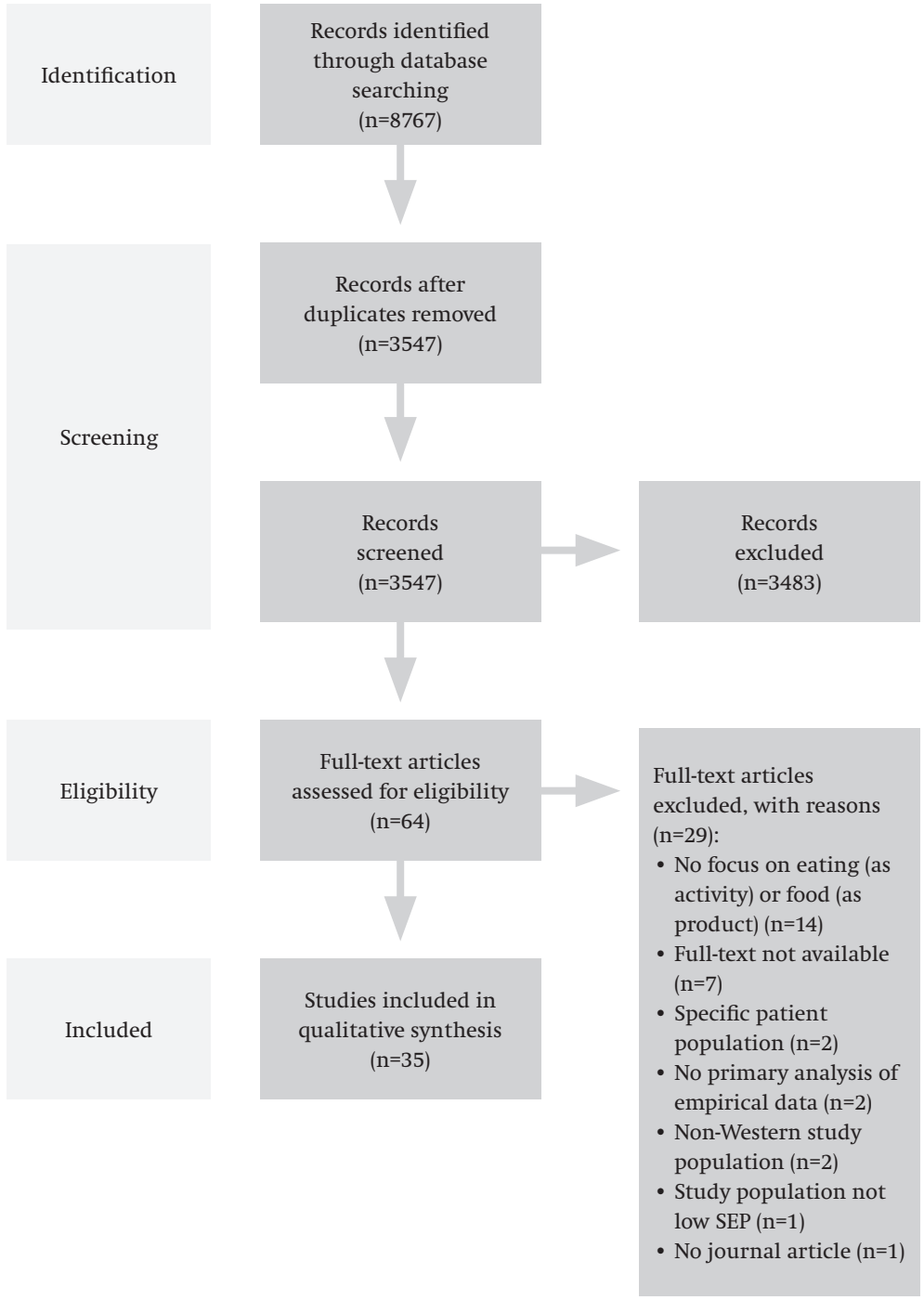

Figure 1 | Flow diagram of the study selection process.

resulting in 35 publications that were included in the scoping review. Figure 1 displays the PRISMA flow diagram (Moher, Liberati, Tetzlaff, Altman, & Group, 2009) of the study selection process.

3.3.2 Overview of included studies

Table 1 provides an overview of study characteristics and the results of the critical appraisal. Specific characteristics of each study are described in Additional file 2. Full references of all studies are included in the reference list.

The majority of studies was conducted in the USA (n = 16), various countries in Europe (n = 14), and Australia (n = 5). Most studies were published in the most recent ten years (n = 25), with fifteen studies published between 2016 – 2020 and ten studies between 2011 – 2015. Qualitative methodology was most frequently used (n = 32), of which interviews (n = 15) and focus groups (n = 9) were the most common. Parents and caregivers were the most frequently studied population (n = 11), followed by women (n = 7), a combination of parents and children or adolescents (n = 6), only adolescents (n = 5), general adults (n = 5), and only one study targeted men. It is notable that in the studies on parents and caregivers, and on parents in combination with children or adolescents, mothers were overrepresented compared to fathers. Low SEP was most often assessed by the SEP of the neighbourhood, community or area (n = 11) and by low income (n = 16), which was determined by whether participants received government support (n = 6), a combination of low income and education level (n = 5), solely assessing income (n = 4), and recruiting participants in low-income housing (n = 1).

For the majority of studies (n = 30) at least eight out of ten CASP items were answered with 'yes'. Considering this high and consistent quality, all studies were regarded as equally important for the data synthesis.

3.3.3 Synthesis of results

Synthesis of the results yielded seven major recurring themes in the literature: 1) notions of 'healthy' and 'good' eating; 2) time and monetary constraints to healthy eating and associations with behavior and moral value; 3) social influences on eating and food practices; 4) expressing identities through food and eating; 5) importance of upbringing and tradition in food and eating practices; 6) perceived responsibility for and desired control over eating behavior; 7) role of food in regulating children's (eating) behavior.

Table 1 | Study characteristics and critical appraisal results.

Characteristic		Number of studies (n=35)
Study location	USA	16
	Australia	5
	UK	4
	The Netherlands	4
	Canada	2
	The Netherlands, Belgium and Germany	1
	Eastern Scotland	1
	Greece	1
	Sweden	1
Year of publication	2016 – 2020	15
	2011 – 2015	10
	2006 – 2010	3
	2001 – 2005	5
	2000 or before	2
Methodology	Interviews	15
	Focus groups	9
	Participatory Action Research, interviews and co-creation sessions	3
	Interviews and ethnographic observation	1
	Focus groups, interviews and introspections	2
	Focus groups and questionnaire(s)	2
	Quantitative surveys	2
	Quantitative surveys, interviews and focus groups	1
Study population	Parents / caregivers	11
	• *of which were studies specifically on mothers*	*7*
	• *of which the majority of participants were mothers*	*4*
	Parents and children / adolescents	6
	• *of which were studies specifically on mothers*	*1*
	• *of which the majority of participants were mothers*	*4*
	Women	7
	• *of which were studies specifically on older women*	*1*
	• *of which were studies specifically on younger women*	*1*
	Adolescents	5
	• *of which were studies specifically on boys*	*1*
	• *of which were studies specifically on girls*	*1*
	Adults (both women and men)	5
	• *of which were studies specifically on older adults*	*1*
	Men	1

Characteristic		Number of studies (n=35)
Number of participants[a]	1 – 20	4
	21 – 40	13
	41 – 60	5
	61 – 80	3
	81 – 100	4
	101 – 260	4
	781 – 860	2
Assessment of SEP	Low neighborhood / community / area SEP	11
	Receiving government support (indicating low income / poverty)	6
	Low income + education level	5
	Low income	4
	Low neighborhood / community / area SEP + education level	3
	Education level	3
	Occupation + education level + receiving government support	1
	Occupation	1
	Low-income housing	1
CASP checklist, number of items answered with 'yes' (max. 10)[b]	Five items answered with 'yes'	1
	Six items answered with 'yes'	0
	Seven items answered with 'yes'	2
	Eight items answered with 'yes'	9
	Nine items answered with 'yes'	18
	Ten items answered with 'yes'	3

Note: a: Total number of individual participants, e.g. 30 parents and 30 children in a study is considered 60 participants; five focus groups of each five participants is considered 25 participants in total; b: This checklist was designed for qualitative research; therefore, two quantitative studies were not assessed and the total number of studies in this row is 33.

Notions of 'healthy' and 'good' eating

The importance of healthy eating was acknowledged by participants in the majority of studies, and participants perceived healthy eating as desirable (Backett-Milburn, Wills, Gregory, & Lawton, 2006; Baumann, Szabo, & Johnston, 2019; Boshoff, Dollman, & Magarey, 2007; Calnan, 1986; Dalma et al., 2016; Dibsdall et al., 2002; Dressler & Smith, 2013; Dye & Cason, 2005; Eikenberry & Smith, 2004; Engler-Stringer, 2010; Fielding-Singh, 2017, 2019; Fielding-Singh & Wang, 2017; Herman, Malhotra, Wright, Fisher, & Whitaker, 2012; Hupkens, Knibbe, &

Drop, 2000; Inglis & Crawford, 2005; Jung, Shin, Kim, Hermann, & Bice, 2017; Lucan, Barg, Karasz, Palmer, & Long, 2012a, 2012b; Porter, Shriver, & Ramsay, 2016; Stephens et al., 2018; Teuscher et al., 2015; Trofholz, Schulte, & Berge, 2018). Healthy foods were even considered morally superior as compared to unhealthy foods, in studies among adolescents (Fielding-Singh, 2019) and working age men (Stephens et al., 2018).

Studies showed, however, that there are various ways how participants interpreted what 'healthy' or 'good' eating means. Regarding (un)healthy food products, participants frequently described fruits and vegetables as healthful foods (Backett-Milburn et al., 2006; Boshoff et al., 2007; Calnan, 1986; Dibsdall et al., 2002; Dressler & Smith, 2013; Dye & Cason, 2005; Eikenberry & Smith, 2004; Engler-Stringer, 2010; Fielding-Singh, 2017, 2019; Fielding-Singh & Wang, 2017; Hardcastle & Blake, 2016; Jonsson, Larsson, Berg, Korp, & Lindgren, 2017; Lucan et al., 2012a, 2012b; O'Neill, Rebane, & Lester, 2004; Pescud, Pettigrew, & Henley, 2014; Porter et al., 2016; Trofholz et al., 2018). 'Fresh' and 'organic' foods were also regularly mentioned as healthy (Baumann et al., 2019; Calnan, 1986; Dibsdall et al., 2002; Fielding-Singh, 2017, 2019), as well as fresh meat and fish (Calnan, 1986; Eikenberry & Smith, 2004; Engler-Stringer, 2010; Fielding-Singh, 2017; Lucan et al., 2012a; O'Neill et al., 2004; Pescud et al., 2014; Porter et al., 2016). However, there was some ambiguity regarding the healthiness of red meat (Dibsdall et al., 2002; Lucan et al., 2012a). For example, some participants in a study among low-income African Americans believed that saturated fat was unhealthy, but that beef (red meat that contains a lot of saturated fat) was healthy (Lucan et al., 2012a). In addition, some types of meat were considered healthy while others were not, as displayed by mothers in the study of Porter et al. (2016), who described chicken as healthy and pork as unhealthy. Unhealthy foods were described by study participants as junk foods including chips, soda, candy and fast food (Fielding-Singh, 2017, 2019; Fielding-Singh & Wang, 2017; Hupkens et al., 2000; Jonsson et al., 2017; Pescud et al., 2014), fatty products (Dye & Cason, 2005; Lucan et al., 2012a; O'Neill et al., 2004; Porter et al., 2016), white bread, sweet sandwich fillings, dessert and sweet yoghurt drinks (Hupkens et al., 2000), large portions of meat (Lems, Hilverda, Broerse, & Dedding, 2019), and foods advertised on TV (Lucan et al., 2012a).

In terms of nutrients, foods high in vitamins, minerals, protein, and fiber, and foods low in fat, calories, cholesterol, sugar and salt were considered as healthy

(Calnan, 1986; Lucan et al., 2012a), while foods that were high in fat, sugar, salt, chemicals, preservatives and additives were considered unhealthy, as well as 'food processing', although it is not clearly defined to what kind of food processing participants refer (Dibsdall et al., 2002; Fielding-Singh, 2017; Hardcastle & Blake, 2016; Lucan et al., 2012a; Stephens et al., 2018).

Participants described a 'good diet' as consuming substantial, regular meals consisting of fresh foods (Calnan, 1986), traditional food (Dibsdall et al., 2002; Engler-Stringer, 2010) or a Mediterranean diet, which was also described by the Greek study participants as 'our diet' that passed on from generation to generation (Dalma et al., 2016). A 'good meal' should include meat, starch and a vegetable (Calnan, 1986; Lucan et al., 2012b; Porter et al., 2016), also described as 'balanced' (Calnan, 1986; Engler-Stringer, 2010). It should be home cooked and served at home (Backett-Milburn et al., 2006; Fielding-Singh, 2017; Porter et al., 2016). Participants described desirable dishes as huge and big, showing a preference for abundance in terms of quantity and variety (Baumann et al., 2019). 'Good food' should be filling and satisfying (Dye & Cason, 2005; Hardcastle & Blake, 2016; Lems et al., 2019; Lucan et al., 2012b; Stephens et al., 2018).

Children were considered as 'good eaters' by parents when they finished all the served foods without complaining, regardless of what was actually eaten (Backett-Milburn et al., 2006). 'Good eaters' were described as opposed to 'fussy eaters', where the evaluation of 'good' depended on the easiness with which the child could be catered, rather than the quality of the foods eaten (Backett-Milburn et al., 2006).

Thus, the importance of healthy eating was acknowledged by the majority of study participants and healthy eating was mainly expressed as consuming fresh fruits and vegetables, and – although accompanied by ambiguity and ambivalence – meat. However, along with notions of what is 'healthy' and 'unhealthy', there were additional meanings of what constitutes a 'good' meal or 'good' food, which may complement as well as oppose the perceived (un)healthiness of food.

Time and monetary constraints to healthy eating and associations with behavior and moral value

Although considered important, other life demands and responsibilities pose a barrier to healthy eating. These induce time constraints, perceived or real, with

the result that healthy eating is not a top concern (Bukman et al., 2014; Dalma et al., 2016; Dibsdall et al., 2002; Eikenberry & Smith, 2004; Fielding-Singh & Wang, 2017; Inglis & Crawford, 2005; O'Neill et al., 2004). Beside time, the (perceived or real) expensiveness of healthy foods while having a limited budget, is another frequent barrier to buy (more) of it (Backett-Milburn et al., 2006; Baumann et al., 2019; Bukman et al., 2014; Dalma et al., 2016; Dibsdall et al., 2002; Dressler & Smith, 2013; Eikenberry & Smith, 2004; Engler-Stringer, 2010; Fielding-Singh, 2017, 2019; Fielding-Singh & Wang, 2017; Hardcastle & Blake, 2016; Hupkens et al., 2000; Inglis & Crawford, 2005; Jung et al., 2017; Lucan et al., 2012b; Stephens et al., 2018).

Especially in relation to the costs, when making food choices on a limited budget, satisfying, 'filling' foods are preferred over nutritious foods that are perceived to be not satisfying (Dye & Cason, 2005; Hardcastle & Blake, 2016; Lems et al., 2019; Lucan et al., 2012b; Stephens et al., 2018). Preferring high-caloric, filling foods over less satisfying and more expensive nutritious foods thus poses a barrier to healthy eating.

Since healthy foods are considered morally superior, not being financially able to eat healthily may negatively impact people's sense of moral worth (Fielding-Singh, 2019). Some adolescents felt embarrassed about their families' diets and envied the diets of more financially privileged peers (Fielding-Singh, 2019). In a study among young low-income women, healthy foods were considered (too) expensive but eating unhealthily raised feelings of guilt because of the perceived inability to buy healthier options (Engler-Stringer, 2010).

In sum, the (perceived) ability to eat healthily is limited by time and cost constraints due to other demands and responsibilities. In this context, healthy eating is not a top priority. Within the budgetary space that is left, people prefer high-caloric filling foods to make sure to be satisfied, rather than nutritious foods that are perceived to be less satisfying. However, eating unhealthily may negatively impact people's sense of moral worth.

Social influences on eating and food practices

A variety of social influences on food and eating practices is discussed in the literature. First, many study participants perceived adhering to others' food likings and requests as important, and found it difficult to deny food requests (Dye

& Cason, 2005; Engler-Stringer, 2010; Fielding-Singh, 2017; Hardcastle & Blake, 2016; Herman et al., 2012; Hupkens et al., 2000; Inglis & Crawford, 2005; Teuscher et al., 2015). This was primarily the case in studies on parents, who wanted to adhere to children's food requests, but also among women who wanted to adhere to requests of, e.g., partners and relatives. Identity may play a role, e.g., wanting to be a good parent, partner, relative or friend by satisfying food requests (see paragraph 3.3.4). A study by Teuscher et al. (2015) among women of Dutch, Turkish and Moroccan origin in the Netherlands illustrated how feeling the need to indulge food requests limits perceived control over what is eaten. Study participants highlighted the importance of the family relationship and pleasing all family members' food likings was a way to cherish this relationship. This family well-being was considered more important than women's individual goals, such as healthy eating. So even when healthy eating is perceived as important, it may be subordinate to other, competing values such as cherishing relationships (Teuscher et al., 2015).

Social influence on eating and food practices was also displayed by studies showing the meaning of eating as a social event for bonding and building relationships, among family members as well as among friends, although eating together during family meals is sometimes prioritized secondary after other life demands and responsibilities (Blaine et al., 2016; Jarrett, Bahar, & Kersh, 2016; Lems et al., 2020; Malhotra et al., 2013; Teuscher et al., 2015). Thus, eating with others can enhance bonding, but feeling the need to adhere to family members' food likings and requests can pose a barrier to healthy eating, especially if those food requests entail unhealthy foods. However, eating alone can also be a barrier to healthy eating, especially with regard to cooking only for oneself (Dibsdall et al., 2002; Dye & Cason, 2005; Eikenberry & Smith, 2004; Engler-Stringer, 2010; Jung et al., 2017; Lucan et al., 2012b; O'Neill et al., 2004).

Expressing identities through food and eating

The literature also showed that food and eating play a role in expressing identities. The desire to be a 'good parent', was regularly expressed (Dalma et al., 2016; Eikenberry & Smith, 2004; Fielding-Singh, 2017; Herman et al., 2012; Lucan et al., 2012b; Pescud & Pettigrew, 2014; Porter et al., 2016; Stephens et al., 2018; Trofholz et al., 2018). For example, parents articulated that they wanted to be a good role model for children by promoting a healthy diet (e.g. Dalma et al. 2016), or that they wanted to do better than their own parents (Porter et al., 2016). Parents also used food as tool to show love and affection, which makes both parents and children feel good (Pescud & Pettigrew, 2014). For parents with a low SEP, indulging children's food requests was a way of compromising for (material) deprivation in other areas (Fielding-Singh, 2017; Pescud & Pettigrew, 2014; Pescud et al., 2014). This gave parents a sense of being a competent caregiver (Fielding-Singh, 2017).

Another expressed identity was being a good, moral person by eating healthily, while not being able to eat healthily due to, e.g., financial limitations, may have an opposite effect (see paragraph 3.3.2) (Fielding-Singh, 2019). Eating healthily was also – and more recently – believed to enhance masculinity, as articulated by men in the study of Stephens et al. (2018), although adolescent boys believed that eating meat and junk food boosted masculinity and independence, while eating healthy food could damage their identity (Lems et al., 2019). Women of various ages in a disadvantaged community in the UK considered healthy eating as something for 'other people'; thus, apparently not consistent with their own identity. They described those 'other people' as people with more time and people who were *not* mums with young children (O'Neill et al., 2004).

Depending on what identity is associated with which type of diet, and the desirability of that identity, identity can either enhance or hinder healthy eating, or both. For example, as a role model, a 'good parent' may provide healthy foods to children, but on the other hand, a 'good parent' may indulge children's (unhealthy) food requests.

Importance of upbringing and tradition in food and eating practices

Participants expressed the importance of upbringing, in the sense of traditions with which one was raised, as a substantial perceived influence on eating and food practices (Dalma et al., 2016; Dibsdall et al., 2002; Eikenberry & Smith, 2004; Engler-Stringer, 2010; Hardcastle & Blake, 2016; Inglis & Crawford, 2005; Jung et al., 2017; Lucan et al., 2012b; Malhotra et al., 2013). To illustrate, eating practices of low-income women were influenced by childhood experiences, such that they considered a healthful diet as a 'traditional fare, such as what their mother used to cook' and noted for example that 'my mother('s) teachings are more important than the government or the scientists, to me anyway' (Dibsdall et al., 2002, p. 303). Women interviewed by Inglis and Crawford (2005) also held beliefs and values they were taught in childhood regarding their food-related

practices, such as finishing everything on the plate, and seemed hesitant to change their diet and try something new (Inglis & Crawford, 2005). Mothers in the study of Malhotra et al. (2013) described that warm as well as painful memories of family meals in their childhood influenced current mealtime practices with their own children.

Endorsing childhood beliefs and values into current food and eating practices, may increase a sense of control over eating and/or cooking healthily, by holding on to something people grew up with themselves; thus, a perceived 'recipe for success' for how to eat well.

Perceived responsibility for and desired control over eating behavior

Participants acknowledged the importance of individual tastes, perceiving eating behavior to be one's own responsibility, and desired control over what is eaten (Backett-Milburn et al., 2006; Dibsdall et al., 2002; Dye & Cason, 2005; Herman et al., 2012; Lems et al., 2019; Stephens et al., 2018). To illustrate, a study on adolescent boys showed that they believed that it was one's own responsibility whether they became overweight or not, in addition to blaming the environment (Lems et al., 2019). Men interviewed by Stephens et al. (2018, p. 7) believed that 'no one influenced their eating behaviors', although the men also mentioned circumstances such as a limited budget and mobile worksites, and consequently eating whatever is available at those sites, as barriers to healthy eating (Stephens et al., 2018). Low-income women in a study by Dibsdall et al. (2002) expressed that they wanted to be in control over what they ate, and resented experts who told them what they should eat. These examples indicate that there is a tension between a desired sense of autonomy, in the sense of desired control over what is eaten, and perceived limitations in that control due to various circumstances.

Role of food in regulating children's (eating) behavior

Although parents tended to indulge children's food requests, as elaborated upon in paragraph 3.3.3, various parents also reported aiming to regulate their children's food intake, although this was sometimes perceived as difficult (Boshoff et al., 2007; Dalma et al., 2016; Fisher et al., 2015; Hardcastle & Blake, 2016; Herman et al., 2012; Hupkens et al., 2000; Trofholz et al., 2018). Expressed reasons for regulating children's food intake were related to costs, health but also to life lessons. For example, restricting food options teaches children that they cannot always get what they desire (Herman et al., 2012). However, sometimes simultaneously, parents acknowledged their child's individual taste preference and wanted to adhere to that. That resulted in shifting responsibility, giving children control over their own food choices, completely or by providing them with limited choices regarding what and how much is eaten (Backett-Milburn et al., 2006; Boshoff et al., 2007; P. Fielding-Singh & Wang, 2017; Hardcastle & Blake, 2016; Herman et al., 2012; Pescud et al., 2014). This aligns with the idea that being in control over what is eaten is desirable (see paragraph 3.3.6); possibly, parents find it important to grant their children such a sense of autonomy.

In addition, parents used food as a tool to handle children's behavior. For example, by providing snacks to children to occupy them or to calm them, or to reward good behavior (Blaine et al., 2016; Fisher et al., 2015; Pescud & Pettigrew, 2014; Pescud et al., 2014).

In sum, parents aimed to regulate their children's food intake for various reasons, although occasionally parents placed the responsibility for what and how much is eaten with the children, or used food to handle children's behavior.

3.4 Discussion

3.4.1 Summary of evidence

The aim of this scoping review was to provide an overview of healthy eating beliefs and to unravel how meaning is attached to food and eating in populations with a low SEP, as displayed in current literature. Qualitative synthesis of 35 included studies revealed seven themes that were regularly expressed by study participants: notions of 'healthy' and 'good' eating; time and monetary constraints to healthy eating; social influences on food and eating practices; expressing identities through food and eating; the importance of upbringing and tradition in food and eating practices; perceived responsibility and desired control over eating behavior; and regulating children's (eating) behavior. Beyond these thematic results, it is notable that the majority of studies was conducted in the most recent ten years, which shows a recent increased interest in this subject. This may be due to the increasing prevalence of overweight and obesity (GBD 2015 Obesity Collaborators, 2017). In addition, it is notable that the majority of studies included mainly women, often in their role as mothers, as study population. This implies that the identified themes are primarily dis-

cussed by, and perceived as important by, women/mothers, and it cannot be assumed that these beliefs are equally relevant and/or perceived as important for other gender and age groups. Critical appraisal of the included studies, based on the CASP qualitative checklist (Critical Appraisal Skills Programme, 2018), indicated that overall, the studies were of good quality.

3.4.2 Interpretation

A recurring, however implicit, topic that bridges the identified themes, is the perception of limited control over what is eaten. As identified in the review, study participants viewed eating behavior as their own responsibility, and 'healthy' and 'good' eating, in the ways that this was understood by the study participants, were perceived as important and desirable. However, people were (or perceived to be) only partially in control to do so because of time and money constraints, social influences, measuring up to desired identities, and desiring to keep up traditions, that influenced eating behavior.

Experienced limitations to be fully in control over what is being eaten, for example to eat healthily when desired, may be induced by competing values that people hold. As also noted by Teuscher et al. (2015), cherishing family relationships (by indulging family members' food requests) is a value that can compete with the value to eat healthily. Healthy eating appears to be valued in populations with a low SEP, as displayed by the acknowledged importance of healthy eating (as understood by the study participants) by the vast majority of study participants included in this review. Identified themes in this review provide indications of what additional values competing with a desire to eat healthily might be. These include feeling responsible for other tasks and responsibilities (as indicated by perceived time and monetary constraints), valuing to express a desired identity (e.g., to express being masculine, which may be enhanced by eating junk food), and valuing to keep up traditions, even if these may be unhealthy. However, study participants did not express influences on eating behavior in terms of 'competing values', and it is plausible that the process of prioritizing values and subsequent influence on eating behavior happens partly unconsciously, as do other food-related and moral decision-making processes (Ham & van den Bos, 2010; Raghunathan, Naylor, & Hoyer, 2006).

A consideration that should be taken into account when interpreting the results of this review, is that although some included articles described results

of participants with both a low and higher SEP (Baumann et al., 2019; Bukman et al., 2014; Calnan, 1986; Fielding-Singh, 2017, 2019; Fielding-Singh & Wang, 2017; Hupkens et al., 2000; Inglis & Crawford, 2005), the study population of the majority of studies consisted only of participants with a low SEP. This implies that the identified themes in this review are applicable to populations with a low SEP, but this does not imply that these themes are applicable *exclusively* to populations with a low SEP, or that they pose a contrast to beliefs, norms and values among populations with a higher SEP.

Based on literature in the field, some comparisons between healthy eating beliefs among populations with a low and higher SEP can be made. Beliefs that appear to be prevalent mainly among populations with a low SEP, entail financial considerations. This can be derived from the observation that participants with a high SEP did not mention financial considerations at all in a study on perceptions of healthy eating (Mete, Shield, Murray, Bacon, & Kellet, 2019), and from the few studies that compared beliefs among participants with a low and higher SEP, that found financial considerations to be mostly described by populations with a low SEP (Bukman et al., 2014; Fielding-Singh & Wang, 2017; Inglis & Crawford, 2005). Valuing tradition also seems more exclusively reserved for populations with a low SEP (Inglis & Crawford, 2005).

However, there are also overlapping themes of beliefs among populations with a low and higher SEP. A literature review on perceptions on healthy eating in a 'general' population (not specifically low SEP), focusing on the Canadian context, showed that fruits, vegetables and fresh foods were most often considered as important part of a healthy diet, and meals that consisted of fresh foods and were home cooked and consumed at home were considered healthier than foods eaten elsewhere (Paquette, 2005). However, this review did not provide information on evaluative dimensions of food and eating beliefs. A qualitative study on the meaning of healthy eating among Australian adults, of which the majority held a bachelor's or postgraduate degree and could thus be viewed as high SEP, showed that healthy eating was considered as important but was not prioritized in daily life due to a lack of time induced by work and family commitments, which resulted in reduced energy levels at the end of the day (Mete et al., 2019). This is similar to findings in our review among populations with a low SEP. In addition, and not found among populations with a low SEP, participants in this study described popular diets (e.g. Weight Watchers) and social media

as part of their attempts to improve healthy eating (Mete et al., 2019). Similar to Mete et al. (2019), a study of Inglis and Crawford (2005) showed that not only women with a low, but also women with a middle and high SEP perceived time constraints as barrier to healthy eating.

Although time constraints are a perceived limitation to healthy eating in both low and higher SEP populations, the reasons and thoughts underlying this theme are different. Women with a low and middle SEP experienced time constraints due to work commitments, while many women with a high SEP were not involved in paid work and lacked time because of household and family commitments (Inglis & Crawford, 2005). Moreover, although the high SEP participants in the study by Mete et al. (2019) described that having enough time to eat healthily was a luxury, they also described that *prioritizing* healthy eating was something that *should be chosen*; that within the limited time of day, prioritizing healthy eating is a *choice that could be made*. This shows, first, the perceived moral superiority of healthy eating, which is similar to the current review's findings among populations with a low SEP. Second, the high SEP participants in this study seem to view time as a space within which deliberate choices can be made, such as to eat healthily or not. This seems contrasting to the views of populations with a low SEP, since our review indicated that populations with a low SEP viewed a lack of time to eat healthily as out of their control rather than a choice they made by deliberately prioritizing other demands. This may indicate that populations with a high SEP are more aware of competing values that can deliberately be prioritized than populations with a low SEP.

Multiple conclusions can be drawn, with subsequent identification of knowledge gaps. First, the current review showed that populations with a low SEP perceived healthy eating as important and desirable; however, they perceived to be only partially in control to do so due to various barriers they described. These barriers to healthy eating as described by study participants may also be viewed in terms of (consciously or unconsciously) competing values. Second, the perceived importance of healthy eating seems to apply to 'healthy eating' in the sense of consuming fresh fruit, vegetables and meat, which were defined as the main 'healthy foods' by populations with a low SEP. However, the review showed that there were also various definitions of what 'good' eating meant to populations with a low SEP, and these were not always in accordance with what was perceived as 'healthy'. Current literature provides very limited information

on what it means for populations with a low SEP to eat 'well', and the relative importance of eating 'well' as compared to eating 'healthy'. Possibly, eating 'well' may pose another value competing with eating 'healthy'. Third, reasons and thoughts underlying healthy eating beliefs and meaning attached to food and eating appears to be different for populations with a low and higher SEP, even when they concern the same belief (such as time constraints as a barrier to healthy eating). Although current literature provides some indications of what the underlying reasons and thoughts of healthy eating beliefs are, profound insights are very limited.

3.4.3 Implications for research and practice

Since current literature provides only limited information on the reasons and thoughts underlying healthy eating beliefs, in-depth exploration of the origin and construction of healthy eating beliefs should be conducted, as well as on what it means to eat 'well'. Specific food-related values of populations with a low SEP should be explored and it should be considered, e.g., how and to what extent values relate to (compete with) each other, and how and to what extent they influence 'healthy' and 'good' eating. In addition, such studies should also be conducted in populations with higher SEPs, to investigate whether and to what extent findings are applicable exclusively to populations with a low SEP, or across populations with different SEPs.

Insights in the origins of 'healthy' and 'good' eating beliefs and how they fit in the everyday life of populations with a low SEP, can contribute to attempts, e.g., interventions, to improve diet quality in populations with a low SEP, in a way that makes sense to them. Mutual understanding of what it means to eat 'healthy' and 'well' and what underlying reasons and thoughts are, may also provide opportunity to successfully engage the low SEP target group in the co-creation of interventions, in a way that fits their daily reality.

3.4.4 Strengths and limitations

This scoping review adds to the current literature by providing a clear overview of healthy eating beliefs and how meaning is attached to food and eating in populations with a low SEP as displayed in current literature, and provides a starting point for future in-depth research on healthy eating beliefs and the meaning of food.

Beliefs identified in this review do not necessarily provide a clear contrast with beliefs among populations with a higher SEP, which may be considered as a limitation of the review. Because a review of beliefs among populations with a higher SEP is beyond the scope of the present review, we highlighted differences in beliefs between populations with a low and higher SEP that were found in publications included in the present review, compared our findings to a previous review, and compared our findings to a recent qualitative study on beliefs among populations with a higher SEP.

Finally, due to the very large number of articles that resulted from the initial search query, the search query was adapted to show only results that contained words related to 'socioeconomic' in the title, rather than in the title and/or other fields (in addition to the search terms related to 'beliefs' and 'eating', that were also searched for in other fields). Induced by this measure, it is possible that some potentially relevant articles may have been overlooked and are therefore not included in this review.

Funding This work was supported by the Edema-Steernberg Foundation, Wageningen, the Netherlands. The funding source had no involvement in the study design, the collection, analysis and interpretation of data, in the writing of the report and in the decision to submit the article for publication.

Additional file 1 | Search strategy for Scopus.

(TITLE ('socioeconomic' OR 'socio-economic' OR 'socioeconomically' OR 'socio-economically' OR 'sociodemographic' OR 'socio-demographic' OR 'sociodemographically' OR 'socio-demographically' OR 'social class' OR 'low income' OR 'low-income' OR 'disadvantaged' OR 'social strata' OR 'social inequality' OR 'social inequalities' OR 'social inequity' OR 'social inequities' OR 'working class' OR 'working-class'))

AND

(TITLE-ABS-KEY ('belief' OR 'beliefs' OR 'norm' OR 'norms' OR 'normative' OR 'attitude' OR 'attitudes' OR 'meaning' OR 'perception' OR 'perceptions' OR 'perspective' OR 'perspectives' OR 'view' OR 'views' OR 'viewpoint' OR 'viewpoints' OR 'opinion' OR 'opinions' OR 'conceptualize' OR 'conceptualization' OR 'conceptualizations' OR 'value' OR 'values' OR 'knowledge'))

AND

(TITLE-ABS-KEY ('eat' OR 'eating' OR 'food' OR 'foods' OR 'foodwork' OR 'food-related' OR 'nutrition' OR 'nutritional' OR 'diet' OR 'diets' OR 'dietary' OR 'lifestyle'))

Additional file 2 | Individual study characteristics and critical appraisal results.

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Backett-Milburn et al. (2006)	Assessing perceptions underlying dietary practices in low SEP families with normal and overweight teenagers.	Breadline Britain Index (area-level indicator of SEP based on multiple measures of deprivation)	Interviews were conducted with 34 low SEP parents or food providers (of which two-thirds were mothers, one father and several grandmothers) and 36 children (13-14 years) in Eastern Scotland.	Parents and food providers explained body shape and size by genetic, contextual and behavioral factors. Individual tastes were strongly acknowledged and parents believed teenagers to be increasingly responsible for their own food choices. Teenagers were considered as 'good eaters' when they ate all the served food without complaining, regardless of the healthiness of the foods. Meals prepared and served at home were considered as 'good food'.	Yes = 9; Can't tell / No = 1
Baumann et al. (2019)	Exploring cultural repertoires that guide low SEP consumers' taste in food.	Occupation and receiving government assistance	Interview data from a larger study in Canada were analysed. Of 105 participating families (adults and teens), 43 had a low SEP.	Food characterized by abundance, corporate brands, familiar ethnic foods and healthy foods were preferred by consumers with a low SEP. They considered healthy foods as out of reach.	Yes = 8; Can't tell / No =2
Blaine et al. (2016)	Assessing low SEP caregivers' perceptions on preschoolers' snacking and TV viewing habits.	Income (receiving government assistance)	Interviews were held with 47 low-income caregivers (mostly women) of 3-to-5-year-old children in the USA.	Snacks were provided to children for non-nutritive purposes. Caregivers described that children expect snacks while watching tv, that snacking and tv watching is good for social bonding and interaction, that snacks can serve to manage the child's behavior (e.g. to stop nagging), and that snacks are used to increase food intake in picky eating children.	Yes = 9; Can't tell / No = 1
Boshoff et al. (2007)	Exploring influences on and characteristics of healthy eating and physical activity behaviors in children with a low SEP.	Neighborhood SEP	First, a non-experimental quantitative design assessed characteristics of 227 low SEP children (10-13 years) in Australia. Second, interviews with 18 mothers and focus groups with 27 children who engaged in healthy eating and physical activity were conducted.	Low SEP children's physical activity and healthy eating behaviors were influenced by perceived health benefits, values relating to healthy eating and physical activity held by children and their parents, how much children enjoyed physical activity and healthy eating behaviors, the children's preferences, and social influences. Mothers restricted unhealthy foods and encouraged intake of healthy foods. Mothers usually placed restrictions around unhealthy foods for financial as well as health reasons. Mothers also understood the role their children's personal choice played. Therefore, they provided children with limited food choices rather than everything they wanted. Parents' rules and expectations taught children health beliefs held by their parents. Parents explained that financial considerations sometimes played a role when buying food.	Yes = 8; Can't tell / No = 2

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Bukman et al. (2014)	Identifying low SEP populations' perspectives regarding eating and physical activity and how they can be supported in adapting their lifestyle.	Neighorhood SEP; Education level and employment status were also assessed	Focus groups were held with 56 adults, of which 26 had a low SEP, in the Netherlands.	Participants illuminated the influence of time, energy, habits, social influences and physical condition on eating behavior and lifestyle change. Cost concerns were specifically expressed by participants with a low SEP. Experienced health complaints may induce lifestyle changes; merely the prevention of health complaints did not provide sufficient motivation.	Yes = 9; Can't tell / No = 1
Calnan (1986)	Comparing low SEP women's beliefs regarding the maintenance of health.	Occupation (Registrar General's social class classification)	Interviews were held with 60 women, of which 30 had a low SEP, in the UK.	Women believed a 'good diet' was a way to stay healthy. To a 'good diet' belonged fresh fruits and vegetables, a diet low in fat and fried foods, a 'balanced' diet, a diet high in fiber, using few canned, frozen or dried foods, a diet low in carbohydrate, a diet containing fresh meat and fish, one meal a day, a diet low in salt, no overeating, plain cooking, additional vitamins and minerals, and foods containing high protein, as mentioned by various women. Women, especially with a low SEP, described 'good food' as a cooked meal with meat, vegetables and potatoes or chips.	Yes = 5; Can't tell / No = 5
Dalma et al. (2016)	Exploring low SEP parents' and children's attitudes towards healthy eating and the provision of free school meals.	Neighborhood SEP	Focus groups were conducted with 22 parents of elementary school-aged children, 22 parents of 8-10-year old children, 31 parents of 10-12-year-old children and 39 high school children (all had a low SEP) who participated in a school-based healthy nutrition programme in Greece.	Parents perceived the Mediterranean diet as a healthy diet, that was passed on from generation to generation. Eating together was perceived as beneficial for the family. Parents identified themselves as being responsible for their children's diet. They were aware of their effect as role models, and the relevance of improving their own eating behavior. Parents perceived their role as tough. They had to cope with resistance of children to the limiting of sweets and to eat healthy foods. In addition, they dealt with limited time and money, which were perceived barriers to healthy eating.	Yes = 8; Can't tell / No = 2
Dibsdall et al. (2002)	In-depth exploring of food and health related beliefs in low SEP women, focusing on fruit and vegetable consumption and cancer prevention.	Income (low-income housing)	Interviews were held with 14 low-income women in a rural region in the UK.	Drivers of food- and health-related attitudes consisted of egocentric systems, information characteristics and control issues. Women's childhood experiences were important for shaping current dietary behavior. Women saw a healthful diet as a traditional fare, such as what their mother used to cook. Healthy eating got a low priority in context of other life demands (egocentric systems). Fruits, vegetables, fresh and organic foods were considered healthy, while fat, sugar, salt, chemicals and processing were considered unhealthy (information characteristics). Women desired control over what they ate. As main food shoppers, women felt that access to healthy foods was within their control; however, money was limited and organic food was perceived as too expensive (control issues).	Yes = 10; Can't tell / No = 0

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Dressler et al. (2013)	Exploring differences and similarities regarding eating behavior on an environmental, personal and behavioral level, in low SEP women of lean/normal weight and low SEP women with overweight/obesity.	Income; eligible to receive government assistance (SNAP)	Focus groups were held with 83 low SEP women, of which 35% was lean/ normal weight and 65% was overweight/obese, in the USA.	Women discussed themes regarding food environment, aberrant eating behavior, health values, and beliefs. Emotional eating was more common in overweight women, while normal weight women showed greater nutrition knowledge and more physical activity. Fruit and vegetables were preferable for health reasons, but the costs posed a barrier to consumption. Some women saw fast food as a cheap option.	Yes = 9; Can't tell / No = 1
Dye et al. (2005)	Identifying influencers of older, low SEP women's intake of fruits and vegetables.	Income and education level	Focus groups were held with 28 older women with a low SEP (over 65 years of age).	Personal, behavioral and environmental factors were identified. Women believed nutritional changes could be good for their health, but eating alone was perceived as a barrier to healthy eating. Potential food waste was perceived as a barrier to increasing fruit and vegetable intake. Demands of family members were another barrier to healthy eating. Cost concerns were a barrier to try new foods that they or their family members may not like. Fruits and vegetables did not provide the satiation the women desired. Women found authorative recommendations regarding fruit and vegetable intake not credible or difficult to remember.	Yes = 8; Can't tell / No = 2
Eikenberry et al. (2004)	Identifying low SEP communities' definitions of healthy foods and exploring motivations, barriers and promotors of healthy eating.	Neighborhood / community SEP	796 residents of a low-income community in Minnesota, USA filled out self-administered surveys.	Fruits and vegetables, meats, grains, low-fat, nutritious and foods that are 'good for you' were regularly described as healthy foods. Health, weight loss or weight maintenance were participants' main motivators for healthy eating, as well as personal preference and family (e.g. to be a good role model for children). How one was raised and federal food assistance programs were promotors of healthy eating. Perceived barriers to healthy eating were time, costs, taste laziness, lack of discipline, picky eating, and living alone.	not applicable
Engler-Stringer (2010)	Exploring how social and physical food environments (the 'foodscape') shape food and cooking practices in low SEP women.	Neighborhood SEP	Focus groups were held with 22 young, low-income women (18-35 years) in Canada.	Household roles and responsibilities, health, learning and access to food influenced women's food practices. Women described food they prepared as food like their mother cooked and traditional food. Women showed a desire to try new foods, but they needed to take the preferences of live-in boyfriends, roommates, and children into account. Trying new foods, but not knowing how to prepare them, may lead to food waste, which was perceived as a barrier. Managing fat and sodium content and eating sufficient vegetables and whole grains but not too much sugar was perceived as important, although the women did not always adhere to it. Women felt guilty when they did not eat healthy foods. Healthy foods were perceived as very expensive.	Yes = 9; Can't tell / No = 1

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Fielding-Singh (2017)	Exploring how socioeconomic disparities in diet are driven by food's symbolic value.	Education level and income	Interviews were held with 24 low, 24 middle, and 25 high SEP families. Ethnographic observations were performed on 2 low SEP families, and 1 middle and 1 high SEP family. The families, living in the USA, consisted of parents and adolescents.	Parents with a low SEP provided their adolescents food as compensation for deprivation in other areas of life, while high SEP parents used food to disseminate classed values, to their adolescents and to others, around health and parenting. This gave parents, with both a low and high SEP, a sense of being a competent caregiver. Parents considered vegetables, fruits, whole grains, fish and lean meats as healthy, as well as fresh, homemade and whole foods. Junk foods including soda, candy, chips and fast foods, and foods high in fat, salt or sugar were considered as unhealthy. Parents with a low SEP let costs guide their food choices. Parents felt the need to adhere to adolescents' food requests. Parents with a low SEP indulged food requests more often than parents with a higher SEP.	Yes = 9; Can't tell / No = 1
Fielding-Singh (2019)	Exploring adolescents' views on healthy eating as a moral, affluent practice and its relation to socioeconomic position.	Parents' level of education and household income	Interviews were held with 74 adolescents in the USA, of which 25 had a low SEP, 23 had a middle SE and 26 had a high SEP.	Adolescents with a low, middle and high SEP associated healthy eating with financial privilege and moral superiority. For adolescents with a higher SEP, healthy eating was a means to differentiate themselves from 'unhealthy' families (who often had a low SEP). For adolescents with a low SEP, healthy eating was difficult due to financial barriers, which may affect their sense of moral worth.	Yes = 9; Can't tell / No = 1
Fielding-Singh et al. (2017)	Exploring how mothers and adolescents of various socioeconomic positions discuss food.	Parents' level of education and household income	Interviews were held with 124 mothers and adolescents (62 families) in the USA. These included 21 families with a low, 21 families with a middle, and 20 families with a high SEP.	Although mothers and adolescents with a low as well as higher SEP discussed food, it was more common in families with a high SEP. Conversation topics included healthy eating (more common in high SEP families), food quality (more common in high SEP families), and price (more common in low SEP families). Fruits and vegetables were considered healthy, and soda and fast food were considered unhealthy. Healthy eating was perceived as important in families with a low as well as higher SEP, but families with a low SEP considered it more frequently as out of reach.	Yes = 8; Can't tell / No = 2
Fisher et al. (2015)	Exploring low SEP urban mothers' perceptions of feeding snacks to their preschool-aged children.	Income (receiving or eligible to receive government assistance (SNAP))	Focus groups were held with 32 urban, low-income mothers in the USA.	Mothers referred to snack(s) to describe eating occasions as well as foods that were offered to children. Mothers explained that snacks involved less preparation than meals. They did not perceive some snacks as 'real food'. Mothers liked consuming snacks as well as children. Mothers described that snacks were effective tools to regulate children's behavior (e.g. to reward good behavior, or to prevent negative behavior). Mothers described various ways to limit children's access to snacks (e.g. locking cabinets and offering small portions).	Yes = 9; Can't tell / No = 1

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Hardcastle et al. (2016)	Exploring low SEP mothers' underlying perceptions and attitudes regarding food choices, and the impact of a healthy eating intervention at school.	Neighborhood SEP	Phone interviews were held with 16 mothers in a socially deprived community in Sussex, UK.	Mothers perceived costs as an important influence on food choice. Mothers displayed diverse attitudes regarding diet and regulating children's eating behavior. Some mothers were very concerned with pleasing their children, others had more strict rules regarding food. Mothers also discussed (confidence in) cooking skills, and the role of habits and socialisation on diet. The cooking intervention appeared to have a positive influence on (confidence in) cooking skills and encouraged healthier ways of cooking.	Yes = 9; Can't tell / No = 1
Herman et al. (2012)	Understanding low SEP mothers' perceptions regarding feeding their children, portion sizes and the consumption of solid fats and sugary foods.	Income (receiving or eligible to receive government assistance (SNAP))	Focus groups were held with 32 low-income mothers of 36-to-66-months old children in the USA. Mothers also filled out a sociodemographic questionnaire.	Mothers found it important to limit children's sugar intake to prevent hyperactivity and tooth decay. Regulating children's food intake was used to teach life lessons. During meals, mothers assisted children with regard to choices about portion sizes. Mothers believed that being responsive to their children's eating behavior was a positive part of their relationship with the children. Mothers emphasized their child's uniqueness in food preferences and wanted to be responsive to their child's individuality. Mothers found it difficult to reject children's food requests, especially regarding sweets and snacks. Bad memories from their own childhood contributed to this. Other adults, such as grandparents, undermined mothers' authority by providing unhealthy foods to children, which posed a barrier for mothers to let their children eat healthily.	Yes = 9; Can't tell / No = 1
Hupkens et al. (2000)	Exploring health considerations, permissiveness and cost in relation to food in women with various SEPs.	Education level	Surveys were filled out by 849 lower- and middle-class women living with a partner and at least one child in the Netherlands, Belgium and Germany.	Mothers with a low SEP more often considered costs with regard to food consumption, while mothers with a higher SEP more often took health aspects into account. Regarding food restrictions, mothers with a low SEP appeared more permissive than mothers with a higher SEP. Nonetheless, food consumption differences between populations with low and higher SEPs were only to a very small extent explained by these considerations.	not applicable
Inglis et al. (2005)	Exploring how various factors lead to differences in eating behavior among women of various SEPs.	Neighborhood SEP (SEIFA score)	Interviews were conducted with 56 Australian women, of which 18 had a low, 19 had a middle and 19 had a high SEP.	Regarding eating behavior, women with a low SEP consumed more traditional fruits and vegetables, while higher SEP women consumed more novel ones. Women with a low SEP also held stronger traditional beliefs regarding food, e.g. how they were brought up, than higher SEP women. Health, cost and easiness of preparation were important influences of food choice, taste was less important. Time constraints, induced by e.g. family influences (more frequent among women with a high SEP) and work (more frequent among women with a low SEP) posed a barrier to healthy eating, as well as costs (more frequent among women with a low SEP). The local food environment, the extent to which healthy foods were available and accessible, were also mentioned by women with various SEPs.	Yes = 9; Can't tell / No = 1

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Jarrett et al. (2016)	Exploring mealtime experiences in African American caregivers of preschoolers with a low SEP.	Income	Interviews and photo elicitation interviews were conducted with 11 African American caregivers (mothers) of preschoolers in the USA.	Most families had a variable mealtime schedule, although some always ate together, and some never. Mothers perceived different household schedules, availability of fast food restaurants, household chores, lack of time, low-wage work and TV watching as barriers to having common, structured family meals. Eating together, e.g., a family meal, was considered important for the family cohesion.	Yes = 9; Can't tell / No = 1
Jonsson et al. (2017)	To explore perceived barriers to healthy eating and physical activity in a multicultural community with a low SEP.	Neighbourhood / community SEP	53 Swedish adolescents from a multicultural community participated in focus groups.	Adolescents discussed availability of temptations, such as widely available fast food options and screen-based activities, as barriers to healthy eating and physical activity. They experienced only little support from their surroundings, e.g., from their parents, to eat healthily or engage in physical activity. In addition, adolescents discussed norms and demands that they perceived as barriers to healthy eating and physical activity. For example, physical activity was more for boys than for girls, and girls were expected to do more household chores in their free time than boys.	Yes = 8; Can't tell / No = 2
Jung et al. (2017)	Exploring behavioral, normative, and control beliefs regarding fruit and vegetable intake among older adults with a low SEP.	Income; eligible to receive government assistance (SNAP)	Interviews were conducted with 25 low-income older adults (22 women and 3 men) in the USA.	The older adults discussed health benefits, nutrients and enjoying taste as perceived advantages of fruit and vegetable intake. A perceived disadvantage was that some specific components in fruits and vegetables may negatively influence chronic conditions. The older adults mentioned health professionals, family and friends as approving referents of fruit and vegetable intake, and did not think anyone would disapprove fruit and vegetable intake. Receiving food assistance and support from family and friends facilitated fruit and vegetable intake, as well as budgeting and food preparation skills. The participants also consumed fruits and vegetables because they were raised to do so and it had become a habit. Costs and cooking for one were perceived barriers to fruit and vegetable intake.	Yes = 9; Can't tell / No = 1
Lems et al. (2019)	To comprehend low SEP adolescent boys' perceptions of health and health promotion strategies.	Neighborhood SEP and education level	A participatory action research approach was used, including interviews, participant observations and co-creation sessions, with 63 adolescent boys in the Netherlands.	Adolescent boys believed that eating healthily could damage their identity, whereas they associated eating large portions of meat and junk foods with masculinity and autonomy. Eating junk food with other boys reinforced social relations. Compared to junk foods, healthy foods were perceived as not satisfying. Healthy foods were also perceived as expensive. The tempting social and physical environment, e.g., many fast food options in the neighborhood, were also a barrier to healthy eating, although boys also believed that eating behavior was one's own responsibility. Boys also believed that parents should set an example regarding healthy eating.	Yes = 10; Can't tell / No = 0

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Lems et al. (2020)	Exploring low SEP adolescent girls' perspectives on a healthy lifestyle and how to develop fitting health promotion strategies.	Neighborhood SEP and education level	A participatory action research approach was used in which 26 adolescent girls participated. They engaged in group sessions to discuss and develop health promotion materials and in a dialogue session where the materials and ideas were presented to policy-makers of the Amsterdam Healthy Weight Programme.	Adolescent girls discussed a lack of self-discipline, lack of good taste of healthy foods, expensiveness of healthy foods and limited availability of healthy foods in the neighborhood as barriers to healthy eating. Girls perceived unhealthy eating, e.g., eating junk food together, as a valuable social event. Consuming unhealthy foods was also perceived as a way to deal with stress. Girls mentioned getting an attractive body and social support from parents as motivators for healthy eating. Positive long-term health outcomes did not provide motivation to eat healthily and exercise regularly, although the girls were aware of positive health outcomes.	Yes = 10; Can't tell / No = 0
Lucan et al. (2012a)	To explore concepts of a healthy diet in low SEP African Americans and to explore their recommendations to support healthy eating.	Neighborhood / community SEP	Interviews were conducted with 33 low-income African Americans in the USA.	Overall, participants demonstrated adequate nutritional knowledge, but there was some ambiguity regarding the healthiness of some foods. Eating behavior from the previous day, as described by participants, was mainly unhealthy. Participants recommended various strategies to promote the intake of healthy foods. These included making healthy foods more available and affordable, increasing exposure to and advertising of healthy foods, and provide more education on health outcomes of eating and education on food preparation.	Yes = 9; Can't tell / No = 1
Lucan et al. (2012b)	Exploring low SEP African Americans' perceived influences on fruit, vegetable, and fast food intake.	Neighborhood / community SEP	Interviews were held with 33 urban, low-income African Americans in the USA.	Fruits and vegetables were considered expensive and were subject to concerns regarding satiation and taste. Participants discussed the importance of convenience regarding preparation and consumption of foods. Fast foods raised health concerns. Participants explained that personal influences, such as cravings or wanting to eat fast, led to the consumption of fast foods rather than fruits and vegetables. Social and cultural influences, such as family roles and social traditions influenced eating behavior (e.g. being brought up to finish vegetables before leaving the table; being a role model for children regarding fruit and vegetable intake), as well as neighborhood, home and work environments. Finally, some participants discussed broader contextual influences, such as being distrustful towards the food industry. Age and gender played a role in perceived influences on eating behavior.	Yes = 9; Can't tell / No = 1

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Malhotra et al. (2013)	Identifying perceived benefits and challenges of having family meals with preschool-aged children among mothers with a low SEP.	Income (receiving or eligible to receive governmental assistance (SNAP))	Focus groups were held with low-income mothers of preschool-aged children in the USA.	Mothers discussed three main themes regarding family meals. First, mothers' own childhood memories of family meals - painful as well as good memories - influenced their current mealtime practices. Second, mothers believed that eating together contributed to building relationships with their children, by connecting and communicating with their children during mealtimes and enjoying their time together. Third, mothers described various challenges to having family meals. Mothers perceived family meals as hard work, time-consuming and tiring. Mothers struggled to maintain calm and order at the dinner table. Family meals were sometimes perceived as frustrating, when children refused to eat the provided food.	Yes = 8; Can't tell / No = 2
O'Neill et al. (2004)	Exploring understandings of healthy eating and how barriers to healthy eating might be overcome in a community with a low SEP.	Neighborhood SEP	A participatory action research approach was used and 115 inhabitants of a deprived community in the UK participated.	Overall, participants had an adequate understanding of what a healthy diet entailed. Various barriers to healthy eating were discussed. These included contradicting messages from professionals, availability of unhealthy foods in school (for younger participants), limited time, cooking for one (mainly for older participants), and advertisements. Community norms also posed a barrier to healthy eating; some participants viewed healthy eating as something for 'other people'.	Yes = 8; Can't tell / No = 2
Pescud et al. (2014a)	Exploring low SEP parents' beliefs and behaviors regarding treat foods for their overweight or obese children.	Level of education and income	Introspections, interviews and focus groups were conducted with 37 parents (mainly mothers) of overweight or obese children in Australia.	Parents described treats as unhealthy foods and believed they should be consumed sparingly. However, most parents reported that that they provided treats to their children every day. Treats were provided to control children's behavior, e.g., to reward good behavior or to prevent negative behavior. Treats could counteract deprivation beliefs. Treats were also provided to demonstrate love and affection, making both parents and children feel good.	Yes = 8; Can't tell / No = 2

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Pescud et al. (2014b)	To explore low SEP parents' beliefs with regard to children's nutrition.	Level of education and income	Interviews, focus groups and introspections were performed with 37 parents (mainly mothers) with a low SEP from Australia.	Parents showed some accurate knowledge regarding nutrition. However, they held some beliefs that were not consistent with nutritional guidelines. Parents believed giving children treats every day was appropriate and that it was a normal part of a balanced diet. They were concerned that children may feel deprived if they did not receive treats. Parents perceived eating in front of the television, both meals and treats, as appropriate. Parents perceived using food to reward good behavior, or to control negative behavior, as appropriate. Parents believed that overweight children would outgrow their overweight. Parents described that when children did not receive the foods they wanted, they refused to eat. Therefore, they believed it was appropriate to give children any foods they would eat, because they were worried that their children would get hungry or starve. Similarly, parents perceived it as difficult to get children to eat breakfast, and therefore considered it as appropriate to give them any food they wanted for breakfast. Finally, parents believed that cordial was an appropriate alternative to soft drinks in order to encourage children to drink more.	Yes = 7; Can't tell / No = 3
Porter et al. (2016)	Examining low SEP African American mothers' perceptions, facilitators and barriers related to eating, nutrition and health, and the accuracy of mothers' perceptions of child weight.	Income	Focus groups were held with, and questionnaires were filled out by, 32 African American mothers of 3-5-year-old children in the USA.	Mothers showed some nutrition knowledge, but shared some common misunderstandings, e.g. that fruit juices are healthy. Mothers believed that a healthy meal should include meat and starch, and should be homecooked. Mothers acknowledged their influence as role mothers, but admitted they did not always eat healthily themselves. Mothers remembered meal-related childhood experiences, and wanted to feed their own children better than their own parents. Barriers to healthy eating included a lack of family support, e.g. husbands talking about fast food, and picky eating by children. Mothers discussed various nutrition-related diseases that ran in the family. Finally, mothers believed their children ate a relatively healthy diet and did not seem concerned about their child's diet and weight. Over a quarter of the mothers underestimated the weight of their child.	Yes = 9; Can't tell / No = 1

Author (year)	Study aim	Assessment of SEP	Study procedures	Results and descriptions related to food and healthy eating	Critical appraisal results
Stephens et al. (2018)	Examining factors that may contribute to educational inequalities in the eating behavior of men, on an intrapersonal, social and environmental level.	Education level	Interviews were conducted with 30 men, of which 15 had a low, and 15 had a higher SEP, in Australia.	On the intrapersonal level, various themes emerged in lower as well as higher educated men as influences on eating behavior. Men believed that eating healthfully was not negatively associated with masculinity, but rather enhanced it. Men also shared common nutrition knowledge and awareness (somewhat lower among lower educated men). Men perceived healthy foods as morally superior to unhealthy foods. Men also mentioned social influences of children, e.g., wanting to be a good role model. On the environmental level, influences discussed by men included availability, accessibility and convenience of (un)healthy foods. Men also discussed costs of food and the related relative importance of convenience, taste and healthiness. Lower educated men discussed less advanced cooking skills, but more involvement in other food-related tasks. Lower educated men also emphasized that 'no one influenced their diet', that they had to adhere to a budget, and that they had mobile worksites, which influenced their food choices.	Yes = 9; Can't tell / No = 1
Teuscher et al. (2015)	Understanding the perspectives of low SEP women of Dutch, Moroccan and Turkish origin towards physical activity and healthy eating.	Education level	Focus groups were conducted with 99 disadvantaged women of Dutch, Moroccan and Turkish origin in the Netherlands.	Women discussed barriers to healthy eating and physical activity. Perceived barriers were posed by competing values, norms and activities. These included social norms and practices of others, that were perceived as important because they influence relationships with others. Women discussed examples such as what is socially appropriate to consume at social events, and feeling the need to adhere to family members' food preferences when cooking a meal. Women described various thoughts to solve such dilemmas and to explain their own behavior regarding (un) healthy eating and physical activity.	Yes = 9; Can't tell / No = 1
Trofholz et al. (2018)	Exploring low SEP mothers' perceptions of their role during family meals.	Income	Interviews were conducted with 83 mothers from low income households in the USA.	Mothers believed it was their task to help children make healthy choices. Mothers felt responsible for making the meal happen. They also monitored children's food intake and made sure that children ate enough food. Controlling children's behavior and aiming to maintain order during the meal was also discussed as part of their role. Mothers wanted to create a pleasant atmosphere during the meal. Finally, mothers facilitated conversation during the meal.	Yes = 7; Can't tell / No = 3

4

To like or not to like

Negotiating food assessments of children from families with a low socioeconomic position

Authors: Amy van der Heijden, Hedwig te Molder, Bogdana Huma, Gerry Jager

Published as: Van der Heijden, A., Te Molder, H., Huma, B., & Jager, G. (2022). To like or not to like: Negotiating food assessments of children from families with a low socioeconomic position. *Appetite, 170*, 105853. doi.org/10.1016/j.appet.2021.105853

Abstract

The present study explored how primary school-aged children from families with a low socioeconomic position produce 'likes' and 'dislikes' of foods during everyday family meals, and how these (dis)likes are understood and treated by their parents. It is crucial to understand how food preferences develop in the course of everyday life, as it is known that there are socioeconomic disparities in food preference and consumption, and that children from families with a low socioeconomic position have relatively poorer diets. Deploying an interactional approach to food preference, video recordings of 79 evening meals in families with a low socioeconomic position were analyzed using discursive psychology and conversation analysis. The analysis highlighted that children's food likes and dislikes were treated differently by their parents. While likes were routinely not responded to, agreed with or further elaborated, dislikes were predominantly oriented to as food refusals or treated as inappropriate, or non-genuine claims. Children's food assessments, i.e., likes and dislikes, were often disattended by parents when they appeared to be food preference displays. By contrast, assessments that accomplished social actions like refusals and complaints were more often responded to. The analysis also revealed the importance of distinguishing between assessments about food items in general, that were not currently being eaten, and assessments of food eaten here-and-now. All in all, the study evidences that and how assessment sequences open up interactional spaces where children and parents orient to and negotiate relative rights and responsibilities to know, to assess and to accomplish specific actions. Implications for food preference research are discussed.

Keywords
Food liking; low socioeconomic position; family mealtimes; discursive psychology; conversation analysis; assessments

4.1 Introduction

4.1.1 Background

Over the past decades, the prevalence of obesity has increased rapidly, as well as the prevalence of associated lifestyle diseases (Williams, Mesidor, Winters, Dubbert, & Wyatt, 2015). An imbalance between energy intake and expenditure, due to, e.g. an energy-dense diet and limited physical activity, is a major contributor to obesity (Mitchell, Catenacci, Wyatt, & Hill, 2011). Food preferences developed in childhood greatly influence food preferences and eating behavior in later stages of life (Anzman-Frasca & Ehrenberg, 2018; Issanchou, 2017; Skinner, Carruth, Bounds, & Ziegler, 2002). Therefore, it is important that a preference for healthy foods and healthy eating habits are developed already in childhood. Whereas in low and middle income countries obesity is predominantly a problem of the rich, in high income countries obesity is more prevalent among people with a low socioeconomic position (SEP) (Dinsa, Goryakin, Fumagalli, & Suhrcke, 2012). Studies conducted in high income countries, in which the present research is also situated, have shown that children from families with a low socioeconomic position (SEP) have poorer diets than their higher SEP counterparts (Mech, Hooley, Skouteris, & Williams, 2016; Van der Velde et al., 2019; Zarnowiecki, Dollman, & Parletta, 2014; Zarnowiecki, Parletta, & Dollman, 2014). As such, populations and especially children with a low SEP could gain most benefit from interventions aiming to improve, e.g., dietary behavior. However, populations with a low SEP are least reached by such interventions (Beauchamp, Backholder, Magliano, & Peeters, 2014; Bukman et al., 2014). A complication to this issue is that populations with a low SEP are relatively underrepresented in current research.

Various factors contribute to more unhealthy eating behavior in populations with a low SEP. For example, healthy, nutrient-rich foods are more expensive than more unhealthy, energy-dense foods (Monsivais, Mclain, & Drewnowski, 2010). Individuals with a low SEP perceive high costs of healthy foods as a barrier to healthy eating (Van der Heijden, Te Molder, Jager, & Mulder, 2021). In addition, competing values can also pose a barrier to healthy eating: people with a low SEP acknowledge the importance of healthy eating, but may simultaneously value maintaining social relationships, upholding specific identities, or keeping up traditions, which may involve indulging in unhealthy eating practices (Van der Heijden et al., 2021). Food 'liking' is also a major influence on food

choice (Liem & Russell, 2019; Wanich et al., 2020). Food liking appears to be patterned by SEP. For example, men with a low SEP reported less consumption and lower implicit (unconscious) liking for fruit than men with a higher SEP, while no differences were found in explicit (conscious) liking, nor for other foods such as cheese and cake (Pechey, Monsivais, Ng, & Marteau, 2015). Moreover, people with a low SEP displayed a preference for an abundance of foods, whereas their higher SEP counterparts focused more on aesthetics than quantity (Baumann, Szabo, & Johnston, 2019).

Cutting edge sensory science and psychological research showed that associating unhealthy foods with tastiness contributed to more unhealthy food choices (Raghunathan, Naylor, & Hoyer, 2006; Mai & Hoffman, 2015). However, studies on *how* people associate healthiness and tastiness of foods with each other show mixed results. Whereas Raghunathan et al. (2006) showed that people implicitly associated unhealthy foods with tastiness even if they explicitly reported that they did not, Werle, Trendel, & Ardito (2013) showed that people associated healthy foods more with tastiness, and Van der Heijden, Te Molder, De Graaf, & Jager (2020) showed that children as well as parents with a low SEP associated healthy foods with tastiness on implicit level, whereas children indicated unhealthy foods as tastier than healthy foods on explicit level.

Thus, although research has shown that there *are* socioeconomic disparities in food consumption and food preference, and various determinants of eating behavior such as food costs, beliefs, associations, and liking have been identified, it remains unclear *how* such food beliefs, associations and likings play out in everyday life. In order to gain a more comprehensive understanding of food preference, it is crucial to unravel how food likes and dislikes are produced and responded to, what terms such as 'liking', 'tasty' and 'healthy' actually mean to people in the context of everyday life and what norms and (hidden) moralities are at play in displays of real-life food preferences (Van der Heijden et al., 2020).

Family mealtimes are a suitable setting for the study of food preference in everyday life, as it is a place where food is offered and eaten, and where taste is regularly negotiated (Wiggins, 2013). The family mealtime has been a site to study, for example, how parental feeding strategies (e.g., authoritative, authoritarian, indulgent) and types of encouraging prompts (e.g., reasoning, bribing, pressuring) influence children's eating behavior (Edelson, Mokdad, & Martin,

2016; Fries, Martin, & Van der Horst, 2017; Hughes et al., 2011). However, less research has been done on initiatives *by children* to display their food preferences. The first study on children's food likings and parents' responses to them showed that there is little interactional space for children to voice their food preferences, i.e., likes and dislikes (Wiggins, 2014). Whereas parents made more claims about what their children like or don't like, children mostly made claims about their *own* likes and dislikes of food. However, parents frequently countered their children's claims, or treated them as inappropriate (Wiggins, 2014). More research on how children display their food preferences and how this is treated by parents, is crucial to our understanding of how children's food preferences are developed in the context of everyday life, and what it means to children and parents to like or dislike a food.

4.1.2 A discursive psychological approach to food preference

Discursive psychology offers a well-suited entry point for systematically researching the interactional organization of food likes and dislikes, as it engages with how psychological constructs, such as food preferences, are produced and made relevant by people in everyday talk (Wiggins, 2017). Discursive psychologists study food evaluations as interactional practices, rather than as individual cognitive constructs (Wiggins, 2001). Already in 2001, Wiggins noted that most social psychological research on food preference was based on assumptions derived from attitudinal research. Food preference was thereby treated as a cognitive construct that is measurable with, e.g., questionnaires and rating scales (Wiggins, 2001). Two 'problems' arise when food preferences are studied solely in this way (Wiggins, 2001; Wiggins & Potter, 2003). First, the distinction between underlying food preferences (e.g., attitudes) and evaluations of particular food items (e.g., immediate hedonic taste evaluations), which participants find relevant (Wiggins & Potter, 2003), appears to be difficult to make in practice (Wiggins, 2001). Second, by drawing on evaluative terms such as which foods are 'liked' or 'disliked', 'tasty' and 'not tasty', 'healthy' and 'unhealthy', researchers impose specific categories and lexical terms of food evaluations upon their study participants. When used in questionnaires or rating scales, the meaning of such evaluative terms is taken out of context: it is not considered how such evaluations are oriented to and used in daily realities, at a specific point in time, or for any other purpose than expressing a cognitive state or sensory experience. There may be a discrepancy between researchers' and participants' interpretation of the meaning of those terms (Wiggins, 2001; Wiggins & Potter,

2003). In a recent review on healthy eating beliefs and the meaning of food in populations with a low SEP this issue also became apparent, as the results showed that people expressed various meanings of what is 'healthy' and 'good' eating (Van der Heijden et al., 2021).

Discursive psychological research on food preference offers an alternative approach to attitude-based research on food preference by studying what people *do* when expressing food evaluations in everyday talk; which *social actions* are accomplished when people express evaluations of food (Wiggins & Potter, 2003; Wiggins, 2017). A discursive psychological approach to food preference research helps to bridge the gap between psychological and sociological concepts of eating (Wiggins, 2004). Everyday talk is highly structured and organized, and people orient to interactional norms to make sense of each other (Schegloff, 2007). Therefore, by studying how people orient to a construct such as food preference in the normatively organized context of everyday interaction, common-sense taken-for-granted interactional and societal norms (Garfinkel, 1967) regarding food preference could be unraveled. Such norms may not be expressed and oriented to explicitly, and may thus remain invisible in research that relies on self-reports such as interviews (Versteeg, 2018).

4.1.3 Study aim

A deeper understanding of the role of taste and how this is negotiated in the everyday life of families with a low SEP could provide a valuable contribution to future interventions that aim to improve eating behavior in this target group. To date, discursive psychological research on food preferences, or any other subject, has not specifically topicalized socioeconomic position. In addition, only little research focused on discursive practices deployed by children to display their food preference. The present study aims to shed light on how children from families with a low SEP show (dis)likings of food, i.e., provide evaluations of foods, during everyday family meals, and how these (dis)likings are understood and treated by their parents.

4.2 The interactional approach to assessments

In order to gain a more in-depth understanding of how children use evaluations of food in everyday talk, this section will outline the discursive psychological approach to attitudes and evaluations in everyday interactions, i.e., assessments, and highlight key concepts therein. It will review contributions both from discursive psychology (Potter, 2021) and conversation analysis (Sidnell & Stivers, 2013), two closely aligned approaches that have been used to study assessments in naturally occurring talk-in interaction. Henceforth, the term *assessment* will be used as a synonym to 'evaluation'.

4.2.1 Assessments and actions

Discursive psychological research on food preference shows that evaluations of food, i.e., *food assessments*, in everyday talk are action-oriented. By providing evaluations of food, individuals produce (other) social actions within ongoing (social) activities (Wiggins & Potter, 2003). For example, evaluations of food can serve to compliment the cook, request (more) food, account for (not) eating food, claim knowledge of or experience with certain foods, convince someone to eat a food, or phrase a possible complaint about a food (Wiggins, 2001; Wiggins & Potter, 2003). In addition, conversation-analytic work showed that, as part of social practices, food assessments can also fuel topical talk, reorient people's focus towards the food, or stop an emerging course of action (Mondada, 2009). Evaluations of food are not always fully phrased as such; they can also come as bodily expressions, gustatory *mmm*s, or disgust markers such as 'yuck' (Wiggins, 2002; Wiggins, 2013). Thus, food assessments can serve as *vehicles for other actions* in addition to or instead of evaluating food; the former is the so-called *double-barreled* nature of assessments (Schegloff, 2007).

Schegloff (2007, p. 20) notes that the 'the action which some talk is doing can be grounded in its *position*, not just its *composition*.' Thus, *how* assessments accomplish specific actions derives from the assessment's place within a sequence, as well as the design of the turn through which it is implemented. To illustrate, when a person initiates talk by doing an assessment, e.g., 'this food is delicious' (a so-called first-pair part (Schegloff, 2007; Stivers & Rossano, 2010; Pomerantz, 1984)), (dis)agreement from another person becomes relevant, e.g., 'yes it is', or 'well, actually I think it is gross' (as a second-pair part). By contrast, assessments done in a responsive position, e.g., to answer a question, as a response to a previous assessment, or as an evaluation of someone else's response, have a decreased response relevance (Stivers & Rossano, 2010).

In terms of composition, the action that an assessment accomplishes can partially be grounded in its formulation as an object-side or subject-side assessment (Wiggins & Potter, 2003; Edwards & Potter, 2017; Potter, Hepburn, & Edwards, 2020). Object-side assessments, for example 'this food is tasty', display an evaluation as a 'feature of the world', where the evaluation indexes a quality of the assessable (in this case, the food) (Wiggins & Potter, 2003; Edwards & Potter, 2017). Object-side assessments appear as independent of the speaker (Edwards & Potter, 2017). As such, they are suitable to express for example compliments about food, as they display not 'just' a subjective experience (Wiggins & Potter, 2003). Alternatively, subject-side assessments display a personal stance or subjective experience towards the assessable that is restricted to the evaluation of the speaker (Wiggins & Potter, 2003; Edwards & Potter, 2017), such as 'I like this food'. Subjective evaluations do not necessarily implicate co-participants in an interaction, which limits the suggestion that co-participants should respond to or agree with the assessment (Wiggins & Potter, 2003).

Assessments can also be divided into category assessments and item assessments. In the context of food preference, a category assessment implies a broader category of foods, i.e., 'I like apples', whereas an item assessment refers to a specific food item, such as 'I like *this* apple' (Wiggins & Potter, 2003; Wiggins, 2014). Each type can accomplish different actions. For example, a category assessment may convey a food preference as enduring over time, rather than only at the current occasion; as such, a category assessment can be used to account for, e.g., refusing a food (Wiggins & Potter, 2003). Item assessments are bound to a specific occasion, which makes them suitable to, e.g., do an evaluation of a specific food item that can be different from a general evaluation of the corresponding food category (Wiggins & Potter, 2003; Wiggins, 2014).

4.2.2 Assessments and epistemic rights

People ubiquitously manage and negotiate knowledge of a certain domain (Stivers, Mondada, & Steensig, 2011; Heritage & Raymond, 2005). The dimensions and morality of knowledge are highly relevant to the study of (food) assessments in interaction, because doing an assessment implies that one has epistemic access to the assessable, and that one has a relative right to assess it (Pomerantz, 1984; Heritage & Raymond, 2005). Three dimensions of knowledge, or *epistemics*, can be distinguished (Stivers et al., 2011). *Epistemic access* refers to the extent to which someone has access to specific knowledge. *Epistemic primacy* refers to asymmetries in people's relative rights to knowledge and to make claims about it. Finally, *epistemic responsibility* entails the responsibility that people have towards certain knowledge; i.e., people don't only have a right, but also a responsibility to know certain things such as (personal) information or common sense (Stivers et al., 2011). Participants in everyday interaction treat knowledge as a moral domain, and hold each other accountable for the rights and responsibilities that come with epistemic access, primacy, and responsibility (Stivers et al., 2011).

Especially with regard to interactions between children and parents, it seems plausible that there could be an asymmetry between children's and parents' epistemic access regarding certain foods or drinks, and their relative rights and obligations to know and make claims about them. This could account for how parents orient to children's food assessments, and vice versa. To illustrate, if food preference is constructed as a cognitive state of an individual, then what people like and don't like could be treated as within their own epistemic domain to which they have epistemic primacy (Stivers et al., 2011; Wiggins, 2014). However, in her paper on food likes and dislikes by children and parents, Wiggins (2014) showed for example that parents routinely countered or ignored children's (dis)likes and made claims about what their children liked according to them – thereby claiming primary rights to their children's food likings, thus, treating their children's food preference as not only within the children's own epistemic domain. In addition, a study on challenging food evaluations showed that if food preferences were challenged or questioned, it was not the taste evaluation as such that was challenged, but rather whether the speaker was entitled (had a relative right) to do the assessment (Wiggins, 2004).

4.2.3 Assessments and the relevance of responding

If we aim to understand how children's food assessments are understood and treated by parents, it is also essential to identify if and how assessments are *responded to*. Although first position assessments invite (dis)agreement, and thus make a response relevant (but not required), assessments are also frequently not responded to by co-participants in an interaction (Stivers & Rossano, 2010). Non-response to assessments also happens at the dinner table; Wiggins (2014) noted that when children expressed an evaluation of food featuring the term 'love' (e.g., 'I love apples'), parents did not always verbally respond to it, nor discuss it in, for example, the context of what the family might eat in the future.

Thus, there is more at stake when it comes to whether assessments are responded to, or not. To this end, Stivers & Rossano (2010) developed a model of response relevance and identified multiple response-mobilizing features of speakers' turn design, that, as they argue, mobilize coparticipants in an interaction to respond. In addition to the sequential position and produced social action, features of turn design that contribute to mobilizing a response to an assessment are the use of an interrogative lexico-morphosyntax (i.e., using a question word or morpheme, through which an utterance can be understood as a question, for example), the use of interrogative prosody (e.g., a rising intonation; often hearable in the final part of questions, such as 'it is, isn't it?'), engaging in speaker gaze (the speaker gazes at the recipient, to indicate that a response is due), and displayed epistemic asymmetry between the speaker and the recipient (e.g., the speaker treats the recipient as more knowledgeable of something than the speaker is) (Stivers & Rossano, 2010).

All in all, the vast body of discursive psychological and conversation analytic work on assessments reveals how particular constructions of assessments can serve to perform particular social actions, how the design of assessments can make a (particular) response from co-interactants relevant (or not), and how assessing displays speakers' epistemic access, rights and responsibilities. Thus, treating children's food assessments as social actions in interaction, rather than as expressions of individual food preference as a cognitive state, allows us to better understand how children and parents collaborate in the interactional construction and negotiation of children's food preferences. The present paper employs this approach, which we describe in the next section.

4.3 Methods

4.3.1 Data corpus and study procedure

For this study, we collected video recordings of 79 evening mealtimes. The recordings were made by ten families with a low SEP. Nine of these families were recruited from multiple food banks throughout the Netherlands and one additional family was recruited via snowball sampling. One of the researchers (AH) volunteered to help at the food banks to be able to personally contact the families and inform them about the research. If interested, participants could contact the researchers.

In each family there was at least one primary school-aged child and at least one parent. Table 1 provides an overview of the participating families' compositions. Low SEP was indicated by a low or medium education level of at least one parent, based on the definition of Statistics Netherlands (CBS, 2021), and low household income. Education level and demographical information (i.e., age of the family members) were assessed before conducting the recordings. Household income was not directly assessed, since this may be a sensitive topic for the families and may reduce their willingness to participate. Instead, to avoid stigmatization, low household income was implied by the eligibility of the families to visit the food bank, which requires a household income under the national minimum income limit.

Families recorded the evening meals themselves, without researchers being present. Each family was provided with two cameras to enable recording from different angles and capture verbal as well as non-verbal interaction (e.g., body positions, hand gestures and facial expressions). The cameras were placed on a tripod stand next to the dinner site, which was a table in the kitchen or living room, or a couch in front of a television. Families were encouraged to record only when all family members felt comfortable to do so. Although some reactance to the presence of a camera might be expected from the families, awareness of a camera does not automatically pose an impediment to interaction, nor does it necessarily lead to producing only specific types of talk (Speer & Hutchby, 2003).

After completing the recordings, the families received meal boxes as reimbursement for their participation. All family members were informed about the purpose of the study (i.e., to capture naturally occurring conversation during mealtimes) and were given ample opportunity to ask questions. All recorded family members provided written informed consent (written informed consent for children was provided by their parents). This study was approved by the Medical Ethical Review Board of Wageningen University & Research, the Netherlands (METC-WU, file number: NL64893.081.18).

4.3.2 Analytical procedure

The data were analyzed using discursive psychology (DP) (Potter, 2021; Edwards & Potter, 1992; Potter & Hepburn, 2005; Wiggins, 2017) and conversation analysis (CA) (Schegloff, 2007; Sidnell & Stivers, 2013). These are qualitative, inductive

Table 1 | Family compositions.

Family[1]	Caretakers	Children[2] (ages)
1	Mum	Mason (18 years old), Lucas (11 years old), Sarah (10 years old)
2	Mum	Caitlyn (8 years old), Leila (6 years old)
3	Mum and Dad	Ronald (9 years old), Dylan (5 years old)
4	Mum	Levi (4 years old)
5	Mum and Partner	Michael (12 years old), Kathryn (7 years old), Eva (3 years old)
6	Mum and Dad	Ronald (17 years old), Oliver (15 years old), Charlotte (13 years old)
7	Mum and Dad	Marie (11 years old), Benjamin (8 years old), Claire (3 years old)
8	Mum and Grandma	Jenny (12 years old), Lola (9 years old)
9	Mum	Liam (14 years old), Olivia (12 years old), Emma (6 years old), James (5 years old)
10	Mum and Dad	Lucas (8 years old), Mia (2 years old)

Note: 1: In random order; 2: All names are pseudonyms.

methodologies for the analysis of real-life talk-in-interaction (Wiggins, 2017; Sidnell & Stivers, 2013). DP and CA focus on *how* (i.e., through which practices) specific *actions* (e.g., complimenting, offering, or complaining) are accomplished in interaction, rather than approaching talk as a means to access or get insight into cognitive processes (Potter & Hepburn, 2005; Sidnell & Stivers, 2013). DP and CA examine how a speaker's turns at talk are understood and treated by other participants in the interaction, as is displayed in the other participants' immediate next turns or in the subsequent unfolding interaction (Wiggins, 2017; Sidnell & Stivers, 2013; Potter & Hepburn, 2005). Thus, DP and CA focus on the way in which participants *themselves* make sense of each other in their interactional context. DP draws on analytical principles of CA and there is major overlap between the two. However, as Wiggins (2017, p. 42) explains, DP is distinctive in the examination of 'how psychological constructs are enacted and made relevant in interaction, and the implications of these for social practices'.

For the present paper, the psychological construct under study entailed food preference, i.e., liking and disliking foods, and more specifically we focused on food assessments.

A verbatim transcript of the audio recordings was made by a transcription service. We manually searched the verbatim transcripts for utterances about food. We transcribed these sections in detail, using the Jeffersonian notation (Jefferson, 2004) and including non-verbal expressions (e.g., gazes, hand gestures), derived from the video recordings. We searched the detailed transcripts for food assessments and narrowed our focus to food assessments done *by children*. We included assessments in which children used an assessment segment in their talk (Goodwin & Goodwin, 1987) in our collection of cases for the present analysis. Thus, assessments in which children used at least one assessment term or phrase with a clear positive or negative valence, such as 'I (don't) like it', 'this food is (not) tasty', 'yummy', 'gross', and similar utterances.

We identified 96 cases of food assessments by children in our data corpus that met the inclusion criteria. We closely examined each individual case and in an iterative analytic process we looked for commonalities and discrepancies between the cases, and identified interactional patterns. Table 2 provides an overview of the identified cases. In the following analysis, we will show how children's assessments were understood and treated in various designs and contexts, as derived from our data corpus of mealtime conversations in families with a low SEP. Due to the explorative nature of the present research and space limitations, we focus our detailed analysis on the most dominant (i.e., frequent) interactional patterns.

4.4 Analysis

Our analysis tracks a range of assessment features (such as the valence of the assessment, and whether the referent food item is currently being eaten or not) and the sequential position of the turn implementing the assessment. We will show that and how these features are relevant for the *actions* children are performing and for how parents *respond* to them.

Table 2 | Overview of cases.

Child's assessment	Number of cases
Positive assessment about a food currently being eaten	57 cases • Not responded to (n = 40) • Responded to (n = 17)
Negative assessment about a food currently being eaten	33 cases • Not responded to (n = 8) • Responded to (n = 25)
Positive assessment about a food item in general (the food is not eaten during the current meal)	5 cases • Not responded to (n = 3) • Responded to (n = 2)
Negative assessment about a food item in general (the food is not eaten during the current meal)	1 case • Responded to (n = 1)
Total	96 cases

4.4.1 Assessments conveying positive here-and-now experiences

Children's positive assessments that conveyed here-and-now experiences were frequently not responded to, agreed with by parents, and elaborated on with further specifications of the assessment object. We highlight how sequential position in conjunction with turn design furnished children with resources to implement particular social actions within larger courses of action. Whether assessments were responded to by parents or not ultimately depended on the constellation of these features.

We start by showing two excerpts in which a child does a positive assessment about the food eaten at the present moment, that is not responsive to others, and does not receive a response from its parent(s). We found this to be a common pattern throughout the data, identified in 40 cases. Excerpt 1 shows Mum, Dad, Marie (11 years old), Claire (3 years old) and Benjamin (8 years old) sitting on the couch in the living room, eating their dinner. Claire finished her potatoes and Mum offers her some more, asking her which potatoes she wants (as there are two options to choose from). Our target assessment is on line 11.

Excerpt 1 | This is tasty

1	MUM:	*((to Claire))* Welke aardappeltjes ↑wil je (.) wil je die aardappeltjes die Benjamin heeft
		((to Claire)) **Which potatoes do you ↑want (.) do you want these potatoes that Benjamin has**
2		(.) of wil je deze ◦aardappeltjes◦?
		(.) or do you want those ◦potatoes◦?
3	CLA:	E::hh [die]
		E::hh [those]
4	CLA:	[*((points))*]
5	MUM:	Die Benjamin heeft?
		That Benjamin has?
6	CLA:	◦◦↓Hm↑h◦◦
		◦◦**↓Hm↑h**◦◦
7	MUM:	(3.0) *((Mum grabs some cooked potatoes and puts them on Claire's plate))*
8	MUM:	*((to Claire))* Zo (.) ↑kijk eens?
		((to Claire)) **There (.) ↑look at that?**
9		(.)
10	MAR:	[*((looking at her plate))*
11	MAR:	[Di=is lekker
		[**This=is tasty**
12		(3.0) *((Marie takes another bite while gazing at Mum, Mum is scooping potatoes onto her own plate))*
13	MUM:	Wilt iemand mayonaise of zoete ↓saus
		Does anyone want mayonaise or sweet ↓sauce

After Mum and Claire established which potatoes Claire wants and Mum provided her with those, a three-second silence follows and Marie initiates a new sequence with a positive, object-side assessment in line 11. Marie's assessment is in sequentially initial position, as it is not responsive to, nor receipting a prior turn, meaning that it could but in this case does not receive a reply (Stivers & Rossano, 2010). By virtue of being sequentially first, a response could have been relevant here; specifically, it would make a second assessment (agreeing or dis-

agreeing) a logical second-pair part of the assessment (Schegloff, 2007). In addition, the object-side assessment projects the 'tastiness' as a quality of the potatoes itself, as a 'feature of the world', rather than as a personal stance of Marie. As such, the assessment may not be restricted to the epistemic domain of Marie, but may also cover the epistemic domains of others (especially Mum, who prepared the potatoes), which may invite them to respond. This assessment could also function as a vehicle for another social action; object-side assessments are suitable ways to make, e.g., compliments about the food (Wiggins & Potter, 2003), and Mum could easily have treated this assessment as a compliment. Notably, while doing her assessment, Marie is looking down at her plate rather than at the other family members. She does not make anyone accountable for receipting her turn and/or producing a response. In addition, Marie engages in a speaker gaze towards Mum *after* she does her assessment (line 12), but at that point Mum is looking at her own plate while scooping potatoes onto it, and does not see nor receipt Marie's gaze. Thus, in light of the interactional efforts that accompany Marie's assessment (initiating the sequence, object-side assessment, potential social action, and gazing at Mum after the assessment), a response could be relevant here. However, to be treated as, e.g., a compliment rather than as a subjective experience that does not implicate anyone, it appears that these features alone do not suffice and additional elements are necessary – which are missing in this interaction.

In Excerpt 2, Mum, Mason (18 years old), Sarah (10 years old) and Lucas (11 years old) are sitting at the dinner table. They are just starting their meal with rice, chicken and sauce. Our target assessment is on line 15.

Excerpt 2 | Mum, Mason, Sarah, and Lucas are starting their meal

1	SAR:	↓Eet smakelijk,
		↓Enjoy your meal,
2	MUM:	Smakelijk
		Enjoy
3	LUC:	[*((looking at his plate, poking in his food))*]
4	LUC:	[◦Wat=is dit◦]
		[◦What=is this◦]
5		(0.3) *((Mum glances at Lucas))*
6	SAR:	*((pointing at the pan on the table, looking at Mum))*
7	SAR:	De ↑rest ehhh heb=
		The ↑rest ehhh have=
8	MUM:	[*((looking at Sarah))*]
9	MUM:	[=#Ja (.) hh wat maakt dat nou u::it.#]
		[=#Yes (.) hh what does that matt::er.#]
10		(2.5)
11	LUC:	[*((looking back and forth from his plate to Mum))*]
12	LUC:	[◦↑Oh◦]
		[◦↑Oh◦]
13		(2.0)
14	LUC:	[*((looking back and forth from his plate to Mum))*]
15	LUC:	[Lekke:r.]
		[Tast:y.]
16		(17.0) *((Mum is looking at her own plate and eating; Mason is scooping sauce onto his rice; Lucas and Sarah silently eat))*
17	LUC:	↓Mama,
		↓Mummy,
18	MUM:	J:a hh
		Y:es hh
19	LUC:	[Ik weet (.) jij weet waarom ik di:e (.) saus niet wou pakken net]
		[I know (.) you know why I didn't want to take th:at (.) sauce just now]
20	LUC:	[*((pointing at Mum's plate, looking back and forth to Mum and his own plate))*]

In line 4, Lucas inquires about the food he is being served. Mum glances at Lucas, indicating her receipt of his inquiry, but does not produce a verbal response – probably because after a short 0.3-second silence Sarah intervenes and gets involved in an argument with Mum, which can be derived from Mum's angry voice in response to Sarah's turn (lines 6 – 9). Following a 2.5 second silence, Lucas produces a high-pitched but soft 'oh' while looking back and forth from his plate to Mum (lines 11 – 12). 'Oh' is considered as a change-of-state token indicating a change in a person's current knowledge state (Heritage, 2018; Heritage,

1984). As such, Lucas conveys he has found out what the food is. After another silence of two seconds Lucas does a positive assessment (line 15). His assessment seems to be a development of his own previous turns, 'oh' (line 12) and inquiry about the food (line 4). This does not yield a response: a seventeen-second silence follows, in which all family members continue eating. After this, Lucas starts a new sequence (line 17).

Lucas's inquiry about the food on his plate and his repeated looking at his plate exemplify that his assessment is about *this* food item, here and now. Lucas's assessment is not clearly formulated as a subject- or object-side assessment. Lucas' inquiry about the food in line 4 might be a potential criticism of the food, and after finding out what the food is (line 12), a way to address this veiled criticism could be to offer a compliment. This way, the positive assessment may also function as a compliment to the preparer of the food (Mum). However, from the way his assessment is treated by others, it does not seem to be a vehicle for any other action than a display of his personal experience and preference for this food item. Informing about personal preference is inherent to Lucas's own epistemic domain (i.e., territory of knowledge), and other family members are not implicated by that action. Being treated as such, the assessment does not make a response from others relevant. With regard to features of turn design, Lucas's assessment is declarative rather than interrogative in wording and falling intonation. This does not convey that Lucas might expect a response. Lucas does, however, engage in speaker gaze, as he is looking back and forth to his plate and Mum while doing his assessment. There might also be epistemic asymmetry between Lucas and Mum, as Mum is likely to be responsible for, and more knowledgeable of, the food on their plates. These latter two features could have made a response relevant. However, Mum may not have noticed Lucas's gaze, as she is looking at her own plate.

Thus, Lucas's positive assessment does not yield any response. A close examination of the assessment's social action (a potential compliment, but treated as a display of personal preference) and features of Lucas's turn design, indicate that this assessment did not make a response relevant. The lack of response to his assessment is not treated as problematic by Lucas – consistent with findings of Stivers & Rossano (2010), who established that speakers orient to nonresponse to an assessment as an acceptable alternative.

We now move on to Excerpt 3 in which an assessment in subsequent sequential position also fails to elicit a reaction from co-present interlocutors. We have Mum, Dad, Marie (11 years old), Claire (3 years old) and Benjamin (8 years old) again sitting on the couch in the living room, and they just started their dinner. On the table by the couch are two types of potatoes: plain cooked potatoes and baked potatoes with mushrooms. Mum is going to distribute the potatoes onto the children's plates. Our target assessment is produced by Marie in line 13.

Excerpt 3 | Baked potatoes with mushrooms

1	DAD:	>Nou=jongens<
		>Well=guys<
2	MUM:	*((walks to her seat on the couch, meanwhile looking and pointing at the two pans with potatoes))*
3	MUM:	We:lke wil jij (.) wil je die ↑aardappels of wil [je die?]
		Wh:ich one do you want (.) do want those ↑potatoes or do you want [those?
4	MAR:	[Dees]
		[Those]
5	MAR:	*[((points at baked potatoes with mushrooms, scoops them onto her plate))*]
6	MUM:	[Want deze is met (.) ↑ne::e die lust jij helemaal niet >want er zit champignons in.<]
		[Because this one is with (.) ↑n::o you don't like those at all >because there are mushrooms in it.<]
7	CLA:	[*((points at plain cooked potatoes))*]
8	CLA:	[Wil dez::e]
		[Want th::ose]
9	MAR:	Ma:ar ik pak geen champig↑[nons
		But I don't take any mush↑[rooms
10	CLA:	[Ik wil dez::e
		[I want th::ose
11	MUM:	*((to Claire))* O wil je di:e? (1.0) waar is di:e (.) lepel nou weer
		((to Claire)) **O you want th:ose? where is th:at (.) spoon now**
12		(4.0) *((Marie continues scooping baked potatoes onto her plate))*
13	MAR:	Ik lust deze wel (.) deze aardappels,

		I <u>do</u> <u>like</u> these (.) these <u>potatoes</u>,
14		(2.0) *((Mum is scooping plain cooked potatoes on Claire's plate and hands the plate over to Claire))*
15	MUM:	*((to Claire))* Zo?
		((to Claire)) **This way?**
16	BEN:	[Mag ik <u>die</u> aardappels?]
		[Can I have <u>those</u> potatoes?]
17	BEN:	[*((points at the plain cooked potatoes))*]
18		(2.0) *((Mum looks from Claire's plate to the bowl with plain cooked potatoes, and reaches for it))*
19	MUM:	[Ja natuurlijk]
		[Yes of course]
20	MUM:	[*((hands over the bowl with cooked potatoes to Benjamin))*]

In line 3, Mum starts a sequence by inquiring 'which potatoes do you want', although the inquiry is not clearly directed to anyone in particular, as Mum is looking at the table and the pans. In overlap with Mum's turn-final 'those', Marie indicates her choice for the baked potatoes with mushrooms, but Mum counters it by claiming better knowledge of Marie's food preference, stating that Marie does not like those 'at all' (line 6) because they contain mushrooms. While Mum is subsequently occupied with Claire's food choice in lines 7 – 11, Marie counters Mum's claim by stating that she will avoid taking any mushrooms (line 9), and continues to scoop the baked potatoes onto her plate. This counter is not responded to. After a four-second silence, Marie follows up with a positive assessment of the potatoes she supposedly didn't like (line 13). Note the contrastive emphasis on 'do' and 'like' which invites listeners to hear her turn as a further counter to Mum's assertion regarding her food preferences. This assessment is not responded to, as becomes apparent in the next few lines (14 – 19), where a two-second silence follows, and Mum occupies herself with serving Claire and Benjamin their potatoes.

Marie does her positive assessment in a responsive position, as a reaction to Mum's assertion, and her assessment is also a vehicle for another action: negating Mum's contestation by doing a counter-claim (the positive assessment). As Marie's assessment is done in subsequent (not initial) sequence position, it does not necessarily make a response relevant. Moreover, Marie's assessment is formulated as

a subject-side assessment, displaying her personal positive stance towards the potatoes she is currently eating and thus limiting the relevance for others to respond (Wiggins & Potter, 2003). The assessment is not responded to, and this is not treated as problematic by Marie.

Next, we consider two examples in which a child's positive assessment does receive a response, as it is agreed with by parents, and elaborated on with further specifications of the assessment object. Agreement and negotiating further specifications comprised the most typical responses when parents produced a response to their children's assessments conveying positive here-and-now experiences. In Excerpt 4, Mum, Liam (14 years old), Emma (6 years old) and James (5 years old) just started their meal while sitting on the couch by the television. They are eating pizza with mozzarella.

Excerpt 4 | Pizza mozzarella

1	EMM:	*((puts a large piece of pizza with mozzarella in her mouth))*
2	MUM:	Da p<u>a</u>st nie h<u>è</u>,
		That doesn't fit yes,
3	EMM:	M<u>a</u>ma l<u>e</u>t op.
		M<u>u</u>mmy p<u>a</u>y attention.
4	EMM:	[*((chews on her large piece of pizza))*]
5	MUM:	[*((looks at Emma))*]
6	MUM:	[Mmm,]
		[Mmm,]
7	EMM:	J<u>A</u>MM:IE
		<u>YU</u>MM:Y
8	MUM:	Is echt <u>h:ele</u> lekkere zachte ka:as (.) hè?
		Is really <u>v:ery</u> tasty soft che:ese (.) yes?
9		(2.0) *((Emma gently nods))*
10.	JAM:	◦Kan=je mijn <u>drinken</u> geven◦
		◦Can=you pass my <u>drink</u>◦
11	MUM:	Ja (.) slokje <u>drinken</u> en dan ga je ↓eten (0.5) <u>Ja</u>?
		Yes (.) take a <u>sip</u> and then you will ↓eat (0.5) <u>Yes</u>?

Mum initiates the sequence by noting that such a large piece of pizza won't fit into Emma's mouth (lines 1 – 2). In her response, Emma appoints Mum as the next speaker by summoning her to 'pay attention' (line 3) and subsequently chews on her large piece of pizza. In her response, Mum inserts an assessment sequence: she expresses a gustatory 'mmm' (line 6) (Wiggins, 2002). Mum's expression of gustatory pleasure does not seem to display her own experience, though – rather, it seems enacted pleasure to display epistemic primacy over the here-and-now experience of Emma, the one who is actually tasting the pizza in this moment (cf. Wiggins, 2014; Wiggins, 2019). Emma treats this as an invitation to provide her here-and-now experience, and responds in second position with a positive assessment ('YUMM:Y' in line 7). Building on that, Mum expands the assessment sequence with a full-lexical upgraded positive object-side assessment about the cheese on the pizza, including an interrogative syntax (line 8). With Emma gently nodding, thereby non-verbally confirming Mum's interrogative, the sequence is closed (line 9).

It is notable that in her elaboration of the assessment sequence, Mum specifies the assessable (the 'soft che:ese' on the pizza) via an object-side evaluation ('v:ery tasty'), thereby presenting it as a 'feature of the world' that is not limited to the epistemic domain of either Mum or Emma. This construction, together with the interrogative syntax and turn-final tag, allow for Mum's assessment to be heard as made on behalf of Emma, whom she invites to provide a confirmation (cf. Heritage & Raymond, 2005) that the *soft cheese* is indeed the referent and the origin of the 'yumminess'. By first enacting Emma's taste experience occasioned by the presence of pizza in Emma's mouth, via 'Mmm', Mum treats Emma's experience as an individual sensory one while the experience is coordinated by both Emma and Mum (cf. Wiggins & Keevallik, 2020; Mondada, 2018). Subsequently, Mum specifies the experience further drawing Emma's attention to a particular characteristic of the food item she is presumably enjoying and thus effectively socializing Emma's food preferences. Thus, this extract may provide a snapshot into the interactional development of what could end up to be treated as a child's food preference and which has the origin in the interactional co-production of assessment sequences.

As a final example of positive assessments that convey here-and-now experiences that are specified further and agreed upon, Excerpt 5 features Mum and Lola (9 years old) watching TV on the couch in the living room and eating potatoes, a salad and shrimps. The target assessment is done by Lola on line 6.

Excerpt 5 | Shrimps

1		(35.0) *((Lola and Mum are watching TV, eating salad with shrimps))*
2	MUM:	Poeh *((looks at Lola, waves hand in front of her mouth))*
		Pfew *((looks at Lola, waves hand in front of her mouth))*
3		(1.0)
4	LOL:	Hm?
		Hm?
5		(3.0) *((Mum is chewing on her food))*
6	LOL:	Garnalen zijn lekker,
		Shrimps are tasty,
7		(1.0)
8	MUM:	Ja maar ook wel ↑pittig,
		Yes but also quite ↑spicy,
9		(1.0)
10	MUM:	die ↓ene.
		that ↓one.
11	LOL:	Die grote hè?
		That big one right?
12	MUM:	J:a,
		Y:es,
13		(17.0) *((Lola and Mum continue watching TV))*

After a long silence in which Lola and Mum are eating and watching TV, Mum initiates a sequence by expressing 'phew' while looking at Lola and waving her hand in front of her mouth. This could be a display of discomfort invoked by her current eating experience, but the utterance is quite opaque – as reflected in the next turn by Lola, who displays that she did not hear Mum correctly or did not understand what Mum meant, with an open class repair initiator ('Hm?' in line 4) (Drew, 1997). Mum does not produce a verbal response as she is chewing on her food, and after a three-second silence Lola does a declaratively designed positive object-side assessment about shrimps (line 6). Lola's assessment is in responsive position: it occurs as a second-pair part to Mum's apparent display

of discomfort, and it displays disagreement with that. After a one-second silence, Mum responds in line 8 with a 'pro forma' agreement to Lola's assessment (Schegloff, 2007, p. 69). She starts with 'yes but', initially agreeing with Lola's assessment, while the initial agreement actually serves to delay the subsequent dispreferred (i.e., non-aligning) response 'also quite ↑spicy'. After another one-second silence Mum continues to specify the assessment object, by pointing out a specific shrimp ('that ↓one.' in line 8). Lola initiates repair to Mum's specification in line 11, by providing a candidate understanding (i.e., a suggested meaning) of what the assessment object is (specification plus tag: 'that big one right?'). Mum's confirmation in line 12 provides a repair solution ('y:es,'). Thus, Mum and Lola eventually reach agreement on what is actually assessed, and on the specific content of the assessment – after which the sequence is closed.

Although assessments in responsive position, such as Lola's assessment in line 6, decrease the relevance for co-interactants to respond (Stivers & Rossano, 2010), in this sequence there is some misunderstanding regarding the assessment object (*what* is actually assessed) and valence (is the assessment positive or negative), and thus whether Lola's assessment about shrimps is then an agreement or disagreement to Mum's initial utterance. Such misunderstanding makes a post-expansion relevant, which is a stretch of talk that comes after the first and second pair-part (Mum's utterance and Lola's response), while still being part of the same sequence (Schegloff, 2007, p. 148). In addition, the object-side formulation of Lola's assessment displays tastiness as a quality inherent to shrimps, rather than as a personal preference and/or subjective experience of Lola, increasing the relevance of co-interactant Mum to respond (particularly to agree or disagree). It is notable that although Lola's assessment is lexically formulated as a category assessment (Wiggins & Potter, 2003; Wiggins, 2014), i.e., about shrimps as a category of food rather than specifically *these* shrimps, in her pro forma agreement in lines 8 – 10 and the subsequent specifications, Mum treats the assessment as if it were an item assessment conveying a here-and-now experience, i.e., about *these* shrimps. This excerpt provides another example of how an assessment sequence is interactionally achieved as a coproduction between interlocutors.

In sum, children's positive assessments that conveyed here-and-now experiences typically yielded two types of responses. A common pattern was that they were not responded to at all (as in Excerpt 1 and 2). These assessments were produced with few or no response-mobilizing features (Stivers & Rossano, 2010) and

even though they occupied a turn-initial position and some assessments could have been taken as subtle compliments, parents did not attend to them. By contrast, positive assessments that were featured in sequences initiated by a parent were agreed with or responded to by further specifying the assessment referent, displaying assessment sequences as interactionally achieved co-productions (as in Excerpt 4 and 5). This can be called notable; even when displays of personal food preference do not make a response relevant with regard to features of turn design, parents could have addressed these in terms of taste development and thus could have built their children's food preferences; or could have addressed these in terms of what could be eaten in future meals, for example.

4.4.2 Assessments conveying negative here-and-now experiences

Children's negative assessments conveying here-and-now experiences were more likely to yield a response and more elaboration from their parents than their positive counterparts, as they accomplished different actions. They were typically treated as food refusals, or as inappropriate claims. Excerpt 6 shows an assessment conveying a negative here-and-now experience that is treated as a food refusal. Mum, Leila (6 years old) and Caitlyn (8 years old) are eating at the dinner table. Leila has finished most of her potatoes and carrots, but still has a lot of peas left on her plate.

Excerpt 6 | Peas

1	LEI:	Mam:a?
		Mumm:y?
2	MUM:	J:a?
		Y:es?
3	LEI:	[*((points at peas))*
4	LEI:	[◦Ik lus et niet◦
		[◦**I don't like it**◦
5	MUM:	Hmm, (.) maar=dan >ga je wel proeven<
		Hmm, (.) but=then >you will still taste<
6		(0.5)
7	LEI:	Ok:::é (.) zelfde (onverstaanbaar)
		Ok:::ay (.) same (inaudible)

8		(1.0)
9	MUM:	En hoeveel?
		And how many?
10		(4.0) *((Mum looks at Leila, Leila looks at Mum and shrugs her shoulders))*
11	CAI:	Zal ik papa eve et [vlees brenge?
		Shall I bring dad [the meat?
12	MUM:	[Hoeveel moet je der ↑proeve?
		[How many do you have to ↑taste?
13	LEI:	Zes?
		Six?
14	MUM:	↑Ja (2.0) hemaal goed
		↑Yes (2.0) quite right

Leila initiates a sequence by summoning Mum in line 1, drawing her attention and appointing her as the next speaker. After Mum gives a 'go ahead' (line 2) (Schegloff, 2007), Leila produces a negative assessment conveying a here-and-now experience about the peas on her plate ('I don't like it', lines 3 – 4). The declaratively formulated subject-side assessment displays a personal non-preference for the peas, which does not necessarily implicate others, and limits the relevance of a response. However, Mum responds with a 'Hmm', followed by a short pause and a counter claim, 'but then you will still taste' (line 5).

Notably, first, by initiating the sequence and drawing Mum's attention Leila makes a response from Mum to what she is going to say next relevant. Second, in Mum's response it is not the negative assessment as such, i.e., Leila's disliking of peas, that is elaborated upon; rather, what is responded to is the *social action* that is accomplished, namely a refusal to eat more peas. Mum responds first with a delay token ('Hmm', line 5) which not only forestalls the upcoming dispreferred response, but also conveys she is first searching for a mutually acceptable solution (Jefferson, 1980). The response she finally produces is phrased as a compromise via the use of the contrastive 'but' and the lexical choice 'taste' that directs Leila to eat some of the peas on her plate. In her response in line 7, Leila shows compliance with Mum's directive, thereby orienting to Mum's response as a correct understanding of her negative assessment (i.e., a food refusal).

Also notable here is that Mum continues to elaborate on the amount of peas that Leila has to eat (line 9). She does so in an interrogative format, asking Leila how many peas she has to eat; she offers Leila the opportunity to come up herself with the proper way on how to deal with the peas that are left. Such practice corresponds to what Hepburn (2020) describes as parents' preference for self-direction as a resource for socialization practices. Leila is given the opportunity to develop her own solution to her 'problem behavior', i.e., refusing her peas, rather than being more invasively directed, as correcting others is generally understood as a dispreferred action (cf. Hepburn, 2020).

Excerpt 7 shows a similar scenario. Mum and Lola (9 years old) are eating potatoes, shrimps and salad on the couch by the television.

Excerpt 7 | Pearl onions

1	MUM:	*((seats herself on the couch, her wheelchair rolls towards Lola))*
2	MUM:	Zet hem even ↑naast jou neer alsjebl:ieft
		Put it ↑next to you pl:ease
3		(6.0) *((Lola puts the wheelchair aside, returns to her seat))*
4	LOL:	Ik vind die sla niet zo heel (.) erg lekker.
		I don't like that salad that (.) much.
5	MUM:	Oh. (2.0) en nu?
		Oh. (2.0) now what?
6		(3.0) *((Lola walks over to Mum, points at something on her plate))*
7	LOL:	◦Dit◦
		◦**This**◦
8	MUM:	Die ↑zilveruitjes (.) dan laat je die deruit,
		Those ↑pearl onions (.) then you leave those out,
9	LOL:	*((returns to her seat, shrugs shoulders))*
10		(3.0) *((Lola pokes her fork in the salad))*
11	LOL:	(inaudible mumbling)
12	MUM:	>Laat=maar=uit<
		>Leave=them=out<
13		(4.0) *((Mum and Lola look at each other, both continue eating))*

14	MUM:	*((looks at Lola, shrugs shoulders))*
15		(17.0) *((Mum and Lola are watching TV while eating, sounds hearable in background))*

Lola initiates a sequence by expressing a declaratively formulated, softened subject-side assessment conveying her negative here-and-now experience of the salad (line 4). Mum treats it as an 'informing', as displayed by her response with a change-of-state token 'Oh' (Heritage, 1984), indicating that her knowledge state regarding Lola's disliking of the salad changed from not-knowing to now-knowing (line 5). After a two-second silence, Mum elaborates the sequence by asking 'now what?', which effectively asks Lola to clarify the implication or upshot of her assessment. Lola treats Mum's turn as displaying some difficulty in understanding due to lack of access to the referent of the assessment. She thus walks over to Mum and points to the content of the plate to facilitate her access to the assessable. It is Mum in line 7 who names pearl onions as the referent of the Lola's negative assessment and then allows Lola to leave them out, thus treating Lola's assessment as a food refusal. Noteworthy here is the work Mum does to separate the pearl onions from the rest of the salad and thus on the one hand concede to her daughter's food refusal, while on the other hand making provisions for Lola to continue eating the salad once the problematic ingredient has been dealt with.

We continue with an example of an assessment conveying a negative here-and-now experience, that is responded to by treating it as an non-genuine claim. Excerpt 8 shows Mum, Eva (3 years old), Michael (12 years old) and Kathryn (7 years old) eating potatoes, spinach and chicken at the dinner table.

Excerpt 8 | Faker

1	KAT:	Uh Mich, (.) hier staat gewoon pompoenhoofd. *((points at the table))*
		Uh Mich. (.) here it just says pumpkin head. *((points at the table))*
2		(4.0) *((Michael looks at what Caitlyn pointed to))*
3	EVA:	[*((grimacing, looking at her plate))*]
4	EVA:	[I:el.]
		[Y:uck.]
5		(2.0) *((Michael and Kathryn are engaged in inaudible conversation))*
6	EVA:	Dat vind ik niet lekker, (.) d::at.
		I don't like that, (.) th::at.
7		(1.0) *((Michael and Kathryn still conversing, Mum looks at Eva))*
8	EVA:	[Die vind ik niet <lekker>
		[I don't <like> that
9	EVA:	[*((grimaces, cries))*
10	MIC:	£Maar je moet (.) wel=
		£But you do have (.) to=
11	MUM:	=Neppert.
		=Faker.
12	MIC:	Maar je moet het wel opet:en
		But you do have to e:at it
13	MUM:	↓Hm↑hm
		↓Hm↑hm

While Kathryn and Michael are engaged in some talk about pumpkin heads, Eva initiates a sequence with the disgust marker 'yuck' while grimacing and looking at her plate (lines 3 - 4). After two seconds, she follows it up with a full-lexical subject-side assessment conveying a subjective negative here-and-now experience. As a declaratively designed, subjective experience that does not necessarily implicate others, the relevance of a response is limited. As Michael and Kathryn are engaged in conversation they do not respond, but Mum looks at Eva. After one second Eva repeats her statement, possibly in pursuit of a response. Michael starts a response (line 10), but is interrupted by Mum calling Eva a 'faker' (line 11), thereby treating Eva as a non-credible person, deeming her negative assessments as not genuine. In line 12 Michael continues his response by stating 'you do have to eat it', treating Eva's negative assessment as a food refusal. Interestingly, however, is that in this case it is the *brother* who orients to the social action of the assessment, while the parent 'dismisses' the assessment.

Finally, Excerpt 9 shows an example where a negative assessment is not responded to. Mum, Dad, Ronald (17 years old), Oliver (15 years old) and Charlotte (13 years old) are eating stew with smoked sausage at the dinner table. There is still some smoked sausage left, which Dad offers to the family. The target assessment is done by Charlotte in line 4.

Excerpt 9 | Smoked sausage

1	DAD:	>Hoef je geen< rookworst,
		>Don't you want< smoked sausage,
2		(3.0)
3	DAD:	Hoezo niet,
		Why not,
4	CHA:	Omdat het vies is en het is niet l:ekker,
		Because it is gross and it is not t:asty,
5		(3.0)
6	OLI:	*((to Dad))* Hier zelfs jij schuift het apart,
		((to Dad)) **See even you shove it aside,**
7		(1.0)
8	MUM:	Hij schuift niks apart.
		He does not shove anything aside.

Here, the sequence is initiated by Dad who offers Charlotte smoked sausage. The offer is implemented via a negative interrogative ('don't you want') that puts some pressure on the recipient to accept the offer or at least provide strong reasons for the refusal (Drew, 2013). After a three-second silence, Dad treats the lack of response as a refusal, and solicits an account for it from Charlotte (line 3). In response to Dad, Charlotte produces a double object-side negative assessment of the sausage: it is gross and also not tasty. The assessment accounts for rejecting a food offer by Dad. As the object-side assessment is not limited to Charlotte's own epistemic domain, a response from others could be relevant. However, the assessment is done in second sequential position, as a second-pair part to Dad's account solicitation, which limits the relevance of a response. As becomes clear from lines 5 – 8, her assessment is not responded to.

In sum, children's assessments conveying a negative here-and-now experience were oriented to by parents as vehicles for other actions. Parents frequently elaborated on the social action that the assessment accomplished, as they understood it, while elaboration on the evaluative component of the assessment

was very limited. Assessments done in first sequential position initiated courses of action and were more likely to be responded to than assessments done in other sequential positions as they accomplished different actions; e.g., initiating the refusal of a food (first position) versus accounting for not eating a food (in a responsive position).

4.4.3 Assessments about food items in general

Although most assessments were done about foods that were currently eaten, i.e., here-and-now experiences, on few occasions children assessed foods in general, i.e., that were not bound to a current eating experience. These assessments were usually done in the context of a 'larger project' in which families were establishing what foods could or should (not) be eaten on a future occasion. Assessments about food items in general were designed and/or treated differently than assessments conveying here-and-now experiences as they accomplished different actions, and offered children and parents a platform to negotiate epistemic access, rights and responsibilities to assess. In Excerpt 10, Mum, Mason (18 years old), Lucas (11 years old) and Sarah (10 years old) are eating potatoes, sausages and kale at the dinner table.

Excerpt 10 | Chicory in the oven

1	MAS:	Volgende ↑keer als ik een keer voor het eten moet zorgen gaan we spina:ziestamp eten.
		Next ↑time when I have to take care of the dinner we are going to eat spi:nach stew.
2		(2.0)
3	MAS:	[met spekjes
		[with bacon
4	SAR:	[↑Broccolistampi::e
		[↑Broccoli stewy::
5	LUC:	[Broccolisoep
		[Broccoli soup
6	LUC:	Broccoli[soep
		Broccoli [soup
7	SAR:	[Met ↑witlo:::f

		[With ↑chicory:::
8	MAS:	Nee,
		No,
9	LUC:	*(inaudible mumble)*
		(inaudible mumble)
10	SAR:	↑Witlof is lekker.
		↑Chicory is tasty.
11		(1.0)
12	MUM:	In de ↑oven?
		In the ↑oven?
13	SAR:	J:a hh,
		Y:es hh,
14	LUC:	↑Nee,
		↑No,
15	MUM:	Bij=wie heb je da leren eten,
		With=whom did you learn to eat that,
16	SAR:	*((shrugs shoulders))*
17	LUC:	Koudheid (1.0) ↑op school,
		Coldness (1.0) ↑at school,
18	SAR:	*[(inaudible mumble)*
		(inaudible mumble)
19	LUC:	[Koudheid (.) heette ↓het
		[Coldness (.) it was ↓called
20	MUM:	Gewoon koud (.) niet koudheid.
		Just cold (.) not coldness.

The sequence is initiated by Mason, who indicates he will cook spinach stew next time (line 1). Both Sarah and Lucas have alternative suggestions: broccoli stew and broccoli soup. Additionally, in line 7, Sarah suggests including chicory, which Mason flatly rejects in line 8. In response, in line 10, Sarah does a declaratively formulated, object-side positive assessment about chicory. The declarative design and responsive position decrease the relevance of a response;

however, the object-side formulation indexes the tastiness as a quality of the chicory, which is not restricted to Sarah's personal preference or epistemic domain, increasing the relevance of a response. As a social action, the assessment may serve as a vehicle to account for her suggestion in line 7 as well as a counter to Mason's rejection of it. While Mason remains silent, after a one-second gap, Mum elaborates by asking Sarah whether the chicory was cooked in the oven (line 12). Sarah confirms this at which point Lucas jumps in and contradicts her (line 14). Mum continues to elaborate in line 15 by inquiring with whom she learnt to eat that. Sarah replies by shrugging her shoulders (line 16); possibly indicating that she cannot give Mum an adequate answer to her question. Lucas takes over and explains that he ate chicory cold (raw).

Mum's elaboration on Sarah's evaluation of chicory in the oven comes at a point in the conversation where there is a conflict in the offing between Sarah and Lucas (line 15). With her inquiry, Mum steers the conversation in a different direction and further development of the conflict is avoided. In addition, by asking Sarah about her eating habits, Mum orients to those as within the epistemic domain and authority of Sarah, while also displaying her own entitlement, perhaps even her responsibility, to know about them. Interestingly, the matter inquired here is specifically *with whom* Sarah learnt to eat chicory. This displays Mum's orientation to the accountability of Sarah's assessment as depending on *who* taught Sarah to eat chicory (as it was apparently not Mum herself), rather than, for example, *where* or *how* she got acquainted with chicory.

Finally, Excerpt 11 shows the same family on a different occasion, about to start their meal consisting of spinach, meat balls, boiled eggs and potatoes. Mum forgot to fry the bacon that she intended for the current meal. She just mentioned that the bacon is in the kitchen, but that she is not going to prepare it anymore for the current meal. Our target assessments are done by Lucas in line 3, and by Sarah in lines 5 – 6.

Excerpt 11 | Pancakes with bacon

1	MUM:	Eten morgen wel gewoon n boterham met e:i (.) en ↑spekjes,
		Tomorrow we'll just eat a sandwich with e:gg (.) and ↑bacon,
2		(1.0)
3	LUC:	◦Oké. (1.0) ma:ar spekjes zijn een plus,◦

		◦**Alright. (1.0) b:ut bacon is a plus,**◦
4		(3.0) *((family members continue eating in silence))*
5	SAR:	Mam:a (.) weet je nog da=k ehh (.) boterham met spek ehh k=bedoel
		Mumm:y (.) do you remember tha=I ehh (.) like sandwich with bacon ehh I=mean
6		pannenkoek met spek ↓lust,
		pancake with ↓bacon,
7	MUM:	↓Hm↑hm
		↓Uh↑uh
8	SAR:	Wil je=da ook ns een keer maken ◦voor mij◦=
		Do you=want to make that too some time ◦for me◦=
9	LUC:	[*((poking with his fork in his food))*
10	LUC:	[=Is dit goed? Of is dit denk je teveel (1.0) is wel allemaal door elkaar,
		[=Is this good? Or is this you think too much (1.0) it is all mixed up,
11		(3.0) *((Lucas inspects his plate, others continue eating))*
12	LUC:	en best groot
		and quite big
13		(4.0) *((family members continue eating in silence))*
14	MUM:	*((to Mason))* Heb je een uit of thuis wedstrijd morgen?
		((to Mason)) **Do you have an away or home match tomorrow?**

In line 1, Mum states that they will eat the bacon tomorrow with a sandwich and egg. After a one-second delay, indicating an upcoming non-preferred response (Schegloff, 2007), Lucas responds with 'alright (1.0) b:ut', and a positive object-side category assessment about bacon, 'bacon is a plus,' (line 3). Lucas's response is a 'pro forma' agreement (Schegloff, 2007, p. 69). He initially agrees with Mum's proposal, delaying his subsequent 'dispreferred' response that does not align with that. As a social action, Lucas's turn including his assessment about bacon serves as a vehicle to display disagreement with Mum's statement that they will eat the bacon tomorrow (instead of today). Despite the object-side formulation of the assessment, the relevance of a response is limited by the responsive position of the assessment, its declarative formulation and the social action, that has little implications for others. Mum does not respond and the sequence is closed.

After a three-second silence Sarah initiates a new sequence in line 5 by summoning Mum and inquiring her about her memory of Sarah's preference for pancakes with bacon. Sarah formulates her preference as a subject-side assessment ('I like'), and the assessment is about a food item in general (pancakes with bacon, which are not currently being eaten). Mum confirms Sarah's inquiry in line 6, and Sarah follows up with a request to make those pancakes for her some time (line 8). As becomes apparent from the next lines, Mum does not respond to this request as Lucas intervenes in the conversation, and eventually Mum starts a new sequence directed at Mason. However, it is not whether the request is granted or not that is of interest here, but rather *how* Sarah designs it.

The sequence-initial position, the interrogative format of Sarah's turn and the appointment of Mum as next speaker make Mum increasingly accountable for producing a response (Stivers & Rossano, 2010). By inquiring about Mum's memory, Sarah solicits recognition, thereby displaying herself what she *expects* Mum to remember (cf. Shaw & Kitzinger, 2007). Sarah's inquiry and Mum's confirmation constitute a pre-sequence (Schegloff, 2007), as this sequence precedes a projected next action: a request by Sarah to have pancakes with bacon some time. Thus, the action of Sarah's assessment is double-barreled: not only does it solicit recognition in a summons-answer pair, it also functions as a pre-sequence to 'clear the grounds' for a later food request.

By showing what she expects Mum to remember, Sarah displays her understanding that Mum not only has epistemic access to Sarah's food preferences, but also has an epistemic *responsibility* towards them, i.e., she *should* know about them. Whereas in Excerpt 10 Mum actively asked Sarah about the origin of her preference for chicory, in Excerpt 11 Mum displays her understanding of Sarah's preference for pancakes with bacon in her confirmation in line 7, which diminishes the relevance for Mum to inquire further about Sarah's preference for those pancakes. Moreover, Sarah's formulation of soliciting recognition and her subsequent food request show how she orients to interactional rights and responsibilities of the family roles that are in place (i.e., child and mother). To elaborate, first, by displaying the apparent need to 'clear the grounds' before doing a food request, Sarah orients to Mum as having more authority in deciding which foods are consumed, as Mum is probably the person buying groceries and preparing meals while Sarah 'just' receives the food. By building up her food request with this pre-sequence, Sarah displays her understanding that it would

be ‘inappropriate’ for her to request Mum for a specific food out of the blue. Sarah’s orientation to her role of a ‘good child’ is also illustrated in the formulation of the request itself: ‘do you=want’ indicates a freedom of choice for Mum to accept or decline the request, displaying Sarah’s understanding of having relatively inferior rights to make decisions about food, and Mum having superior rights. Moreover, ‘some time’ softens the request, making it less demanding by leaving the time frame for granting the request undefined.

In sum, children’s assessments about food items in general that were not bound to a current eating experience accomplished different actions than assessments conveying here-and-now experiences. When a response was conditionally relevant, assessments about food items in general were designed and/or yielded responses in which children’s and parents’ relative rights and responsibilities to knowledge were oriented to and negotiated, as well as relative rights to do specific actions. Thus, children’s assessments about food items in general opened up an interactional space to negotiate matters of morality at the dinner table.

4.5 Discussion

The present research examined how children from families with a low SEP produce (dis)likes of food, i.e. *food assessments*, during everyday family meals and how these were treated by their parents. Our analysis highlights that children’s food assessments conveying positive here-and-now experiences were routinely not responded to by parents, and to a lesser extent agreed with or further elaborated. Children’s food assessments conveying negative here-and-now experiences were typically oriented to by parents as vehicles for other actions, particularly food refusals, or were treated as non-genuine claims. Finally, children’s assessments about food items in general, i.e., not invoked by a current eating experience, were designed and treated differently as they opened up an interactional space to negotiate matters of epistemics and morality – relative rights and responsibilities to know, to assess and to accomplish specific actions. All in all, children’s food assessments were increasingly likely to be responded to and elaborated upon when they accomplished social actions other than preference displays and thus implicated other co-present individuals (particularly parents).

The findings of the present study add to discursive psychological literature on food assessments in family mealtimes, as the analysis of the present study shows similarities as well as discrepancies to the first study deploying an interactional approach to children’s food likes and dislikes (Wiggins, 2014). In Wiggins (2014), it was concluded that parents frequently claimed epistemic primacy over their children’s food preferences, and countered (dis)likes displayed by children, or treated them as inappropriate. Our findings regarding children’s assessments conveying negative here-and-now assessments (i.e., dislikes) show a similar pattern, since they were regularly treated as inappropriate, non-genuine claims – which could be an indirect way of parents to claim epistemic primacy over their children’s food preferences. However, regarding children’s assessments conveying positive here-and-now experiences our findings deviate from Wiggins (2014). When children in the present research expressed that they liked a food, epistemic matters were not brought to the surface of the conversation, and were not treated as non-genuine claims. Instead, these assessments mostly did not yield any response or, when responded to, parents and children collaborated to establish the specific referents of the assessments. A possible explanation might be that liking a food is not understood by parents as a vehicle for an ‘urgent’ social action, and does not make a response relevant (for a more elaborate explanation on ‘urgency’, see the section on response-mobilizing features below).

Furthermore, Wiggins (2014) noted that in some cases, children’s assessments featuring the term ‘love’ (e.g., ‘I love apples’) were not responded to by parents, nor discussed with regard to possible future meals. The present analysis indicated that non-response is very common when children do assessments conveying positive here-and-now experiences (likes), but not when they express negative experiences (dislikes). Thus, adopting the terminology applied by Wiggins (2014) and elaborating on the previous point, this provides another indication that parents treat children’s likes as ‘nouns’ (physiological and/or psychological states) that limit the relevance of a response, and dislikes and assessments about food items in general as ‘verbs’ (actions) that do make a response relevant.

Moreover, our findings partly correspond to Wiggins’ (2014) noticing that subjective category assessments (e.g., ‘I love apples’) were regularly treated as expressions indicative of underlying food preferences – but that when *children*

did those assessments, parents seemed to treat those assessments as actions that children were performing, rather than as an underlying food preference. This observation becomes particularly apparent in our findings regarding children's dislikes, which parents regularly treated as a food refusal – thus, parents' responses receipted the social action of the assessment. However, our findings regarding children's likes do not correspond to this noticing, as these were predominantly treated as displays of food preference which do not require a response.

The findings of the present study also add to conversation analytic literature on how responses are mobilized (e.g., Stivers & Rossano, 2010; Schegloff, 2010; Couper-Kuhlen, 2010; Eilittä, Haddington, & Vatanen, 2021). A clue to why some of children's assessments were responded to and others were not, may be found in children's relative rights to engage in interactions with adults, and the 'urgency' of the social action accomplished with the assessment (e.g., Sacks, 1995; Butler & Wilkinson, 2013; Eilittä, Haddington, & Vatanen, 2021). Sacks (1995) argued that children have relatively inferior rights to engage in conversation with adults. However, Eilittä et al. (2021) studied children's rights to engage in multiparty interactions with adults in cars and reported that if and how children's summons are receipted is highly dependent of the position and composition of the child's summons, rather than a priori determined rights to engage in conversation. In particular, children were likely to receive a response when no other conversation was going on, but not when the adults were already engaged in another conversation – except when the reason for the child's summons was urgent (Eilittä et al., 2021). Translating this to children's food assessments in mealtime conversations, children may be more likely to receive a response when their assessment is understood as a vehicle for an 'urgent' social action. Our research showed that parents treated a food refusal as more 'urgent' than a subjective pleasurable experience.

The data corpus for the present study consisted solely of families with a low SEP. At least two ideas can be highlighted regarding this matter. Both will be addressed briefly. First, interactional research such as discursive psychology and conversation analysis asserts that interactional patterns transcend linguistic and cultural diversity (Schegloff, 2007). DP and CA research are grounded in the ethnomethodological assumption that social issues, such as power, oppression, racism, and indeed, social class or socioeconomic position, are not pre-determined existing entities; rather, they are socially constructed by people through their talk-in-interaction (Garfinkel, 1967; Kitzinger, 2000). As such, within the research fields of DP/CA, it is controversial to pre-categorize participants based on pre-defined categories such as gender, race, or indeed, socioeconomic position. It is argued that, in an attempt to firmly ground the analysis in the interactional data, participants' characteristics and/or particular contexts in which an interaction takes place should only be addressed in an analysis when oriented to, i.e., made relevant by, the interactants themselves (e.g., Schegloff, 1997; Wiggins, 2002b). However, there is an increasing volume of conversation analytic work in which contextual factors are not explicitly oriented to by the interactants themselves, but *are* addressed in the analysis, as they are observed as being relevant for the interaction by the analyst (e.g., Whitehead, 2020; Cameron, 2008; Flinkfeldt, Parslow, & Stokoe, 2021). Kitzinger (2000) argues that only describing particular forms of talk as belonging to specific categories when the interactants orient to it as such, would be very limiting. In fact, how various assumptions are routinely incorporated into everyday conversations without anyone noticing or responding to them, could be particularly interesting and relevant for analysis (Kitzinger, 2000).

The authors' approach to the present research is in accordance with the latter viewpoint. In the present research, children and parents did not explicitly orient to socioeconomic position in their everyday interactions. In line with research by Kitzinger (2000) and Whitehead (2020), we argue that this does not mean that it could not be relevant for the interaction. Rather, it might be that assumptions specific for families with a low SEP are routinely incorporated into their everyday conversations. As they fit into the worldview of other family members, they are not explicitly noticed or responded to. What is *not* oriented to by interactants could, in fact, reveal taken-for-granted social and interactional norms. Moreover, considering that 'socioeconomic position', and even more so the categorization in high, middle or low, is invented by scientists based on measures such as education, income and occupation (Shavers, 2007), it cannot be expected that participants will make this relevant themselves in everyday interaction. It is not a *participants' category*, to which one naturally belongs, such as to a specific gender, race or age group. Thus, although not explicitly articulated in everyday conversation, there is still a possibility that interactional patterns between children and parents might differ between families from various SEPs. Conclusions regarding whether and to what extent families from various

SEPs treat for example food likes and dislikes differently and which actions are accomplished, should be based on actual research in families with various SEPs rather than being assumed based on theoretical approaches. To clarify, we do not imply that interactional patterns identified in children and parents from the present research are somehow 'dictated by' the low SEP of the families, as if it were a causal relationship. Rather, interactional patterns identified in this research are present *at least* in, and *might* be specific for, families with a low SEP. The present research provides a starting point for more in-depth investigation of how families with various SEPs talk about food.

A second, related point is that the SEPs of the families analyzed by Wiggins (2014) were not collected or not available. As such, a direct comparison between interactional patterns based on SEP is unfortunately not possible at the moment. We propose that it would benefit discursive psychological and conversation analytic research to enquire into the distribution of practices across socio-demographic categories, with a focus on underrepresented populations. This could unravel whether interaction patterns are more prominent in, or more explicitly oriented to in, e.g., specific age groups, people with a certain worldview, people with a certain socioeconomic position, or otherwise. This discussion has received more attention recently, for example in this recent blog within a community of interactional researchers, in which the wide availability of data from white participants with an Anglocentric worldview is discussed (Sciubba, Shrikant, & Williamson, 2021). Moreover, participants with a low SEP are likely to be underrepresented in research where no specific attention is paid to the SEP of the participants, considering that it generally takes a lot of time and effort to include families with a low SEP in research (Stuber, Middel, Mackenbach, Beulens, & Lakerveld, 2020).

Nonetheless, on a note of cautious interpretation, we would like to offer a brief reflection of our findings compared to earlier research on perceptions of taste among mothers of low, middle and high SEPs (Van Otterloo & Van Ogtrop, 1989). Van Otterloo & Van Ogtrop (1989) interviewed mothers and found that whereas mothers with a low SEP believed that their children's taste was a fixed given, mothers with a higher SEP believed taste was moldable and could be developed over time (Van Otterloo & Van Ogtrop, 1989). Following the theoretical assumption within cognitive psychology that behavior is influenced by cognition, we might expect that parents with a low SEP, who believe taste is fixed and thus

cannot be changed, and parents with a higher SEP, who believe taste is moldable, would exhibit different behaviors towards their children's expressions of likes and dislikes. More research is needed to establish whether this is the case; however, a comparison between the findings of our study and findings from Wiggins (2014), who did not specifically topicalize SEP, provides very early and preliminary evidence that this might not be the case, as the findings from both studies did not show strikingly opposite results but rather complement each other.

Moreover, if parents believed that taste is fixed, then logically there would be no difference in how they treated likes and dislikes. But the present research showed that these are treated very differently, as likes are predominantly not responded to and dislikes are predominantly treated as food refusals – thus, in natural conversations, likes and dislikes are not two sides of the same coin. Parents may believe that taste in the sense of food preference is fixed when they are asked (Van Otterloo & Van Ogtrop, 1989), possibly derived from assumptions that taste is routed in, e.g., biology, habits, or a combination thereof, and is accessible through and reflected in language. However, when observing real life situations like the present research, we see that parents treat children's displays of taste as *actions within feeding activities* that have to be dealt with in situ – dislikes are for example treated as potentially causing feeding problems, that have to be 'solved' right away. This is especially relevant considering that feeding children is a primary task and responsibility for parents. This confirms that people treat language-in-use as action, with real consequences for their behavior in everyday life. Moreover, this shows that we should not rely *solely* on measures built on people's accounts of what they believe, because these do not capture the action dimension of language and thus run the risk of failing to provide a comprehensive understanding of human behavior, e.g., how people treat displays of taste, and why parents hardly respond to children's food likes but address dislikes.

All in all, our findings suggest that children's likes and dislikes are not symmetrical alternatives (as depicted by for example a 5-point Likert scale) and thus we might want to reconsider the way we operationalize and measure food preferences. As already noted by Wiggins & Potter (2003, p. 515), measuring food preference on rating scales forces participants into 'a particular language game of semantic differentials and numerical judgements', and 'does not test the possi-

bility that food evaluation in natural situations may be done in as parts of very different practices'. The latter is clearly shown in the present research. Moreover, as also noted by Wiggins (2001) and Wiggins & Potter (2003), a discrepancy may exist between researchers' and research participants' interpretation of what constructs are actually measured in food preference research, using specific evaluative terms – while researchers may be convinced that they measure a stable cognitive state or inner sensation, participants may refer to the last time they ate a particular food, actions accomplished with specific evaluation terms, and/or the interactionally achieved evaluation of that food.

Everyday interaction is highly organized following common-sense taken-for-granted interactional norms (Garfinkel, 1967). It is likely that parents are not always aware of when they respond to their children's assessments, and how they negotiate epistemic access, rights and responsibilities surrounding some of their children's food assessments. Therefore, a practical implication derived from the present research could be the development of a dialogue training for parents. The aim of such dialogue trainings is to increase awareness of speakers' own discursive practices and interactional patterns, by aiding them step-by-step to systematically reflect upon (un)intended effects of their own talk-in-interaction (Mogendorff et al., 2016). The Discursive Action Method (DAM) (Lamerichs, Koelen, & Te Molder, 2009; Mogendorff, Te Molder, Van Woerkum, & Gremmen, 2016) or Conversation-Analytic Role-Play Method (CARM) (Stokoe, 2014) provide suitable formats that can be adapted to a dialogue training for parents. A dialogue training, developed from DP/CA analyses, provides a useful means to increase parents' understanding of the environment in which food is discussed (including likes and dislikes), served and consumed. Critical reflection by parents on how matters of taste (i.e., likes and dislikes) are dealt with in everyday life could, for example, be a component of future interventions aiming to improve eating behavior in families with a low SEP. However, as discussed earlier, it is not substantiated that the findings of the present research apply *exclusively* to families with a low SEP. As such, the dialogue training could also be suitable for families with a middle or high SEP. However, since families with a low SEP consume relatively poor diets compared to families with a higher SEP (e.g., Van der Velde et al., 2019) and consequently the most health benefits could be gained in families with a low SEP, such a dialogue training could be particularly suitable for families with a low SEP. Based on the present research, interactional practices that could be addressed in a dialogue training are, e.g., how parents

respond to children's food likes and dislikes and the (un)intended effects on the interaction. The present analysis showed that children's food likes and dislikes were predominantly not responded to or treated as food refusals or non-genuine claims, respectively. They could, however, also provide an opportunity for dialogue. Rather than resisting, children's assessments could also invite exploring: they could, for example, be treated as invitations to discuss matters of children's taste, taste development, or shared decision making with regard to future meals. In such a training, also potential implications of children's and parents' everyday talk-in-interaction on how children learn about taste preferences and their relative rights to articulate those might be discussed.

As any research, the present research has strengths as well as limitations. The present research is the first to deploy an interactional approach to studying food preferences, i.e., likes and dislikes, in children with a low SEP. The study gives a unique insight in how children from families with a low SEP express (dis) likes of foods, and how these are understood and treated by their parents. It contributes to a deeper understanding of how food preferences are interactionally constructed in the course of everyday life in families with a low SEP. Although the study presents a detailed analysis of the most common parental understandings and treatments of children's food assessments as they occurred in the data corpus, it does not present an exhaustive list of possible responses. In addition, inherent to in-depth qualitative research, the findings are not intended to be generalized to other populations and settings. Finally, our collection of cases featured only a few assessments about food items in general. Although these cases showed a pattern, more cases could yield more robust claims regarding how assessments about food items in general are designed and treated, and how they offer a platform to negotiate epistemic access, rights and responsibilities.

The present research indicates niches for future research. First, more research is needed to establish whether and which differences may exist in interaction patterns between families with different SEPs, for example how they deal with likes and dislikes, and how this relates to their articulated beliefs about taste. Such insights would be beneficial for research in the field of discursive psychology as well as cognitive psychology. Although interactional research, such as discursive psychology and conversation analysis, asserts that interactional patterns transcend linguistic and cultural diversity (Schegloff, 2007), as elaborated upon earlier in this section, it becomes increasingly acknowledged that context such

as cultural or socioeconomic background may shape how constructs are made relevant in interaction (Kitzinger, 2000; Whitehead, 2020; Pomerantz, 2021). In addition, our findings indicate an apparent gradient in the relevance for a parent to respond to an assessment, depending on the type of action accomplished. Some assessments that served as vehicles for other actions such as food refusals yielded elaboration from parents, whereas other assessments that might for example function as a compliment, were not responded to. More research could unravel the nature of why some actions, implemented by assessments, are treated as relevant to respond to, while others are not. A clue might be found in children's relative rights to engage in interactions with adults, and/or the 'urgency' of the social action accomplished with the assessment (e.g., Sacks, 1995; Butler & Wilkinson, 2013; Eilittä, Haddington, & Vatanen, 2021). Furthermore, future research could explore if and how the age of children influences how parents orient to and treat their food assessments. Lastly, in addition to the liking and disliking of food, it could also be explored which discursive practices are deployed by children and/or parents during everyday family mealtimes with regard to other aspects of food, such as the food's healthiness.

To conclude, we would like to emphasize once more the importance of conducting food preference research in populations with low SEP, especially in children. Children with a low SEP consume poorer diets than children with a higher SEP (e.g. Van der Velde et al., 2019), and populations with a low SEP are least reached by lifestyle interventions (Beauchamp et al., 2014; Bukman et al., 2014). Part of the problem may be that lifestyle interventions are not sufficiently tailored to the complexity of people's everyday life (Bouwman, Te Molder, Koelen, & Van Woerkum, 2009; Bukman et al., 2014). Simultaneously, populations with a low SEP are relatively underrepresented in current research. It is clear that there are socioeconomic differences in food preference and consumption; however, very little is known about *how* food preferences develop in the course of everyday life. The present research showed that in everyday mealtime conversations, children's food likes, dislikes and assessments about food items in general accomplish different social actions and parents treat them in different ways. While likes were routinely not responded to at all, were agreed with or further elaborated, dislikes were predominantly oriented to as food refusals or treated as inappropriate, or non-genuine claims. This underlines the action orientation of language-in-interaction, and shows that likes and dislikes are not two sides of the same coin when expressed in everyday life. This, in turn, highlights the

potential limitations of relying solely on cognitive measures in food preference research, as the present research illuminates that there is more to 'food preference' than merely the representation of psychological states. As many parental elaborations on their children's food assessments refer to the accomplished social action and/or relative rights to know and to assess, rather than to the evaluation of the food as such – it becomes apparent that although '(non) tastiness' is discussed at the dinner table, it appears that these discussions are frequently not about *taste* at all.

Funding This work was supported by the Edema-Steernberg Foundation, Wageningen, the Netherlands. The funding source had no involvement in the study design, the collection, analysis and interpretation of data, in the writing of the report and in the decision to submit the article for publication.

Data code and availability The research data underlying this manuscript, audio and video recordings, are confidential and cannot be made publicly available. Upon request, the recordings are available in an anonymized format for peer-review. The lead author has full access to the data reported in the manuscript.

5

Healthy food talk as action in everyday mealtime conversations of families with a low socioeconomic position

Authors: Amy van der Heijden, Hedwig te Molder, Bogdana Huma, Gerry Jager

Submitted for publication in an international peer reviewed scientific journal (2022).

Abstract

Populations with a low socioeconomic position consume relatively unhealthier diets, suffer from a higher prevalence of diet-related health problems, and are underrepresented in research compared to populations with a higher socioeconomic position. This study explored how healthy eating is oriented to and constructed during evening mealtimes in families with a low socioeconomic position. The data corpus comprised video recordings of 79 mealtimes from ten families with a low socioeconomic position. Healthy eating was hardly explicitly oriented to, as shown by the identification of only sixteen cases in which family members referred to (un)healthy eating. Deploying discursive psychology and conversation analysis, the analysis of these cases showed that, how and with what function health claims were produced and designed as identity-centered, food-centered or person-centered health claims. For example, parents constructed a desired prospective identity for their child to manage their child's eating behavior, whereas food-centered health claims accounted for a speaker's own behavior, e.g., for providing a particular food. Insights in how healthy eating is oriented to and constructed in the everyday practice of families with a low SEP can contribute to successfully tailoring lifestyle interventions to the complex everyday life of families with a low SEP. Theoretical and practical implications are discussed.

Keywords
family mealtimes; low socioeconomic position; healthy eating; health claims; discursive psychology; conversation analysis

5.1 Introduction

5.1.1 Background

Dietary and health inequalities continue to prevail between populations with various socioeconomic positions (SEPs), in the sense that populations with a low SEP consume relatively poorer diets than populations with a higher SEP (Giskes, Avendaño, Brug, & Kunst, 2010; Konttinen, Sarlio-Lähteenkorva, Silventoinen, Männistö, & Haukkala, 2013). Moreover, the prevalence of diet-related health problems such as obesity, diabetes mellitus, and stroke is relatively higher in populations with a low SEP (Volaco, Cavalcanti, Filho, & Précoma, 2018; Marshall et al., 2015). Thus, engaging in a healthy lifestyle could yield substantial health benefits for populations with a low SEP; especially children, who have the highest potential of healthy life years to be gained, and considering that the socioeconomic discrepancy in diet quality already emerges in childhood (Van der Velde et al., 2019; Mech, Hooley, Skouteris, & Williams, 2016). However, populations with a low SEP are least reached by interventions promoting a healthy lifestyle, including healthy eating (Beauchamp, Backholder, Magliano, & Peeters, 2014). This may be due to the interventions being insufficiently adapted to the complexity of their everyday life (Bukman et al., 2014). In order to successfully engage populations with a low SEP in interventions promoting a healthy lifestyle, including healthy eating, more insight is needed into the role that health and healthy eating play in the complex everyday life of populations with a low SEP. However, populations with a low SEP are underrepresented in current research, and acquiring those insights comes with substantial challenges. Populations with a low SEP are difficult to reach with conventional recruitment and research methods (Stuber et al., 2020). If researchers do not make an explicit effort to include populations with a low SEP, this target group is likely to be passed over.

The modest body of research on healthy eating targeting participants with a low SEP gives some insights in their beliefs regarding what it means to eat 'healthily', and provides indications that these beliefs may differ from what health professionals would indicate as 'healthy' or 'good' eating (see e.g., Van der Heijden, Te Molder, Jager, & Mulder, 2021). For example, an interview study among low-income women indicated that according to them, 'health' meant being able to continue their life as usual. Instead of following recommended nutritional guidelines, some women would consume fruits and vegetables

only whenever they wanted to and believed that that meant they consumed a healthy diet – even when they did not meet the recommended amount of fruit and vegetable consumption (Dibsdall, Lambert, and Frewer, 2002).

In addition, various studies analyzed video recordings of real-time parent-child interactions and showed that parents refer to the healthiness of foods during mealtimes as one of various argumentative strategies to get their children to eat (e.g., Bova & Arcidiacono, 2014; Bova, 2019; Edelson, Mokdad, & Martin, 2016). However, families with a low SEP are underrepresented in such studies, if included at all, and it cannot be assumed that families with various SEPs all deploy argumentative strategies, including the concept of 'health', in the same way in everyday practice.

Research in the field of healthy eating often relies on people's accounts of what they believe, and accounts of how they ostensibly treat healthy eating in everyday life, for example by means of interviews or questionnaires. Although this provides useful insights in their own right, a problem that arises with this approach is that accounts of beliefs about healthy eating might not correspond to what people actually *do* in everyday life, or to how healthy eating is explicitly oriented to in everyday practice (Wiggins, 2004). Furthermore, as Wiggins & Hepburn (2007) note, research on, e.g., argumentative strategies by parents through the analysis of video recorded real-time interactions, often engages in the coding of observed behavior. However, a label of an argumentative strategy as being, e.g., a reference to food healthiness, only indicates *that* parents apparently make claims about healthiness of food to their children – but many details are overlooked, such as *how*, *when*, and with what *function* (i.e., social action) these claims are produced. It is essential to understand not only *that* people think about and talk about healthy eating, but also *how* claims about healthy eating are produced and oriented to in the complex context of everyday practice, in order to profoundly understand the role of health and healthy eating in people's everyday life.

5.1.2 The interactional approach to healthy eating

Discursive psychology (DP) and conversation analysis (CA) provide suitable approaches to research how healthy eating is oriented to in the course of everyday life. DP and CA are methodologies for the analysis of everyday conversation, i.e., real life talk-in-interaction (Potter, 2021; Edwards & Potter, 1992; Wiggins,

2017; Schegloff, 2007; Sidnell & Stivers, 2013). DP and CA assume language is action-oriented, i.e., that talk is used to accomplish specific social actions. Deploying DP and CA can thus provide insight in how healthy eating is *constructed* and *used* in talk-in-interaction in everyday life, and how healthy eating talk accomplishes *social actions*. To illustrate, food preference, i.e., to like or dislike a food, is shown to accomplish social actions such as complimenting the cook, fishing for more food, or rejecting food (Wiggins, 2001; Wiggins & Potter, 2003). Furthermore, Laurier & Wiggins (2011) showed in their study on the interactional construction of satiety in family mealtimes that being 'full' is interactionally achieved by participants, and can accomplish social actions such as an encouragement to eat more, or adversely, to restrict more eating. Negotiating satiety can also prelude the transition to the next stage in a family meal, such as moving on to the dessert (Laurier & Wiggins, 2011).

Moving towards the domain of how healthy eating is oriented to and constructed in everyday family mealtime interactions, two studies were identified. Wiggins (2004) studied how family members constructed and managed healthy eating advice to one another, focusing on claims about what food contains or consists of, such as vitamins or herbs. When health claims were constructed as generic, universal advice, and the focus was on a category of foods rather than one specific item, health claims were used to, e.g., account for eating that food or to justify choosing it for the family meal (e.g., 'herbs are good for you', or 'your body needs it', in which 'you' and 'your body' are generic). When health claims focused on an individual and applied to a specific food practice in the present moment, e.g., 'you haven't eaten your salad, but it contains vitamins', the claims could accomplish other actions, such as holding an individual accountable for their eating practices (Wiggins, 2004).

Furthermore, Veen et al. (2012) studied how medically required dietary restrictions were treated and managed in families with a child suffering from coeliac disease. The authors expected that health would be a primary evaluation criterion for food in these families, but it turned out that health, e.g., food safety, played a role only as a required condition that was established first. In everyday conversations during mealtimes, it was not the foods' safety or healthiness that was used to account for eating those foods, but rather the food's tastiness, whereby family members constructed eating a gluten-free diet as a matter of choice (Veen et al., 2012).

Both studies on how healthy eating is oriented to and constructed in everyday family mealtimes provide detailed analyses and insights. However, they focus on a specific interactional environment, i.e., advice-giving or managing a disease-related diet, and do not topicalize SEP. Therefore, a continued exploration of how health claims are produced and oriented to in talk-in-interaction is warranted, and is essential for our understanding of how healthy eating is constructed and oriented to in the everyday life of families with a low SEP.

5.1.3 Constructing identity in interaction

A thoroughly studied phenomenon in the field of discursive psychology is how interactants construct and manage a particular *identity* in interaction. Identity construction may provide directions to the analysis of how families with a low SEP orient to and construct healthy eating in real-life everyday interaction. Within discursive psychology, identity is not thought of as an individual, internal state – rather, identities are constructed and managed in interaction and accomplish social actions. Demonstrating or ascribing membership to a particular category, thereby constructing an identity, allows for associations with specific behaviors or characteristics, and/or relative (e.g., superior or subordinate) rights to claim specific knowledge or experiences (Sacks, 1992; Potter, 1996). As such, entitlement to a category, thereby managing a particular identity, is consequential for the social action being accomplished (Wiggins, 2017). To illustrate in the context of food and health, a study on online forum discussions on food pleasure showed how forum participants claimed superior knowledge on matters of taste, thereby constructing the identity of, and entitlement to enjoy food as, a 'gourmet' (Sneijder & Te Molder, 2006). Constructing an identity as 'gourmet' may also function to resist potential accusations of being an 'unhealthy eater' (Sneijder & Te Molder, 2009).

5.1.4 The interactional approach to 'getting children to eat'

As noted earlier, previous studies identified that parents referred to food healthiness as one of various argumentative strategies to get their children to eat (Bova & Arcidiacono, 2014; Bova, 2019; Edelson et al., 2016). A body of literature deploying DP and CA also addresses the matter of getting children to eat in family mealtimes, investigating how parents manage children's behavior during mealtimes, for example by how parents construct and use requests, directives, admonishments and threats, and how children may respond to those (Craven & Potter, 2010; Kent, 2012a, 2012b; Antaki & Kent, 2015; Hepburn & Potter, 2011; Potter & Hepburn, 2020; Hepburn, 2020a; 2020b). For example, Craven & Potter (2010) explain how directives differ from requests in terms of the extent to which a speaker (in this case, a parent) displays entitlement to direct a recipient's (in this case a child's) actions. Unlike requests, the design of directives reduces the contingency of the directed course of action by the speaker on the capacities or desires of the recipient (Craven & Potter, 2010). Kent (2012a, 2012b) highlights how children can respond to directives, e.g., by displaying compliance, resistance, legitimate non-compliance, or incipient compliance. In addition, Hepburn (2020a) analyzed parental practices of managing 'problematic' child behavior in the context of socialization, and identified how instead of deploying 'invasive' management behavior tools such as directives, admonishments or threats, parents can also provide a child with opportunities for self-direction. Rather than telling children what to do, parents let children seek their own solutions to their problem behavior, a practice through which child socialization is interactionally achieved. Moreover, allowing a child to correct its own problem behavior can avoid undesirable consequences of more invasive practices, such as the emergence of conflict (Hepburn, 2020a). Although health is not specifically topicalized in these studies, they may provide directions for further analysis on how healthy eating is constructed and oriented to in talk-in-interaction in everyday life, and how references to health accomplish social actions.

5.1.5 Study aim

The aim of the present study is to explore how healthy eating is oriented to and constructed during evening mealtimes in families with a low SEP, by identifying interactional patterns regarding how, when, by whom and with what function health claims are produced.

It should be noted that in discursive psychological and conversation analytic research, it is assumed that interactional patterns transcend linguistic and cultural diversity (Schegloff, 2007), and it is deemed controversial to categorize research participants based on pre-existing categories such as SEP. However, there is a growing body of literature that disputes the stance that participants' categories should only be addressed in the analysis when oriented to by the participants themselves in the interaction, arguing that what is *not* explicitly oriented to is also relevant for the interaction, and can unravel a taken-for-granted worldview of the participants in the interaction (Kitzinger, 2000; Whitehead, 2020). Moreover, since populations with a low SEP are underrepresented in research,

and given the urgency of the topic at hand, i.e., the potential health benefits that can be gained if lifestyle interventions can be successfully tailored to the everyday life of families with a low SEP, we argue it is both scientifically and societally relevant to conduct the present research in families with a low SEP.

5.2 Methods

5.2.1 Data corpus

Video recordings of 79 evening mealtimes, made by ten families with a low SEP, were collected for this study. Families consisted of at least one parent and at least one primary school-aged child. The specific composition of each family is described elsewhere (Van der Heijden, Te Molder, Huma, & Jager, 2022). Low family income and a low or medium education level of at least one parent (CBS, 2021) were used as indicators for low SEP. Education level and demographical information (i.e., age of the family members) were assessed before the families started recording. Nine families were recruited from food banks in the Netherlands, indicating a low family income. One family was recruited via snowball sampling.

All families were provided with two cameras and recorded their evening meals themselves. No researchers were present during the recordings. The two cameras were placed on tripod stands next to the dinner site, enabling recording from various angles and capturing verbal as well as non-verbal interaction. Families received meal boxes as reimbursement for their participation after they completed the recordings.

All family members were informed about the purpose of the study (i.e., to capture naturally occurring conversation during mealtimes) and were given ample opportunity to ask questions. All recorded family members provided written informed consent (written informed consent for children was provided by their parents). This study was approved by the Medical Ethical Review Board of Wageningen University & Research, the Netherlands (METC-WU, file number: NL64893.081.18).

5.2.2 Analytical procedure

First, a verbatim transcript of the recordings was made by a transcription service. The researchers manually searched the verbatim transcripts for sections in which the (un)healthiness of foods was discussed. Detailed transcriptions of these sections were made by the researchers, using the Jeffersonian notation (Jefferson, 2004) and including non-verbal expressions (such as eye gazes and hand gestures) that were derived from the video recordings. Sections were marked as being about health when the (un)healthiness of food was literally mentioned (e.g., 'this food is (not) healthy') or when physical outcomes of eating a food were mentioned (e.g., 'this food is (not) good for you'; 'eating this food makes you strong'). The analysis draws on a collection of sixteen cases that met these inclusion criteria.

Discursive psychology (DP) and conversation analysis (CA) – qualitative, inductive methodologies for the analysis of real-life talk-in-interaction – were used to analyze the data (Potter, 2021; Edwards & Potter, 1992; Potter & Hepburn, 2005; Wiggins, 2017; Schegloff, 2007; Sidnell & Stivers, 2013). Rather than aiming to get insight into cognitive processes through talk, the analytic focus of DP and CA is on how practices accomplish specific actions in talk-in-interaction (such as complimenting, persuading, or accounting) (Potter & Hepburn, 2005; Sidnell & Stivers, 2013). Moreover, as interactions are highly normatively organized, they can reveal taken-for-granted social and interactional norms (Garfinkel, 1967), including norms on healthy eating in the context of everyday life.

Each individual case was examined in detail and in an iterative, analytic process interactional patterns were identified. The analysis will show that and how the interactional environment shapes the format of a produced health claim and its function, i.e., the social action that is accomplished with the claim. All analyses were performed on the original Dutch data. The structure of sentences in the English translations resembles the structure of the original Dutch versions in order to allow readers to optimally follow the presented analysis. Consequently, the translations do not always display grammatically 'correct' English sentences.

5.3 Analysis

First, it should be noted that the identification of only sixteen cases in a data corpus of 79 evening mealtimes shows that healthy eating is *hardly explicitly ori-*

ented to during evening mealtimes in families with a low SEP. This scarce number is an important finding considering the rationale and aim of the study, with implications that will be elaborated upon in the discussion section.

Furthermore, our analysis of the identified sixteen cases distinguishes three formats in which interactants produce health claims, that accomplish distinctive social actions in the interactional context in which they are produced. *Identity-centered* health claims were produced in the interactional environment of managing children's behavior, in the large majority of cases in argumentative sequences, to overcome (potential) food resistance. Parents constructed a desired prospective identity for their child to manage their child's behavior and cajoled them to consume a particular type of food. By contrast, *food-centered* health claims were produced in interactional environments where managing other people's behavior was *not* the main issue. Rather, food-centered health claims were used to account for a speaker's own behavior, such as for eating or providing a particular food. Finally, we also identified *person-centered* health claims that exhibit the characteristics of both identity-centered and food-centered health claims. They were produced in contexts where the referent of the health claim was a broader category of foods in a hypothetical situation, rather than invoked by a specific food in the present situation, and related to outcomes of consumption for a person. All three types of health claims will be elaborately explained and substantiated with evidence in the following three sections.

5.3.1 Identity-centered health claims

Identity-centered health claims were most frequently produced in the data corpus (9 times). The first example shows how a parent produces an identity-centered health claim in the context of a child's food resistance. Excerpt 1 features Mum, Dad, Marie (11 years old), Benjamin (8 years old), and Claire (3 years old). The family is eating dinner on the couch by the television (not switched on). The meal consists of schnitzel, red cabbage and potatoes. The target claim is produced by Dad on line 7.

Excerpt 1 | You should always eat

1	CLA:	*((looking at Mum))* Mama k=hoef nie te eten.
		((looking at Mum)) **Mummy I=don't need to eat.**
2		(1.0)

3	MUM:	*((scooping potatoes onto Dad's plate, briefly glances at Claire))* Jawel je=gaat wel eten,
		((scooping potatoes onto Dad's plate, briefly glances at Claire)) **Yes you=are going to eat though,**
4	DAD:	Je gaat wel eten schatje,
		You're going to eat darling,
5		(1.0)
6	CLA:	↑Als j::e=
		↑If you::=
7	DAD:	[=Anders word je ↑nooit groot en st:erk,]
		[=Otherwise you ↑never become big and str:ong,]
8		[*((shaking his head to Claire))*]
9		(1.0)
10	CLA:	↑ALS (1.0) als je niet wil=eten ::moet je niet e::ten
		↑IF (1.0) if you don't want to=eat you ::should not e::at
11	DAD:	Jawel, (.) je moet altijd ↓eten
		Yes though, (.) you should always ↓eat

The sequence starts with Claire addressing Mum and stating that she does not need to eat. After a one-second silence, indicating an upcoming dispreferred response (Schegloff, 2007), Mum produces a directive in which she orders Claire to eat (line 3) (cf. Craven & Potter, 2010). Mum's response displays her understanding of Claire's turn as *resistance to eat*, as her directive is directly countering the possibility that Claire resists eating her dinner (line 3). Subsequently, Dad produces a similar directive to Claire, also displaying his understanding of Claire's turn as resistance to eat, and countering it (line 4). Following a one-second silence, Claire starts what will turn out to be an account for her prior statement and a continued display of resistance. Taking advantage of Claire's somewhat disfluent production of her turn (note the colon within 'j::e' in line 6 indicating the lengthening of the sound), Dad comes in with an account grammatically designed as an increment to his prior turn (Couper-Kuhlen & Ono, 2007): 'Otherwise you ↑never become big and str:ong,'. After a one-second silence, Claire restarts the account she had not finished: '↑IF (1.0) if you don't want to=eat you ::should not e::at' (line 10), which is subsequently countered by Dad (line 11).

A striking feature of this excerpt is *how* Dad manages Claire's behavior, i.e., by producing a directive (line 4) for which he provides an account (line 7). In his account, Dad *constructs a prospective desired identity* for Claire: 'Otherwise you ↑never become big and str:ong,' (line 7). The combination of Dad's directive and identity-centered health claim to account for it, makes it interactionally difficult for Claire to continue her resistance. First, because compliance to a directive is, in light of interactional norms, the preferred response option (Kent, 2012a). Second, the identity-centered health claim further encourages alignment by offering a further inducement to comply and thus making it more difficult for Claire to continue resisting.

Note that the inducement is recipient designed for Claire's resistance here-and-now. Recipient design means that a speaker constructs his turn to orient to a specific recipient and the interactional context in which the talk is produced (e.g., Sacks & Schegloff, 1979; Wilkinson, 2011). The claim, 'Otherwise you ↑never become big and str:ong,', is about *you*, i.e., Claire; 'you' is even the grammatical subject of the sentence; she is the center of the claim. In addition, the option that Claire will not acquire the desired identity as constructed by Dad, is projected by Dad as a direct consequence of Claire's behavior in the present moment (refusing to eat), thus orienting to this particular context. The alternative reality projected with this claim (that is not being said), is that resisting Dad's directive (thus not eating) will prohibit Claire from acquiring the desired prospective identity (cf. Billig, 1987). If eating will make her big and strong, while alternatively not eating will not, it becomes not only interactionally difficult but also illogical for Claire to continue resisting to eat. Thus, Claire is also being made *accountable* for her presumed resistance to eat.

In the other cases displaying identity-centered claims throughout the data corpus, the identified phenomenon was similar: interactants (parents) produced identity-centered health claims in the context of managing someone else's (a child's) behavior, and their claims were also recipient designed. Due to space limitations, each of these particular features will not be repeated in the next three examples. Instead, the focus is on notable similarities or differences from the first example.

Excerpt 2 displays a similar scene to Excerpt 1, but rather than resisting food in general, in this example a particular food is resisted. Dad, Dylan (5 years old),

and Ronald (9 years old) are sitting at the dinner table and are about to start their meal, consisting of soup and baguette. Mum is still occupied in the kitchen. The family also ate soup the day before. We focus on the identity-centered health claim produced by Mum on line 5.

Excerpt 2 | From this soup you become very strong

1	DYL:	*((holds his head down on his hands, in whining voice))* Ge:en s::oep.
		((holds his head down on his hands, in whining voice)) **N:o s::oup**.
2		(1.5)
3	DYL:	Ik ↑heb al een s (.) keer soep ↓gegeten
		I ↑already ↓ate (.) soup some time
4		(3.0)
5	MUM:	*((from the kitchen))* Van deze soep word je heel st:erk,
		((from the kitchen)) **From this soup you become very str:ong**,
6		(2.0)
7	DAD:	O:h? (1.0) hoor=je wat mama ↑zegt
		O:h? (1.0) do=you hear what Mum ↑says
8	DYL:	Nee,
		No,
9	DAD:	Van ↓deze soep word je heel sterk,
		From ↓this soup you become very strong,
10		(1.0)
11	DYL:	[(inaudible)
		[(inaudible)
12	DAD:	[Neem je een lekker bro:odje der bij.
		[You take a nice piece of br:ead with it.
13	DYL:	ik eet (.) ik eet dat gewoon o:p,
		I eat (.) I just e:at that,

The sequence is initiated by Dylan, who is holding his head down in his hands and says 'N:o s::oup.' in a whining voice (line 1). After not being responded to, he provides an account for his utterance ('I ↑already ↓ate (.) soup some time' in line

3), possibly to elicit a response from Mum or Dad, who are responsible for providing him with soup on multiple occasions. After a three-second silence Mum says from the kitchen (not visible on camera) 'From this soup you become very str:ong,' (line 5). Providing this account for serving him this particular soup displays her understanding of Dylan's turn as a complaint and/or as resistance to the soup, which makes an account for serving it relevant. Similar to Excerpt 1, in this case Mum accounts for serving this particular soup *by constructing a desired prospective identity* for Dylan: becoming very strong. Mum's account, designed as an identity-centered health claim, functions to counter Dylan's presumed resistance to this soup. The identity-centered claim in this excerpt underscores again how identity-centered claims are produced in the context of managing behavior, and are highly recipient and context designed. The claim is not only designed with Dylan as the subject of the sentence (from this soup *you* become very strong), but also stressing grammatically and prosodically *this* particular soup (notice that partial underlining of 'this' indicating prosodic emphasis). Alternatively, Mum could easily have produced such a claim in a more general format, e.g. 'you are going to eat, otherwise you never become big and strong', as in Excerpt 1 – but, as in all other cases throughout the data corpus, her claim is designed specifically to fit the recipient and the context in which it is produced in order to deal with the emerging resistance to eat.

The next example shows how an identity-centered health claim can be collaboratively produced by parent and child. Excerpt 3 shows Mum and Levi (4 years old) about to have dinner together at the dinner table in the kitchen. Levi is sitting at the dinner table while Mum is still in the kitchen, walking back and forth with food. She already put a bowl of chicken wings on the table.

Excerpt 3 | Also you will eat beans

1	LEV:	*((bends over to the bowl with chicken wings, grabs into the bowl))*
2	LEV:	[Kipjes zijn ↑zo <lekk:er.>]
		[Chickens are ↑so <tast::y.>]
3	MUM:	[*((comes from the kitchen))*]
4		(1.0)
5	MUM:	Maar luister.
		But listen.
6	MUM:	*((puts a plate with green beans and potatoes in front of Levi))*
7	MUM:	*((in high pitch))* ↑Ook eet jij wel ↑boontjes
		((in high pitch)) ↑**Also you will eat ↑beans**
8	LEV:	*((in sad voice, looking disappointed))*: A::wwh,
		((in sad voice, looking disappointed)): **A::wwh**,
9	MUM:	Ja jammer hè,
		Yes sad huh,
10		(9.0) *((Mum walks back to the kitchen and takes out cutlery, meanwhile Levi is eating green beans with an angry face))*
11.	MUM:	Want (.) van bo:ontjes word j:ij?
		Because (.) from be:ans y:ou become?
12		(2.0) *((Mum looks at Levi; eventually he looks back at her))*
13	MUM:	Wat >word je< van ↑boontjes?
		What >do you< become from ↑beans?
14		(1.0)
15	LEV:	<Sterk,>
		<Strong,>
16		(1.0)
17	MUM:	<↓Goed z:o > van boontjes word jij sterk. (1.0) heel goed.
		<V:ery ↓good > you become strong from beans (1.0) very good
18		(11.0) *((Mum humming in background from the kitchen, Levi is already eating green beans and potatoes. Then Mum comes back from the kitchen and sits down at the table too.))*
19	MUM:	Zo. (.) £Nou. (1.0) heh.£ (.) we zitten aan tafel, (1.0) ↑woeh::oe
		There. (.) £Well. (1.0) heh.£ (.) we're at the table, (.) ↑weeh::oo

In Excerpt 3, after a directive from Mum to Levi to eat beans (line 7), Levi displays displeasure about having to eat beans (line 8). In line 9, Mum displays her understanding of Levi's 'A::wwh,' including his non-verbal behavior, as disappointment ('Yes sad huh,'). Although Levi is eating the beans (line 10), thus not completely resisting them, his angry face and the preceding lines are understood by Mum as 'non-defying resistance', as displayed by her subsequent initiative to collaboratively agree on eating beans (starting from line 11). Her initial

inquiry to Levi is not responded to (lines 11/12). After repeating her question (line 13), Levi completes the question-answer summons by stating '<Strong,>' (line 15). Mum then compliments him, produces a full identity-centered health claim that repeats what she and Levi collaboratively achieved, and compliments him again (line 17). After this, the meal continues and Levi eats his green beans.

Notable in this excerpt is how Mum initiates a collaborative completion sequence before producing a full identity-centered health claim herself. By providing Levi the opportunity for self-direction, i.e., letting Levi find a solution to his own potential problematic behavior (resistance to eating beans), Mum does not only overcome the potential resistance, but also interactionally deploys a socialization practice by reinforcing Levi's bean eating behavior on future occasions (as 'you become strong from beans' is not bound to this particular time and place; rather, it conveys a general rule) (cf. Hepburn, 2020a).

According to Huma, Stokoe & Sikveland (2019), persuasive conduct consists in speakers engaging in recipiency management, and producing a recipient designed identity-centered health claim to overcome (potential) resistance to eat makes (continuation of) resistance interactionally difficult. Completing the claim collaboratively, as in this excerpt, seems like an even more effective way to manage someone's behavior (e.g., to overcome potential food resistance), as it makes resistance even more interactionally difficult. That is, it would imply that Levi would have to counter a statement he just co-produced – which would make him accountable for, e.g., being inconsistent.

The final example of identity-centered health claims also shows an excerpt in which an identity-centered health claim is produced in the context of managing behavior, but not in a process of persuasion (i.e., counteracting resistance). In Excerpt 4, once again Mum and Levi (4 years old) are eating green beans, potatoes and chicken legs – albeit on a different occasion. They are sitting at the dinner table, about to finish their meal. Mum is still eating, but Levi is not, despite still having food on his plate (mainly green beans, of which he has eaten only a few). Levi is watching a video on a smartphone and there has been no conversation for the past three minutes.

Excerpt 4 | Are you full sweetheart?

1	MUM:	*((looks at Levi, steals a bean from his plate and puts it into her own mouth))*
2	MUM:	Mama gaat ↑<winn:en>
		Mummy is going to ↑<wi:n>
3	LEV:	*((looks irritated, growls))* Arg:h
		((looks irritated, growls)) **Arg:h**
4		(1.0)
5	MUM:	Zi=je vol?
		Ar=you full?
6		(4.0) *((Mum is looking at Levi; Levi continues to watch a video on a smartphone))*
7	MUM:	Zit=je vol lieverd?
		Are=you full sweetheart?
8		(2.0) *((Levi continues to watch a video on a smartphone))*
9	MUM:	Nou. (.) goed gegeten.
		Right. (.) well eaten.
10		(2.0) *((Levi continues to watch a video on a smartphone))*
11	MUM:	Goed zo word je groot en sterk van, (1.0) ↑boontjes eten.
		Well done you become big and strong from, (1.0) eating. ↑beans
12		(21.0) *((Mum continues eating, and Levi uninterruptedly continues watching the video on the smartphone))*

After three minutes of silence in which Levi was watching a video on a smartphone and Mum was finishing her meal, Mum attempts to get Levi to eat some more beans, by making it into a game who will 'win' (i.e., who finishes the beans the fastest) (lines 1-2). Levi looks irritated and growls (line 3). Mum subsequently attempts to figure out whether Levi has finished eating, by asking Levi whether he is full (line 5). A response from Levi is lacking, as he uninterruptedly continues to watch the video on his smartphone (line 6). Mum repeats her question and adds 'sweetheart', thereby appointing Levi as the next speaker and making him accountable to respond (line 7) (Stivers & Rossano, 2010). A response is again lacking, and after a two-second silence Mum treats this lack of response as a confirmation that Levi is indeed full and has finished eating, displayed in her subsequent compliment to him about how 'well' he ate: 'Right. (.) well

eaten.' (line 9). The formulation in past form displays that this activity is now finished. After a response from Levi is again lacking, Mum attempts to end the meal, and does so by praising Levi about the (few) beans he ate, including an identity-centered health claim: 'Well done you become big and strong from, (1.0) eating. ↑beans' (line 11).

Throughout the prior examples and in the majority of cases, identity-centered health claims were produced in the context of managing someone else's behavior, in a process of persuasion where parents attempted to overcome (potential) food resistance by a child. In this excerpt, the identity-centered health claim is also produced in the context of managing someone else's behavior – but rather than overcoming resistance, in this case, behavior is managed in the sense of *reinforcing good behavior*. Mum constructs a desired prospective identity for Levi (becoming big and strong) to praise him for his bean-eating behavior. By reinforcing Levi's bean eating behavior in this way, Levi is taught that eating beans is not just good behavior for the present moment, but also for future occasions, thus it can also be identified as a food socialisation practice (cf. Hepburn, 2020a).

To conclude, this section showed that and how interactants produced identity-centered health claims in the context of managing someone else's behavior. In the large majority of cases this was in a persuasive context and entailed parents attempting to overcome (potential) food resistance by a child, but also to reinforce good (eating) behavior. Various ways in which the identity-centered health claims were deployed can be linked to food socialisation practices. The excerpts underscore how interactants extensively designed their claims to orient to the specific recipient and context in which they were produced.

5.3.2 Food-centered health claims

The following section will show how interactants produced food-centered health claims to accomplish actions in various interactional contexts. Rather than managing someone else's behavior, food-centered health claims accounted for a speaker's own behavior, e.g., for eating or providing a particular food. Food-centered health claims occurred 5 times throughout the data corpus. Excerpt 4 displays Mum and Levi (4 years old) at the dinner table. Mum's meal consists of soup and Levi's meal of chicken, broccoli and potatoes. Mum is feeding Levi and produces a food-centered health claim on line 11.

Excerpt 5 | Do taste a bite

1	MUM:	E::en, >twee drie,< (.) go
		O::ne, >two three,< (.) go
2		(1.0) *((Mum pretends to put Levi's potato into her own mouth instead of his))*
3	MUM:	Hap,
		Snap,
4		(2.0) *((Levi didn't take the bite yet, Mum again pretends to put Levi's potato into her own mouth instead of his))*
5	MUM:	↑Hap,
		↑Snap,
6	LEV:	*((laughs))* £hehehehe (1.0) heheh£
		((laughs)) **£hehehehe (1.0) heheh£**
7	MUM:	Hap. *((actually eats Levi's potato, chews))*
		Snap. *((actually eats Levi's potato, chews))*
8		(2.0)
9	LEV:	*((rhythmically))* [Klaas, (.) klaas. (.) klaas (.) klaas (.) ka. (.) ka, (.) ka, (.) ◦ka◦]
		((rhythmically)) **[Klaas, (.) klaas. (.) klaas (.) klaas (.) ka. (.) ka, (.) ka, (.) ◦ka◦]**
10		[*((mashes his food with his fork))*]
11	MUM:	*((in high pitch))* Doe een hapje ↑proeven (.) deze is he:el ge↓zond (.) en ↓lekker
		((in high pitch)) **Do ↑taste a bite (.) this one is ve:ry ↓healthy (.) and ↓tasty**
12	LEV:	*((rhythmically))* [Kla, (.) kla. (.) kla. (.) bla. (.) bla, (.) blaas?]
		((rhythmically)) [Kla, (.) kla. (.) kla. (.) bla. (.) bla, (.) blaas?]
13	LEV:	[*((is playing with his fork))*]
14	MUM:	*((offers Levi a bite of food on a fork))*
15	MUM:	E:en, (.) twee drie [>go<
		O:ne, (.) two three [**>go<**
16	MUM:	[*((pretends to put the bite into her own mouth, but then puts it in Levi's))*]

Mum is playing a 'game' with Levi while feeding him, as if the eating were a race ('O::ne, >two three,< (.) go', line 1) pretending to put bites intended for him into her own mouth (lines 1 – 9). In line 11, Mum offers Levi another bite

and produces a food-centered health claim: 'Do ↑taste a bite (.) this one is ve:ry ↓healthy (.) and ↓tasty'. With this claim, Mum accounts for offering this particular bite to Levi. The interactional context in which this claim is produced is thus 'offering food'.

Firstly, the 'center' of this claim is a *food* rather than a person. The claim is about 'this one' (line 11), i.e., this particular bite, which also appears as the grammatical subject of the sentence. Note how this is a major difference from the identity-centered claims, where the center of the claim was a particular person and a constructed prospective identity for that person. Secondly, note how in this case, the stretch of talk does *not* involve managing someone else's behavior, such as persuading someone to eat who resists their food, or reinforcing 'good' eating behavior (as with the identity-centered health claims). Levi is not resisting his food or displaying other behavior that should be 'managed' and/or calls for food socialisation practices. Rather, Levi seems distracted from the food, as displayed by his laughing and rhythmical 'singing' (lines 6, 9 and 12), which could be understood by Mum as an opportunity to offer bites to Levi, for example in an attempt to proceed with the meal.

In the next example, a food-centered health claim is produced to account for providing a particular food. Notably, this example shows a claim about something being *not* healthy – which was rare, as it occurred only two times in our collection. Excerpt 6 shows Mum, Dad, Marie (11 years old), Benjamin (8 years old), and Claire (3 years old), sitting on the couch and stools in front of the television (switched on), and eating white buns with eggs and hamburgers. The excerpt features the interaction between Mum and Claire, while Dad and Benjamin simultaneously have a separate conversation about 'who can be silent the longest'. The food-centered health claim is produced by Mum on line 10.

Excerpt 6 | Hamburgers are not so healthy

1	BEN:	*((to Dad))* Wie het langste stil kan zijn,
		((to Dad)) **Who can be silent the longest,**
2	MUM:	*((to Claire, who is happily bouncing on her chair))* Lekk↓:::er
		((to Claire, who is happily bouncing on her chair)) **Tast↓yyy**
3		(2.0)

4	BEN:	*((to Dad))* Oké?
		((to Dad)) **Alright?**
5	CLA:	*((growls, still happily bouncing))* Grrrrr,
		((growls, still happily bouncing)) **Grrrrr,**
6	BEN:	*((to Dad))* ↑Tot (2.5) e:::h (1.0) ik >klaar ben met eten.< (1.0) oké?
		((to Dad)) **↑Until (2.5) e:::h (1.0) I >am done eating.< (1.0) alright?**
7.	CLA:	[Rrr, (.) rr, (.) rrrrr.
		[Rrr, (.) rr, (.) rrrrr.
8	BEN:	*((to Dad))* [Dri:e (.) >twee ↑een< (.) go
		((to Dad)) **[Thr:ee (.) >two ↑one< (.) go**
9	CLA:	*((in singing rhythm))* De. (.) di:e, (.) e::h (.) pff (.) pff (.) pff (.) pff (.) pff (.) pff (.) p:ff (.) dit is=
		((in singing rhythm)) **The. (.) th:ee, (.) e::h (.) pff (.) pff (.) pff (.) pff (.) pff (.) p:ff (.) this is=**
10	MUM:	*((to Claire))* =Hamburgers zijn dan wel niet zo ge↓zond (.) >maar ◦wel [↑lekker toch?◦<
		((to Claire)) **=Hamburgers are not so ↓healthy then (.) >but ◦they are [↑tasty right?◦<**
11	CLA:	[MAM::::A?
		[MUMM::::Y?
12		(2.0)
13	CLA:	oh (.) u::h (.) welke naam is deze ham<burger,>
		oh (.) u::h (.) which name is this ham<burger,>

Mum produces a positive assessment about the food directed at Claire; possibly in response to Claire's displayed happiness (line 2). Claire does not provide a clear response to her, apart from growling and singing to nobody in particular (lines 5, 7, and 9). In line 10, Mum produces a food-centered health claim directed at Claire: '=Hamburgers are not so ↓healthy then (.) >but ◦they are [↑tasty right?◦<'.

By producing a minimized assessment about the hamburgers' presumed unhealthiness in line 10 (i.e. 'not so healthy' rather than, e.g., 'unhealthy') (see, e.g., Wiggins (2017) for an explanation of minimization in interaction), Mum provides a possible alternative evaluation of the hamburgers. However, by using

the minimized format followed by the contrasting (indicated by 'but') positive taste assessment, Mum constructs the hamburgers' unhealthiness as excusable or compensated by their tastiness. The hamburger-eating is constructed as collaboratively enjoying something, without feeling guilty. This particular construction may function as an account for Mum to eat them and provide them to her family, despite their 'not so healthiness'. Thus, producing a food-centered claim where the hamburgers are the center of the claim rather than a person, including the minimization of their unhealthiness, reduces Mum's accountability for providing them. This corresponds to earlier findings on the construction of healthy eating advice, in which it was established that when eating advice is not tied a specific person, it becomes more 'hypothetical' and less accountable (Wiggins, 2004).

As a final example of food-centered health claims, a deviant case is presented. In Excerpt 7, a child resists his food. Following the analysis until this point on cases in the context of food resistance and managing someone's behavior, a parent producing an identity-centered health claim would fit the pattern. However, in this case, the parent produces a food-centered health claim. We have Mum and Levi (4 years old) again at the dinner table, where Mum eats a salad while Levi is offered broccoli with cheese. They share a smoked sausage. Levi just refused the piece of smoked sausage that Mum offered to him, and now Mum offers him a bite of broccoli with cheese. The food-centered health claim is produced by Mum on line 25. The full-length excerpt is included to display the context of food resistance in which the claim is produced, and to display many features of non-verbal behavior that are relevant for this interaction.

Excerpt 7 | Broccoli with cheese

1	MUM:	*((offers a fork with broccoli to Levi))* Probeer ↑dan de broccoli met ↓kaas (.) die >vind je wel<=
		((offers a fork with broccoli to Levi)) **↑Then try the broccoli with ↓cheese (.) that >you do<=**
2	LEV:	[=Nah]
		[=Nah]
3	LEV:	[*((turns away his head and walks away from the table, to the living room))*]
4		(2.0) *((Mum puts her head down in her hands and sighs))*
5	MUM:	hhhhh:
		hhhhh:
6.	LEV:	*((walks back to the table, loudly drops his fork on the table, and walks away to the living room again))*
7	MUM:	[*((tilts her head towards the living room where Levi is))*]
8	MUM:	[↑Levi. (1.0) je hebt ↑gister ook broccoli gegeten. dat vin jij ↑lekker]
		[↑Levi. (1.0) you also ate broccoli ↑yesterday. you ↑like that]
		(15.0) *((Mum looks frustrated and stares to the wall with her hands clinged together. Occasionally glances at the living room where Levi is playing with toys, making loud, smashing noises.))*
10	MUM:	Levi.
		Levi.
11		(4.0) *((Mum has her head tilted towards the living room, seems to wait for a response from Levi))*
12	MUM:	Ko:m, we doen wedstrijdje.
		Co:me, let's play a game.
13		(3.0) *((loud, smashing noises hearable in background; Mum slides her chair over to Levi's and repositions his chair))*
14	MUM:	Kom lekker zitten.
		Come take a nice seat.
15		(2.0)
16	LEV:	*((from the living room, while making smashing noises))* Nee=nee=nee hh
		((from the living room, while making smashing noises)) **No=no=no hh**
17		(1.0)
18	MUM:	[*((has her head tilted towards the living room where Levi is))*]
19	MUM:	[Ja=maar ik heb spe↑ciaal voor jou met ↑kaas gemaakt. dat >wou jij< hebben.]
		[Yes=but I made es↑pecially with ↑cheese for you. >you wanted< to have that.]
20		(2.0) *((Mum is preparing a new bite of broccoli and cheese on Levi's fork))*
21	MUM:	h:é dat wou jij hebben, (.) met kaas.
		h:ey you wanted to have that, (.) with cheese.
22	LEV:	Ne:e
		N:o
23		(5.0) *((Mum still has her head tilted towards the living room where Levi is, seemingly waiting for a response))*

24	MUM:	*((tilts her head back and looks down to her plate, adjusts a lock of her hair))*
25	MUM:	Ma=is wel gezond, (.) ho:or,
		But=it is healthy, (.) th:ough,
26		(6.0) *((Mum tilts her head towards the living room again, seemingly waiting for Levi to respond; after 6 seconds, a sound from a toy is hearable, after which Mum tilts her head back, takes her salad and walks to the kitchen, with a frustrated facial expression))*
27		(9.0) *((Mum is cleaning up in the kitchen, sighing and mumbling audibly, then sits back at the dinner table))*
28		(5.0) *((Mum rumbles with the food on the table, puts the smoked sausage on the other side of the table))*
29	MUM:	hhhh >well< hh
		hhhh >well< hh
30		(2.0)
31	MUM:	[*((tilts her head towards the living room where Levi is))*]
32	MUM:	[Levi,]
		[Levi,]
33		(3.0)
34	MUM:	Zulle we ↑sa::men (.) kom (.) samen,
		Shall we to↑ge::ther (.) come (.) together,
35		(1.0) *((Mum repositions Levi's chair))*
36	MUM:	[*((tilts her head towards the living room where Levi is))*]
37	MUM:	Ik vin=t wel gezellig als je bij me komt zitten.
		I would like=it if you come sit with me.

Mum offers bites of broccoli with cheese to Levi and engages in various attempts to persuade him to eat (lines 1, 8, 12, 14, 19, and 21), amongst other things by referring to a previous occasion when Levi ate broccoli with cheese and claiming that he likes it, thereby challenging his resistance (line 8); see Wiggins (2004b; 2014). However, Levi resists the bites offered to him by, e.g., turning away his head, producing various forms of 'nah' and 'no', and even leaving the table (lines 2, 3, 6, 16, and 22). Mum displays signs of verbal and non-verbal frustration in response to Levi's resistance (lines 4, 5, 9, and 26).

There is a notable difference between this case and all other cases in the context of food resistance throughout the data corpus. While in all other cases, the parent produced a health claim while *still dealing* with (i.e., possibly overcoming) the resistance, thus still attempting to manage the child's behavior, in this case, the health claim is at the point in the interaction where Mum has seemingly already 'lost' the battle of managing Levi's behavior, i.e., persuading him to eat.

This can be derived, first, from Mum's unsuccessful attempts at persuasion throughout lines 1-23, ending with a clear 'N:o' produced by Levi and a five-second silence in which Levi is not even at the table anymore (lines 22-23). Second, throughout the excerpt, Mum's non-verbal behavior displays attempts to engage Levi in the interaction, as she has her head tilted towards him while speaking to him, and repositions his chair when she summons him, thereby increasingly making him accountable to respond to her attempts at persuasion; a so-called speaker gaze makes a recipient in an interaction increasingly accountable to respond (Stivers & Rossano, 2010) (lines 7, 11, 13, 18, and 23). However, when Mum produces her food-centered health claim, she is looking down at her plate, displaying no non-verbal attempt to engage Levi in the interaction (lines 24-25). Decreasing response relevance specifically at this point in the interaction, increases the plausibility that this claim is not an attempt at persuasion. To illustrate Mum's non-verbal behavior, Figure 1 displays stills of Mum in line 23, where she still has her head tilted towards the living room where Levi is, and in line 25, where she produces her food-centered health claim. Third, the subsequent interaction displays that Mum is no longer trying to persuade Levi to eat. When Mum addresses Levi again, verbally but also non-verbally by tilting her head towards him, rather than persuading him to come and *eat*, she invites him to come *sit* with her ('I would like=it if you come sit with me.', line 37).

In conclusion, food-centered health claims were produced in a variety of interactional contexts where they accounted for a speaker's own actions, e.g., eating or providing a particular food (rather than managing someone else's behavior, as in the identity-centered health claims). This pattern is confirmed by the analysis of a deviant case, which shows that even in the context of a child's food resistance in which an identity-centered claim might be expected, rather, the claim is produced in a food-centered format where it does not accomplish any action involving the management of another interactant's behavior.

Figure 1. Mum's non-verbal behavior in line 23 (left) and line 25 (right).

5.3.3 Person-centered health claims

In this final section, we introduce person-centered health claims. These appear in the form of a 'fusion' between identity-centered and food-centered health claims, as they contain characteristics of both, in a similar sense that speakers can produce *assessments* constructed by lexical terms that point to both subject- and object-side evaluations (cf. Edwards & Potter, 2017). Person-centered claims rarely occurred in the data corpus (2 cases). Excerpt 8 shows Mum, Dad, Ronald (17 years old), Oliver (15 years old) and Charlotte (13 years old). They are having dinner (fries and fried snacks), and are discussing the groceries that they are going to buy next time at the store. Ronald just mentioned to Mum that she should take (buying) peanut butter into account. The person-centered health claim is produced by Ronald on line 13.

Excerpt 8 | Peanut butter

1	MUM:	Waarom moet ik (.) waarom moe=k rekening houden met de pindakaas?
		Why do I (.) why do=I have to take the peanut butter into account?
2		(1.0)
3	RON:	Omdat die beho:orlijk snel gaat opgaan, als (.) als ik er hele d:agen
		Because that is going to go be finished qu:ite fast, if (.) if I'm whole d:ays
4		(2.0) *((Charlotte is inaudibly talking to her pet bird))*
5	DAD:	*((to Ronald))* Vind je lekker hè
		((to Ronald)) **You like that right**
6	RON:	Hm?
		Hm?
7	DAD:	Vin=je lekker hè?
		You=like that right?
8	RON:	Wat. (2.0) ◦↑pindakaas,◦
		What. (2.0) ◦↑ peanut butter,◦
9	DAD:	Ja,
		Yes,
10	RON:	Ja.
		Yes.
11	CHA:	Pindakaas is plakkerig en v::ie:s,
		Peanut butter is sticky and g::ro:s,
12		(1.0) *((Ronald takes a sip from his cup while looking at Charlotte))*
13	RON:	*((to Charlotte))* Ja maar wel heel goed voor je.=
		((to Charlotte)) **Yes but very good for you though.=**
14	MUM:	*((to all))* =Pindakaas op een beschuitje is lekk:er.
		((to all)) **=Peanut butter on a little rusk is tast:y.**
15		(1.0)
16	DAD:	*((to Charlotte))* Ga eens weg met die e::h (.) die gekke hond daar, (.) daar.
		((to Charlotte)) **Take that e::h (.) that crazy dog out of there, (.) there.**

In line 3, Ronald provides a reason for why Mum should 'take peanut butter into account' (i.e., buy it when she goes to the store). In lines 5-10, Dad and Ronald co-produce a positive assessment about peanut butter, which is confirmed by Ronald in line 10. Subsequently, in line 11, Charlotte disagrees with that positive assessment by providing a negative assessment of peanut butter herself ('Peanut butter is sticky and g::ro:s,'). After a one-second silence, Ronald produces a person-centered health claim directed at Charlotte in line 13 ('Yes but very good for you though.=').

In this excerpt, Ronald's claim functions to *disagree* with Charlotte's negative assessment, and simultaneously functions as *accounting* for still wanting to eat peanut butter even though it could be assessed as 'gross'. The 'Yes but' produced by Ronald is a pro forma agreement, i.e., a delayed disagreement – he first agrees with the prior assessment of Charlotte, delaying his subsequent dispreferred response of disagreeing with her (Schegloff, 2007).

Person-centered claims highlight a (beneficial) outcome of the consumption of a particular food for a person, i.e., 'good for you', putting the focus on the person eating the food rather than on the food itself, which is also a characteristic of identity-centered claims. However, person-centered claims do not focus on the construction of a prospective identity for the recipient. Furthermore, a characteristic similar to food-centered claims is that the grammatical subject and center of attention of the claim is the food rather than the person eating it. Although the sentence with the person-centered claim in this example does not include a literal grammatical subject, it can easily be seen that 'peanut butter' would be better suited as subject of the sentence than a person, if there were. Finally, the person-centered claims are distinctive from identity-centered and food-centered claims as the person-centered claims accomplish actions in context of a food (e.g., peanut butter) eaten on a hypothetical future occasion, rather than food eaten at the present moment.

5.4 Discussion

The present study set out to outline how healthy eating is oriented to and constructed during evening mealtimes in families with a low SEP. The analysis revealed that healthy eating was *hardly explicitly oriented to* during evening mealtimes in families with a low SEP. When healthy eating was oriented to, interactants produced health claims in three different formats, in distinctive interactional contexts and accomplishing a variety of actions. *Identity-centered* health claims were produced in the interactional environment of managing someone else's behavior. Parents constructed a desired prospective identity for their child to manage their child's (eating) behavior and cajoled them to consume a particular type of food, in the large majority of cases in an argumentative context to overcome (potential) food resistance by a child, but also to reinforce good eating behavior. *Food-centered* health claims were produced in

a variety of interactional environments where they accomplished actions that accounted for a speaker's own behavior, e.g., for eating or providing a particular food, rather than managing other people's behavior. The rarely occurring *person-centered* health claims accomplished actions in contexts where the referent of the health claim was a food in a hypothetical situation, rather than a food eaten in the present situation.

The findings add to the discursive psychological body of literature on healthy eating talk during family mealtimes (Wiggins, 2004; Veen et al., 2012). In addition to how the construction of healthy eating advice can accomplish different actions (Wiggins, 2004) and how food health and safety are oriented to in context of managing a chronic disease (Veen et al., 2012), our paper adds how, when and by whom claims about food (un)healthiness are produced to accomplish specific actions in various interactional contexts. Furthermore, the findings add to literature on identity construction in interaction as well as discursive practices deployed to get children to eat.

The findings give a unique insight in how healthy eating is oriented to and constructed in the everyday life of families with a low SEP. As populations with a low SEP are largely underrepresented in research on healthy eating and only one prior study deploying DP and CA specifically topicalized SEP (Van der Heijden et al., 2022), the paper provides a valuable contribution to (interactional and other) research on healthy eating. The identification of only sixteen cases in a data corpus of 79 mealtimes is striking. It indicates that healthy eating and healthiness of foods are scarcely discussed topics in these families. The scarcity becomes especially visible when compared to utterances of food liking and tastiness in the same data corpus: 96 taste evaluations were identified, and these included only the ones produced by children, not the parents (Van der Heijden et al., 2022). Furthermore, the cases for the present study were identified in video recordings of six out of the ten families. In four families, no references to food healthiness were identified. Moreover, a relatively large part of the cases (six cases) occurred in one family (Mum and four-year-old Levi). This further implies that talking about healthy eating and healthiness of foods is very rare in these families, and the families who do, seem an exception to the rule.

The findings have corresponding practical implications. Findings of DP and CA analyses can be used as a basis develop a dialogue training for parents in which

they reflect on, and become more aware of, the intended and unintended consequences of their talk-in-interaction, for example following formats of the Discursive Action Method (Lamerichs, Koelen, & Te Molder, 2009; Mogendorff, Te Molder, Van Woerkum, & Gremmen, 2016) or Conversation-Analytic Role-Play Method (Stokoe, 2014). A dialogue training could provide parents with means on how to talk about healthy eating with their children. It could be provided to parents as a component of, e.g., a lifestyle intervention to improve healthy eating in families with a low SEP. However, the observation that food healthiness is hardly discussed in these families, raises the question whether a dialogue training on *how* to talk about healthy eating would be appropriate at all. It should be investigated, first, why food healthiness is hardly explicitly oriented to in these families' everyday life. Although generally, the importance of healthy eating is acknowledged by populations with a low SEP (Van der Heijden et al., 2021), the concepts of food healthiness and healthy eating might not be valued enough to bring them forward as a topic of conversation, or perhaps families lack lexical resources to discuss them. These matters should be unravelled first, before it can be established if and how a dialogue training would be appropriate.

The study has several theoretical implications. First, the findings confirm the action-orientation of language, one of the main assumptions within discursive psychology, and challenge the notion that language and talk would be merely representations of cognitions (e.g., people's thoughts) (Wiggins, 2017; Potter & Hepburn, 2005). Furthermore, it is remarkable how the identity-centered health claims were recipient designed in the sense of 'you become big and strong from eating this'. It is clear that this design, containing this particular prospective identity, is only suitable for children, as becoming big and strong is not something likely to be constructed as a desirable future identity for adults. Although managing someone else's eating behavior seems more likely to occur between parents and children rather than between adults (the latter did not occur in our collection), it would be interesting to see if and how adults deploy identity construction to encourage other adults to eat. Moreover, the lexical choice of 'becoming big and strong' was ubiquitously present in the collection. This gives a concrete insight in how healthy eating is constructed in the everyday life of these families. Moreover, it shows once more how utterances about food healthiness are tuned to the recipient and context in which they are done, rather than being representations of thoughts about what is (not) healthy. This provides valuable information: in order to successfully adapt lifestyle interventions to

the everyday life of families with a low SEP, integrating terms that are actually *used* by them may enhance a better fit to their everyday practices. Moreover, the findings underscore the indispensable value of the analysis of naturalistic data of people's everyday life, as conventional research methods relying on self-report measures fail to provide insight in the *actual practices* of how healthy eating is oriented to and constructed in the course of everyday life. Various examples illustrate how 'big and strong' are terms not commonly found in interview-elicited findings on people's beliefs and practices regarding healthy eating in everyday life, while they are reported in findings based on video recordings of everyday life practices (e.g., Paugh & Izquierdo, 2009; Edelson et al., 2016; Dalma et al., 2016).

The study is subject to some limitations. As mentioned, the collection included sixteen cases, which is a finding in its own right and allowed for the identification of interactional phenomena. However, including more cases (e.g., from existing or yet to be developed data corpora) might lead to more robust conclusions about the construction and functions of various types of health claims. Furthermore, the cases for the present study were provided by recordings of six out of the ten families, and many (six) cases occurred in one family. In terms of robustness of identified interactional patterns and conclusions, ideally, cases would be divided more equally over all families. Finally, as the data corpus comprised families with a low SEP, it is clear that the findings are applicable in these families – however, they might not be *exclusive* for families with a low SEP. It is entirely possible that some findings, such as constructing a prospective identity to manage a child's behavior, are also applicable in families with higher SEPs. However, as families with a low SEP are underrepresented in research and substantial health benefits can be gained in this target group, it was warranted and a strength of the study to conduct the present study in families with a low SEP.

In conclusion, the present study established that healthy eating is hardly explicitly oriented to in mealtime conversations of families with a low SEP. Furthermore, three formats were identified in which interactants in families with a low SEP produced (scarce) health claims: identity-centered, food-centered and person-centered health claims. These accomplished distinctive social actions in their interactional environments. The study provides a unique insight in how healthy eating is oriented to and constructed in the everyday mealtime practices of families with a low SEP, a target group largely underrepresented in research.

Funding This work was supported by the Edema-Steernberg Foundation, Wageningen, the Netherlands. The funding source had no involvement in the study design, the collection, analysis and interpretation of data, in the writing of the report and in the decision to submit the article for publication.

Data code and availability The research data underlying this manuscript, audio and video recordings, are confidential and cannot be made publicly available. Upon request, the recordings are available in an anonymized format for peer-review. The lead author has full access to the data reported in the manuscript.

6

General discussion

6.1 Synopsis research aims and discussion outline

Socioeconomic disparities in diet quality continue to prevail. Populations with a low socioeconomic position (SEP) consume relatively unhealthier diets than populations with a higher SEP. Moreover, in high-income countries such as the Netherlands, the prevalence of overweight and obesity and diet-related illnesses is higher in populations with a low SEP. The socioeconomic disparity in diet quality already emerges in childhood. Children from families with a low SEP consume unhealthier diets than children from families with a higher SEP. However, populations with a low SEP are least reached by interventions to improve diet quality and other lifestyle factors, which paradoxically could result in an increase of the disparity in diet quality and eating behaviors between populations with lower and higher SEPs. Instead of focusing on reducing the socioeconomic inequalities in health and dietary status, it may be more effective to focus on the health 'potential' of populations with a low SEP, and especially children, as they are the ones where the benefits of improved dietary patterns and eating behaviors have the biggest impact.

To be able to realize health potential in low SEP families with children, it is crucial to understand where opportunities for realizing health potential lie in their everyday life, and how such opportunities could be deployed. The research reported in this thesis set out to investigate the following research question: *How can health potential be realized via improving eating behaviors in the everyday life of families with a low socioeconomic position?* There are differences between populations with low and higher SEPs with regard to food preference, i.e., what they (dis)like, and what they believe is healthy or not, and (not) tasty (e.g., Baumann et al., 2017; Inglis & Crawford, 2005; Van Otterloo & Ogtrop, 1989). This thesis aimed to provide insight in how these differences arise, and what the meaning is of '(un)healthy' and (not) 'tasty', and what it means to 'like' or 'dislike' a food, in the everyday life of families with a low SEP. For this purpose, the following research objectives were aimed at. First, the range of implicit and explicit associations between (un)healthiness, (not) tastiness and (dis)liking of foods in children and parents from families with a low SEP was mapped. Second, a thorough review of available scientific literature on healthy eating beliefs and the meaning attached to food in populations with a low SEP was conducted. Third, it was studied how children and parents from families with a low SEP orient to and negotiate food preference in everyday life, i.e., how

tastiness (liking or disliking food) and (un)healthiness of food were oriented to and negotiated in conversations during everyday family mealtimes.

In this general discussion, I will highlight the main findings on the research objectives, discuss overarching conclusions including theoretical and practical implications, reflect on the combination of diverse research approaches and methods as well as on the recruitment and participation of families with a low SEP, and finally, provide an overall conclusion and answer to the main research question.

6.2 Main findings research objectives

Although it was hypothesized that participants would associate unhealthy foods with tastiness, in line with the so-called unhealthy = tasty intuition, 37 primary school-aged children and their parents with a low SEP implicitly (unconsciously) associated healthy foods and tastiness more strongly with each other than healthy foods and not tasty. In contrast to the hypothesis, this indicated a healthy = tasty intuition. Measures on the explicit (conscious) level showed a similar result for parents. Children, however, showed mixed results as they rated pictures of unhealthy foods as tastier than pictures of healthy foods, and rated the descriptions 'food that is tasty' and 'food I like to eat' higher than 'food that is healthy for me', while they also indicated that they did not believe unhealthy foods were tastier than healthy foods (Chapter 2).

Through a systematic search of scientific publication databases, 35 publications were identified as relevant for inclusion in the scoping review. The thorough review and qualitative synthesis of the literature showed that populations with a low SEP expressed diverse meanings of what they considered to be 'healthy' and 'good' food. Healthy eating (as understood in these groups) was considered important. However, they expressed various perceived barriers that indicated limited control over what is eaten, and which may also be interpreted as competing values. Expressed barriers included limited time and money, social influences (such as indulging someone with food they like), desired identities conveyed by the consumption of specific foods, and adhering to traditions. However, participants also expressed a desire to be in control over what is eaten and perceived eating behavior as one's own responsibility. Furthermore, parents articulated how they used food to coordinate (eating) behavior of their children (Chapter 3).

The interactional approach to food preference showed how families with a low SEP oriented to and negotiated food preference in everyday life. Video recordings of 79 evening mealtimes were analysed deploying discursive psychology and conversation analysis. It was shown that children's 'likes' and 'dislikes' of food were treated differently by their parents. Children's food likes were routinely not responded to, agreed with, or further elaborated by parents. Children's food dislikes, on the other hand, were typically treated as food refusals or as non-genuine claims. The analysis indicated that children's food likes and dislikes that accomplished social actions such as refusals or complaints about food more frequently yielded a response from parents than likes and dislikes that appeared as food preference displays (Chapter 4).

Furthermore, the analysis of the video recorded mealtimes showed that (un) healthy eating and (un)healthiness of food were discussed very rarely. If these matters were discussed, claims about (un)healthiness were produced and designed as identity-centered, food-centered or person-centered claims and accomplished specific actions in the interactional environment in which they were produced. Identity-centered health claims were produced in the interactional environment of managing someone else's behavior. Parents constructed a desirable prospective identity for their child, typically to overcome food resistance or to reinforce good eating behavior. Food-centered health claims occurred in a variety of contexts where they accomplished actions that accounted for the speaker's own behavior, such as accounting for eating or providing a particular food. Person-centered health claims were produced in contexts where the referent of the health claim was a food in a hypothetical situation, rather than invoked by a specific food in the present situation (Chapter 5).

6.3 Conclusions and implications

The findings on the research objectives provide useful insights in their own right and research fields. Study-specific implications for theory and practice and suggestions for follow-up research have been provided in each chapter. This section is devoted to overarching conclusions and corresponding theoretical and practical implications for realizing health potential via improving eating behaviors in the everyday life of families with a low SEP.

1 Children and parents with a low SEP oriented to 'healthy = tasty' as a normative rather than an intrinsic belief

The research findings indicated that participants with a low SEP associate healthy foods more with tastiness than unhealthy foods (Chapter 2). However, in this chapter but also throughout the other chapters (particularly 3 and 5), the findings and research processes suggest that people oriented to 'healthy = tasty' as a normative belief rather than an intrinsic belief. I will explicate how I arrived at this conclusion, and what this implies for theory and practice.

In the study on associations reported in Chapter 2, it was found that parents as well as children implicitly associated healthy foods more with tastiness than unhealthy foods – which does not correspond to the relatively unhealthy eating behavior that is common in this group. Implicit associations were measured with instruments that are thought to measure automatic associations, and are therefore insensitive to socially desirable answers (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). However, our findings suggest that normative beliefs, if strongly internalized, can be measured at the implicit level. There is ambiguity regarding which psychological constructs the Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1998; Greenwald, Nosek, & Banaji, 2003) actually measures. I.e., there is scientific debate about the extent to which the IAT measures the attitudes it was designed to measure, and the extent to which IAT effects can be attributed to other factors (De Houwer, Teige-Mocigemba, Spruyt, & Moors, 2009). In their review of implicit measures, De Houwer et al. (2009) showed that IAT effects may, among other things, also be influenced by, e.g. extrapersonal knowledge. Extrapersonal knowledge is knowledge held by participants, but not deliberately considered as relevant (by them) for their own responses to stimuli. This includes knowledge of societal views on particular objects, that can be reflected in the IAT effect, while it does not necessarily reflect the participants' intrinsic beliefs (De Houwer et al., 2009). For the present research, this enhances the plausibility that the 'healthy = tasty' association can, at least in part, be attributed to participants' knowledge of a societal norm.

In addition, for parents, the 'healthy is tasty' association was also found on the explicit level, while children's results on the explicit level were mixed. The findings suggest that the explicit, paper-and-pencil questions were filled out by parents as well as children in a way that they perceived as socially acceptable, i.e., normatively 'correct' from the perspective of a researcher, or even from society as a whole – but that children gave more 'honest' answers on the questions where it was less straightforward what a socially acceptable answer would be. Whereas the instrument that measured implicit associations is thought to be insensitive to socially desirable answers, the paper-and-pencil questionnaires measuring explicit associations are quite sensitive to social desirability (e.g., Schwarz & Oyserman, 2001).

It is on this explicit level that a difference between children's and parents' associations was found: children's explicit results only partly indicated an association between healthy foods and tastiness. Zooming in on *where* the difference between children's and parents' answers occurred, it turns out that on questions logically more prone to social acceptability, children's answers indicated an association between healthiness and tastiness, confirming a societal norm. In these questions, it was more straightforward what a normatively 'correct' answer would be: questions that directly asked whether participants believed that unhealthy foods were tastier than healthy foods, that children answered disconfirming. By contrast, on the questions that did not directly elicit (dis)confirmation of a norm, children indicated unhealthy foods as tastier than healthy foods. These questions included for example taste ratings of various food pictures. In these questions, it is more complicated to determine what a normatively 'correct' answer would be, especially for a child (i.e., participants would have to consider which foods are 'healthy' or 'unhealthy', and deliberately adjust their taste rating to that). Furthermore, the researcher (me) was in the room with the participants while they filled out the questionnaires and tests (which was indispensable for doing research in this target group; see section 6.5). This may have increased feelings of being 'judged' on given (explicit) answers and elicit socially acceptable answers (as perceived by them).

A normative orientation to healthiness and tastiness of foods has theoretical and methodological implications for measuring intrinsic beliefs regarding healthiness and tastiness of foods in families with a low SEP. Although IATs and paper-and-pencil questionnaires are established tools commonly used to measure associations between concepts such as healthiness and tastiness (Raghunathan et al., 2006; Werle et al., 2013), they cannot provide information on *why* associations are found. The ambiguity of what our IATs actually measured and the likely orientation of participants to a societal norm on the paper-and-pencil questionnaires, raises the question whether these are the best tools to unravel

genuine, intrinsic beliefs regarding healthiness and tastiness of foods in families with a low SEP. Elaborating on that, use of these measurement instruments isolates and withdraws the concepts of (un)healthiness and (not) tastiness from the context of what children and parents *do* regarding healthiness and tastiness of foods in everyday life. As elaborated upon by Wiggins (2001) and Wiggins and Potter (2003), the isolation of the targeted concepts displays an assumption that food healthiness and tastiness represent nothing else than cognitive states or sensory experiences; by isolating them, the possibility that these concepts may be used for any other purpose in everyday life, woven into a specific context and point in time, is omitted. It is precisely the latter, that allows for gaining a more profound understanding of the results *beyond* the insight *that* participants associate healthiness and tastiness with each other. Studying these concepts in the context and time in which they are *used* by people in everyday life, might provide more insight into what healthiness, tastiness and liking of food *mean* to populations with a low SEP in everyday life (see also Chapter 4 and 5 of this thesis).

Orientation to healthy foods as tasty in a normative way by participants with a low SEP also has practical implications that should be taken into account by health professionals in attempts to improve dietary patterns and eating behaviors in this target group. For example, it is commonly assumed that psychological determinants of behavior, such as knowledge, outcome expectations and social norms (see e.g., Ajzen, 1991; Bandura, 1998), can lead to intentions and behavior change in favor of more healthy eating patterns. However, a message from, e.g., health professionals conveying the positive (health) outcomes and social norms depicting healthy eating as desirable will probably not convince families with a low SEP to change the way their family eats. As displayed in the research reported in this thesis, the importance and tastiness of healthy eating *is* already acknowledged in populations with a low SEP, as well as the notion that this is what 'should' be done in terms of societal norms and moral considerations (Chapters 2 and 3). A normative explanation of the identified association also implies that it remains obscure what the intrinsic beliefs are regarding the association between (un)healthiness and (not) tastiness of foods in children and parents with a low SEP, and if and how these could be influenced to enhance healthy eating, thereby aiming to realize health potential. Thus, rather than targeting obscure intrinsic beliefs regarding (un)healthiness and (not) tastiness of foods, a more fruitful approach to engaging families with

a low SEP in healthy eating might be to focus on alternative considerations that *are* known, such as *values* involved in (healthy) eating in families with a low SEP. This will be discussed in the next conclusion.

2 People with a low SEP place a high value on healthy food, but more value on other things: competing values

Populations with a low SEP encounter competing values in everyday life, that may hinder or enhance healthy eating. In almost all studies included in the scoping review on healthy eating beliefs and the meaning that populations with a low SEP attach to food (Chapter 3), the importance of healthy eating was acknowledged by the large majority of research participants. First of all, one can wonder in a similar fashion to the previous inference whether this belief is 'intrinsic' or could be another orientation to a societal norm (i.e., an orientation to perceived social acceptability). The present consideration, however, entails that participants from studies that were included in the scoping review also expressed multiple other values related to food and eating, that were often perceived as barriers to healthy eating. The observation that the importance of healthy eating is acknowledged by participants with a low SEP may appear as a finding that is beneficial for, e.g., health professionals, but it should be taken into account that the perceived relative importance of healthy eating may be weighed down by other values that people could be adhering to (more). It should be noted, however, that values related to food and eating could also *enhance* healthy eating.

A theoretical implication that follows is that research should focus more on matters regarding food and eating that populations with a low SEP place *value* on, rather than focussing (predominantly) on how healthy eating is *hindered* (by specific barriers). Insight in what is *valued* by populations with a low SEP and how that could enhance healthy eating also involves practical implications. By integrating the value of healthy eating with other aspects in everyday life that are valued by families with a low SEP, healthy eating may become a more integral part of other valued aspects in life, rather than another thing that should be done because it normatively and morally appears as the 'right' thing to do. It is of utmost importance for health professionals and the target group, i.e., families with a low SEP, to gain a mutual understanding of what important values are, why they are important, and how they play a role in the everyday life of families with a low SEP. That includes a mutual understanding of what

'healthy' actually means, what 'tasty' and 'good' eating mean, and what other values mean and how they play a role in everyday life. Only thereafter can it be mutually established how the value of healthy eating could be integrated with other values in order to enhance healthy eating.

To illustrate how the value of healthy eating could be integrated with other values, I will provide an example. The results of the scoping review indicated that upholding a specific identity could enhance or hinder healthy eating. Parents expressed the importance of being a 'good parent'. As such, they were inclined to indulge children's unhealthy, but inexpensive food requests to, e.g., strengthen family bonds and convey the identity of being a 'good parent'. In this way, the value of being a good parent can hinder healthy eating in the family. However, parents also expressed the importance of being a good role model for children in terms of healthy eating, which was also a part of being a 'good parent'. In that way, the value of being a good parent can enhance healthy eating. The possibility could be explored to connect the identity of a 'good parent' to, for example, providing inexpensive healthy snacks to children. The identity of a 'good parent' could be enforced in this way, by setting a good example as well as by indulging children's request for a snack.

3 Families with a low SEP only trivially orient to food healthiness and tastiness in everyday mealtime conversations

The third conclusion relates to my investigation of how families with a low SEP orient to (un)healthiness and (not) tastiness of food in everyday life. The analysis of child-parent interactions during everyday family meals indicated that food (un)healthiness is *rarely explicitly oriented to at all*. The study included a corpus of 79 video recorded evening mealtimes, and in the total duration of 29 hours of these recordings, references to health were made in only sixteen cases (see Chapter 5). Moreover, to collect these sixteen cases I used a broad definition of a 'reference to health', including phrases such as 'becoming big and strong'. If I had included only those cases in which (un)healthiness of foods was literally mentioned, there would have been only five.

The point of interest here is that, as shown in the analysis, without any exceptions the concept of 'food (un)healthiness' was used to accomplish social actions (e.g., accounting for providing a particular food), but it was not discussed as a topic of conversation in its own right. To elaborate, (un)healthiness

of foods and eating were never discussed in a sense of what is 'healthy' or 'not healthy' and why, why that would be (not) important, or how (un)healthiness of foods could or should influence decisions on what to eat, for example. It can be imagined how various aspects of 'healthy' and 'not healthy' could have been discussed in a context of socialization, e.g., teaching children how and why to make 'healthy' food choices.

A similar observation can be made in how families with a low SEP discuss (not) tastiness of foods in everyday mealtime conversations. The rare occurrence of references to health contrasts the many references made to (not) tastiness of foods, i.e., food likes and dislikes. Likes and dislikes were expressed 96 times throughout the data corpus by children alone. However, the analysis of these food likes and dislikes expressed by children showed that parents treated them as social actions such as refusing food or complaining (see Chapter 4). It was very notable that food likes and dislikes that appeared as food preference displays (rather than being treated as accomplishing other actions), were often disattended by parents. Thus, parents responded to other social actions accomplished by food preference displays (likes and dislikes), but hardly to food preference displays as actions on their own. Food preference displays could, however, imaginably pose a topic of conversation in their own right, for example in a context of socialization. Food preference displays could be discussed in a context of gaining a mutual understanding between children and their parents regarding what is tasty (or not), why (not), taste development, and how (not) tastiness of foods could contribute to food choices including future family meals.

A first theoretical implication following these observations is that the notable absence of explicit orientation to (un)healthiness of foods in the context of everyday life strengthens the impression that healthiness is not an intrinsically motivated element integrated in the everyday life of families with a low SEP, which enhances the plausibility of orientation to food healthiness as a norm of 'others'. As many interactional and societal norms are common sense and taken for granted, they are not always consciously oriented to (Garfinkel, 1967). As such (and as confirmed in Chapter 2 and 3), a profound understanding of how concepts of food tastiness, healthiness and liking are used and oriented to in everyday life, is not elicited from explicit measures such as questionnaires, nor in implicit association measures such as IATs, but can be approximated by the study of naturally occurring conversations in everyday life. However, the

discursive psychological approach to food preference also has limitations with regard to the insights it can yield. As within DP it is assumed that discourse constructs reality, rather than that it reflects people's cognitions, it can account for what happens in interaction but does not provide a means to suggest a causal relationship, i.e., predict behavior (Wiggins, 2017; Edwards, 2012). Thus, the DP approach to food preference provides insight in how people orient to and treat food preference in everyday life, but it cannot provide an explanatory factor for, e.g., why people have certain food preferences or why people eat what they eat (eating behavior). In order to develop, e.g., interventions to improve healthy eating behavior, insights in (causal) factors explaining and predicting dietary patterns and eating behavior are also essential.

The observations of how food (un)healthiness and (not) tastiness are oriented to in the everyday life of families with a low SEP provide implications for practice, as it is *within the context of everyday life* that people deal with healthy and unhealthy eating, including matters of taste. First, engaging in dialogue about healthiness and tastiness of foods is not an integral part of the everyday life of families with a low SEP, and this predominantly absent dialogue provides an *interactional opportunity* to improve eating behavior in families with a low SEP. The absence of dialogue about health and taste might mean that parents do not place a high value on, and do not feel the urgency to, discuss such matters with their children. Another possibility is that they would like to, but may lack the lexical resources to engage in such dialogue. We do know that parents frequently referred to health in the context of food resistance by a child, and responded more frequently to children's food (dis)likes when they conveyed social actions such as refusing food or complaining about food, as was shown in Chapter 4 and 5. Rather than being trivially oriented to in contexts of 'eating troubles', references to health and food preference displays could alternatively be treated as invitations to explore children's taste and development, what is healthy or not and why, or could invoke discussion on what the family could eat on a future occasion (shared decision making).

Second, parents often disattended food preference displays, especially likes, whereas dislikes were frequently treated as food refusals or complaints (Chapter 4). It is shown that eating pleasure and a positive atmosphere during family mealtimes are related to healthy eating (Bédard et al., 2020; Knobl, Dallacker, Hertwig, & Mata, 2022). Therefore, treating children's food preference displays,

likes *and* dislikes, as an opportunity for dialogue rather than disattending or resisting them, could contribute to a positive atmosphere during family meals where children learn about their taste preferences including their relative rights to articulate those. Thus, parents could be provided with means to engage in dialogue with their children about food health and taste. Dialogue trainings, for example following principles of established methods such the Discursive Action Method (DAM) (Lamerichs, Koelen, & Te Molder, 2009; Mogendorff, Te Molder, Van Woerkum, & Gremmen, 2016) or the Conversation-Analytic Role-Play Method (CARM) (Stokoe, 2014) could provide a useful format. Dialogue trainings let participants systematically reflect upon the intended and unintended effects of their own talk-in-interaction, thereby aiming to increase awareness of participants' own discursive practices and interactional patterns (Mogendorff et al., 2016). How to eat healthily and the role of (not) tastiness of foods is something children could learn in the context of family meals. This is important, because eating behaviors developed in childhood have a major influence on eating behaviors later in life (e.g., Issanchou, 2017; Skinner, Carruth, Bounds, Ziegler, & Reidy, 2002; Skinner, Carruth, Bounds, & Ziegler, 2002). Reflection on and increased awareness of how food likes and dislikes and claims about (un)healthiness are predominantly oriented to and could be treated alternatively, might increase parents' understanding of the environment in which food is discussed, served and consumed, and could indirectly contribute to a positive environment that encourages healthy eating.

6.4 Combining research approaches and methods

The present research combined insights from nutrition sciences as well as from psychology. Moreover, a cognitive psychological and a discursive psychological approach to food preference were taken, and quantitative and qualitative research methods were combined. Each approach and method yielded valuable insights that complemented each other. In the present section, I will reflect on the deployed approaches and methods, including my view on combining them. The quantitative, deductive approach using IATs and paper-and-pencil questionnaires (Chapter 2) followed epistemological assumptions from cognitive psychology. Within cognitive psychology, a realist stance is adhered to. It is assumed that there is a certain reality 'out there', that can be accessed and measured using the right tools. Language and talk are tools that represent, and can be used

to access, cognitions; for example via descriptions and attributions (Wiggins, 2017; Edwards, 2012). In the present research, implicit and explicit associations between (un)healthiness and (not) tastiness of foods were measured with the 'right' tools for that purpose (i.e., IATs and paper-and-pencil questionnaires) and the outcomes were treated as 'windows to the mind', i.e., as representative for participants' cognitions as a measurable reality. Furthermore, underneath this approach and methodology lies the assumption that these cognitions would relate to participants' behavior, i.e., food choice and eating patterns.

Deploying this approach and these methods, the measurement results taught us that overall, study participants implicitly and (partly) explicitly adhered to the belief that 'healthy = tasty', rather than unhealthy is tasty. If the theoretical and methodological assumptions are followed that the used tools shed light on 'genuine' intrinsic associations, and that the identified association would relate to food choices (i.e., the consumption of healthy foods), this can be considered as a meaningful finding as the overall aim of this thesis was to gain insight in what the meaning of 'healthy' and 'tasty' is in families with a low SEP. However, as elaborated upon in section 6.3, the measurement tools are subject to ambiguity with regard to what they actually measured (i.e., which concepts, such as intrinsic beliefs or orientations to societal norms), and do not shed light on how food healthiness and tastiness are oriented to in the context of everyday life. Despite these limitations, this study using this approach and these tools did provide very useful insights as it provided clues to the normative orientation to food healthiness and tastiness in children and parents with a low SEP. Moreover, more insight was gained in the use of these measurement instruments for measuring intrinsic beliefs in this target group.

The qualitative, inductive approach followed epistemological assumptions common within discursive psychology and deployed principles of discursive psychology (DP) and conversation analysis (CA) (Chapters 4 and 5). As Wiggins (2017) explains, within discursive psychology, a relativist stance is adhered to. According to the relativist stance, it cannot be assumed that there is a single reality 'out there' that can be independently measured and accessed. Rather, things that are studied and researchers' representations thereof are inevitably intertwined. 'The world', including different versions of reality, are constructed through discursive practices in interaction. Determining which particular version of reality is 'correct' is not possible, nor aimed for. Rather, it is assumed

that, and studied *how*, the world is socially constructed through discursive practices and language (Wiggins, 2017). Within DP, it is studied how psychological concepts are shaped for particular functions (social actions), in the terms that people actually use in everyday life, and as understood by participants in the interaction (Edwards, 2012).

In the present research, produced food likes and dislikes, and claims about (un) healthiness of foods, were analysed and understood according to the displayed understanding of the participants in the interaction. Rather than attempting to access cognitions of participants, it was shown how participants *understood* and *used* the concepts of food tastiness (likes and dislikes) and healthiness in specific contexts and points in time in naturally occurring conversations in everyday life. This analysis of participants' constructed and displayed versions of reality showed that participants constructed and understood food preferences, i.e., likes and dislikes, and claims about (un)healthiness, as to accomplish specific social actions. As also noted by Wiggins (2001) and Wiggins & Potter (2003), and confirmed in Chapter 4 and 5, this action dimension is shown to be continuously oriented to by people in everyday life, and is overlooked in research that attempts to access cognitions regarding food (un)healthiness and (not) tastiness as individual states (including the research reported in Chapter 2 and 3, i.e., associations between (un)healthiness and (not) tastiness, what people find (not) tasty and (un)healthy, and reported beliefs regarding food taste and health in daily life).

Thus, this qualitative, inductive approach following epistemological assumptions and deploying principles common within discursive psychology (DP), also provided important insights in the meaning of '(un)healthy', (not) 'tasty' and '(dis)liking' food in populations with a low SEP. Notably and in contrast to the cognitive psychological approach, the *meaning* that is unravelled here is thus not the self-reported interpretation of participants, but rather their use and understanding of these concepts in everyday life.

As the cognitive psychological and discursive psychological approach to research adhere to different epistemological assumptions (Edwards, 2012; Wiggins, 2017), it can be argued that these approaches are incompatible. Indeed, as shown by the present research, both approaches provide answers to different types of questions and yield different types of knowledge. However – looking

through different lenses – both approaches provide valuable insights into food preference. Moreover, neither one independently provides a holistic understanding. Therefore, I argue that both approaches are complementary, since both contribute to the accumulation of knowledge and to a more holistic, comprehensive understanding of food preference.

6.5 Recruitment and participation of families with a low socioeconomic position

As outlined in the introduction of this thesis, the recruitment and engagement of families with a low SEP in research requires a careful strategy, perseverance and time from researchers. In the present section, I provide a reflection on the process of recruitment, data collection and use of measurement instruments in families with a low SEP, based on the experiences I derived from conducting this research. It could enhance understanding of how and why the present research was conducted the way it was, and can inform other researchers and practitioners with regard to engaging this target group in research. When I started this research, although the 'difficulty' of engaging participants with a low SEP in research was known, there was hardly any documentation regarding how participants with a low SEP could be successfully recruited. Furthermore, in published scientific articles there is often limited space to elaborately describe the process of recruitment and data collection. Recently, the attention and documentation for successfully recruiting this target group has increased (e.g., Stuber, Middel, Mackenback, Beulens, & Lakerveld, 2020). I applaud that experiences from researchers and practitioners are now documented and brought under the attention of a wider audience. I recognize many of my own experiences in the mentioned article. Recognition and reports of experienced challenges and opportunities for success pave the way for other researchers to also successfully recruit populations with a low SEP. This target group is likely to be passed over if researchers do not make a special effort to include them in their research.

6.5.1 Recruitment

First, with regard to recruitment, it was expected that, e.g., handing out flyers would not attract families with a low SEP to sign themselves up for participation. Therefore, I started with contacting various organisations that might potentially be able to bring me in contact with the target group. This included municipalities and various charity organizations. One of the first barriers I encountered was that many of those 'gatekeepers' were occupied and lacked time to cooperate. Even if they were motivated, it could easily take many weeks before, e.g., permissions were obtained from the right managers, and before opportunities emerged where I could actually get in contact with the target group (e.g., specific events that organizations had in mind). Eventually, I got in touch with a very helpful charity organization that informed me about everyday life struggles of families with a low SEP, and how this could influence their motivation to participate in research. Families with a low SEP frequently encounter multiple problems they have to deal with on a daily basis. This could include, for example, financial struggles, struggles to structure their day, sometimes mental or physical problems, caring for children and sometimes other family members (especially a challenge for single parents, which were predominantly single mothers), and collisions with organizations such as youth services or administrators, with subsequent distrust in any institutional organization 'bothering' their lives. Having to deal with many (problematic) issues on a daily basis, taking the effort to sign up for a seemingly not directly relevant research from some university has no priority. The experience was very valuable, because it helped me to understand why a 'conventional' way of recruitment would not work, and what I should take into account when attempting to engage families with a low SEP in research. I could not directly get in touch with families known by the organization due to privacy-related issues, but the organization was willing to send the families a letter on behalf of our research team, which included information about the research, and our contact details. Not surprisingly, the response rate to this letter was zero.

I needed to find a way to personally get in touch with the target group. Eventually, I was able to do so via various food banks throughout the Netherlands. Some food banks helpfully distributed information letters and our contact details to families, but as expected, this again yielded zero responses. Fortunately, at some food banks I was allowed to visit personally and I could help out as a volunteer here and there, and talk to the 'customers' of the food bank about my research. This turned out to be a successful way of recruiting families with a low SEP. It allowed me to clearly explain the research to them, including what was expected and the benefits of participation, and to overcome any suspicion families might have towards me or the research. A university is another institutional organization that may, at first, arouse suspicion: people may wonder why

a university wants to research them. Moreover, a lot of potential participants initially labelled themselves as unfit to participate. They proposed reasons such as; 'how we do things at home is probably not what you want to see', 'I am very busy, I don't have time to show up somewhere', and 'we hardly speak about food during the mealtime, so it's not interesting for you'. Naturally, this encouraged my interest in how they would orient to food healthiness and tastiness in their everyday life.

All in all, personal contact and gaining trust appeared very important in the recruitment process: some of the potential participants asked me explicitly if I would be the one to show up on their doorstep with the tests and questionnaires, before agreeing to participate. Explaining the benefits of participation also enhanced families' willingness to participate. These benefits included the reimbursement they would receive for participation, but also the 'greater good' of participation: the research could eventually, indirectly, benefit their own children. Furthermore, it was important to schedule a substantial amount of time for the recruitment of participants. For the present research, the initial process of findings ways to get in contact with the target group and eventually being able to recruit them, took a couple of months, including multiple visits to various food banks.

6.5.2 Data collection

After agreeing to participate, I visited the participating families in their homes to conduct the computer-based implicit association tests and paper-and-pencil questionnaires. Some families were paid another visit a few months later, when I delivered the materials for recording their evening meals. I visited them in their homes to make participation as easy as possible for them. Travelling to a research location would be a major effort for a lot of the participants, and might diminish their willingness or ability to participate. Planning to go to a specific location in a different city on a set date and time, bringing one of your children along (and finding a caretaker for other children staying at home, which could pose an issue especially for single parents), requires an organized life. Travelling by public transportation requires planning of the route and disbursement of a train or bus ticket (which would of course be reimbursed), and many families did not own a car. One of the participants, a single mother, told me that it was such a hassle that she had to travel 'all the way to the other side of the city', to get to the food bank. I could not imagine asking her to show up at the research facility in Wageningen, even though that would be the default way to conduct the association study reported in Chapter 2, since it would allow for a standardized environment to take the tests. All in all, the most feasible solution for everyone was for me to visit all participants in their homes to do the measurements.

Scheduling an appointment for the visits also appeared quite a challenge, as some of the families were busy with, e.g., work, (informal) care, and having multiple children at home and/or at school. Appointments needed to be scheduled outside of school hours, because children needed to be home to participate. After scheduling an appointment, I encountered several occasions where either the parents or the children were not at home after all. Sometimes the appointment had been forgotten, or families seemed to struggle with organizing their day and planning to be home on time. Sometimes I would call them, wait for a bit and they would arrive eventually, sometimes I had to come back another time. After several occurrences I decided to make brief phone calls on the day before I went to visit the families, to ask whether it was still okay for me to visit them (as a discrete reminder). Most of the time this was okay, and sometimes the appointment needed to be rescheduled. When I was at the families' homes for data collection and gained their trust, there was usually a very positive atmosphere in which some people spontaneously started to share their life stories.

We (the research team) would like to give participating families a proper reimbursement, because especially making the video recordings of their own mealtimes (thus sharing very personal footage) required effort, motivation and courage from their side. However, finding a proper reimbursement for participation was not a standard procedure. In research, a 'common' reimbursement for participation is money. However, we could not 'just' give them money: as families live under the poverty line and receive various types of reimbursement from the government, an additional financial reimbursement from us could potentially get them into trouble with their other reimbursements. Therefore, the families were reimbursed by sending them meal boxes with fresh ingredients, after they finished their recordings. These meal boxes were greatly appreciated by the families. Based on the data collection process, I would recommend researchers and practitioners to be very flexible and patient with regard to how and when appointments are made, to schedule ample time for each participant (e.g., travelling there, possibly waiting, and conduct the measurements in a relaxed atmosphere), and think about appropriate and motivating reimbursement.

6.5.3 Use of measurement instruments

Finally, it should be taken into account that some standardized, validated measurement instruments are not suitable for children and parents with a low SEP, and should be adapted or newly developed to fit the target group. Participants with a low SEP can be low literate, and could experience difficulty in reading and filling out a (lengthy) questionnaire. The IATs and paper-and-pencil questionnaires measuring explicit associations between (un)healthiness, (not) tastiness and (dis)liking of food could be easily adapted to overcome reading difficulties by using images instead of, and in addition to, words. However, the Dutch Healthy Diet – Food Frequency Questionnaire (DHD-FFQ) that provides a validated measurement tool to assess dietary intake and adherence to recommended Dutch nutritional guidelines (Van Lee et al., 2016), is very lengthy (the questionnaire consists of 180 items) and is quite complex. For example, it uses words that are not common language for everyone, and distinguishes between various types of seemingly similar products (e.g., butter, margarine, and semi-fat margarine). Adequately filling out such a questionnaire requires sufficient skills in literacy, a relatively lengthy attention span (especially on top of additional tests and questionnaires), and a fair share of knowledge on food (types), which cannot be assumed to be present in all research participants, especially with a low SEP. Providing a complex and lengthy questionnaire could result in participants providing inaccurate answers to (parts of) the questionnaire, and would thus lead to a major decrease in the reliability and validity of the results. In the present research, I assessed dietary intake of children and parents with a shortened and adapted questionnaire based on the DHD-FFQ (Hooft van Huysduynen et al., 2014). In sum, I would recommend researchers and practitioners to take the complexity (or rather, comprehensibility) and length of the intended measurement instruments into account. The measurement instruments should be pre-tested in the target group, and adapted if necessary.

6.6 Final conclusion

The research reported in this thesis set out to investigate how health potential could be realized via improving eating behaviors in the everyday life of families with a low SEP. For this purpose, the research aimed to provide insight in the meaning of '(un)healthy' and (not) 'tasty' foods, and what it means to 'like' or 'dislike' a food, in the everyday life of families with a low SEP. The findings to the research objectives and overarching conclusions provide theoretical and practical implications that contain pieces of potential. Furthermore, the research yielded valuable insights in combining diverse theoretical approaches and quantitative and qualitative research methods, including the analysis of naturally occurring conversations, as well as on conducting research specifically in families with a low SEP. A prominently present aspect in this research was finding a balance between what would theoretically be the most sound and robust way to conduct scientific research, and what was practically feasible to conduct the research in this target group at all.

On a final note, I would like to emphasize why it is crucial to gain an understanding of how families with a low SEP orient to food tastiness and healthiness in their everyday life. As commonly argued as *rationale*, insights thereof can eventually provide leverage points in attempts such as lifestyle interventions to improve healthy eating in this group. However, there is more to it than gaining insights in what people believe is (un)healthy, (not) tasty, and (dis)liked – and implement the insights in an attempt to improve healthy eating patterns and potentially reducing obesity and diet-related illnesses. It is not a matter of pressing a button – as displayed by, e.g., the difficulty of engaging this target group in participating in research and lifestyle interventions, and the lesser effectiveness of interventions in this group. Thus, another very important, but less articulated aspect of understanding how (un)healthiness, (not) tastiness and (dis)liking of foods are oriented to in everyday life, particularly in populations with a low SEP, is the development of a common and mutually understandable 'language' between health professionals, scientists and the target group to talk about food. How can one enjoy or *like* food, how could you make food healthier, what actually is *healthy, tasty, enjoyable*? Profoundly understanding the role taste and health actually play in people's everyday life, and how these concepts are oriented to in the context of everyday life, is indispensable before health professionals, scientists and families with a low SEP can mutually establish how eating behaviors could be improved. A common language about food, health and taste can enrich mutual understanding in all parties – one of the major assets of engaging in dialogue. A more in-depth connection to populations with a low SEP through mutual understanding and a common language could be an innovative basis for policy, measures and interventions to improve healthy eating behavior in a way that is rewarding for all involved.

References

Agudo, A. (2005). *Measuring intake of fruit and vegetables*. Retrieved from https://www.who.int/dietphysicalactivity/publications/f&v_intake_measurement.pdf

Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In J. Kuhl & J. Beckmann (Eds.), *Action-control: From cognition to behaviour* (pp. 11-39). Berlin: Springer Heidelberg.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211. doi.org/10.1016/0749-5978(91)90020-T

Anderson, E. S., Winett, R. A., & Wojcik, J. R. (2007). Self-regulation, self-efficacy, outcome expectations, and social support: social cognitive theory and nutrition behavior. *Annals of Behavioral Medicine, 34*, 304-312. doi.org/10.1007/bf02874555

Antaki, C. & Kent, A. (2015). Offering alternatives as a way of issuing directives to children: Putting the worse option last. *Journal of Pragmatics, 78*, 25-38. doi.org/10.1016/j.pragma.2015.01.004

Anzman-Frasca, S., & Ehrenberg, S. (2018). Learning to like: Roles of repeated exposure and other types of learning. In J. C. Lumeng & J. O. Fisher (Eds.), *Pediatric Food Preferences and Eating Behaviors* (pp. 35-52): Academic Press.

Appelhans, B. M., Milliron, B.-J., Woolf, K., Johnson, T. J., Pagoto, S. L., Schneider, K. L., . . . Ventrelle, J. C. (2012). Socioeconomic status, energy cost, and nutrient content of supermarket food purchases. *American Journal of Preventive Medicine, 42*, 398-402. doi.org/10.1016/j.amepre.2011.12.007

Babcock, R. L., MaloneBeach, E. E., Hannighofer, J., & Woodworth-Hou, B. (2016). Development of a children's IAT to measure bias against the elderly. *Journal of Intergenerational Relationships, 14*, 167-178. doi:10.1080/15350770.2016.1195245

Backett-Milburn, K. C., Wills, W. J., Gregory, S., & Lawton, J. (2006). Making sense of eating, weight and risk in the early teenage years: views and concerns of parents in poorer socio-economic circumstances. *Social Science & Medicine, 63*, 624-635. doi.org/10.1016/j.socscimed.2006.02.011

Ball, K., Crawford, D., & Mishra, G. (2006). Socio-economic inequalities in women's fruit and vegetable intakes: A multilevel study of individual, social and environmental mediators. *Public Health Nutrition, 9*, 623-630. doi:10.1079/PHN2005897

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology & Health, 13*, 623-649. doi.org/10.1080/08870449808407422

Baron, A. S., & Banaji, M. R. (2006). The development of implicit attitudes. Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science, 17*, 53-58. doi.org/10.1111/j.1467-9280.2005.01664.x

Baumann, S., Szabo, M., & Johnston, J. (2019). Understanding the food preferences of people of low socioeconomic status. *Journal of Consumer Culture, 19*, 316-339. doi.org/10.1177/1469540517717780

Beauchamp, A., Backholder, K., Magliano, D., & Peeters, A. (2014). The effect of obesity prevention interventions according to socioeconomic position: a systematic review. *Obesity Reviews, 15*, 541-554. doi.org/10.1111/obr.12161

Beauchamp, G. K., & Mennella, J. A. (2011). Flavor perception in human infants: development

and functional significance. *Digestion, 83 (suppl 1)*, 1-6. doi.org/10.1159/000323397
Bédard, A., Lamarche, P. O., Grégoire, L. M., Trudel-Guy, C., Provencher, V., Desroches, S., & Lemieux, S. (2020). Can eating pleasure be a lever for healthy eating? A systematic scoping review of eating pleasure and its links with dietary behaviors and health. *PloS One*, *15*, e0244292. doi.org/10.1371/journal.pone.0244292
Bere, E., Van Lenthe, F., Klepp, K.-I., & Brug, J. (2008). Why do parents' education level and income affect the amount of fruits and vegetables adolescents eat? *European Journal of Public Health, 18*, 611-615. doi.org/10.1093/eurpub/ckn081
Billig, M. (1987). *Arguing and thinking: A rhetorical approach to social psychology*. Cambridge: Cambridge University Press.
Blaine, R. E., Fisher, J. O., Blake, C. E., Orloski, A., Younginer, N., Bruton, Y., . . . Davison, K. K. (2016). Conditioned to eat while watching television? Low-income caregivers' perspectives on the role of snacking and television viewing among pre-schoolers. *Public Health Nutrition, 19*, 1598-1605. doi.org/10.1017/s136898001500364x
Blom, S. S. A. H., Gillebaart, M., De Boer, F., Van der Laan, N., & De Ridder, D. T. D. (2021). Under pressure: Nudging increases healthy food choice in a virtual reality supermarket, irrespective of system 1 reasoning. *Appetite, 160*, 105116. doi.org/10.1016/j.appet.2021.105116
Bluemke, M., & Friese, M. (2006). Do features of stimuli influence IAT effects? *Journal of Experimental Social Psychology, 42*, 163-176. doi.org/10.1016/j.jesp.2005.03.004
Boshoff, K., Dollman, J., & Magarey, A. (2007). An investigation into the protective factors for overweight among low socio-economic status children. *Health Promotion Journal of Australia, 18*, 135-142. doi.org/10.1071/he07135
Bouwman, L. I., Te Molder, H., Koelen, M. M., & Van Woerkum, C. M. J. (2009). I eat healthfully but I am not a freak. Consumers' everyday life perspective on healthful eating. *Appetite, 53*, 390-398. doi.org/10.1016/j.appet.2009.08.005
Bova, A. (2019). Dialogical construction of parental feeding strategies during family mealtimes. *Journal of Health Psychology, 26*, 1684-1699. doi.org/10.1177/1359105319884600
Bova, A. & Arcidiacono, F. (2014). 'You must eat the salad because it is nutritious'. Argumentative strategies adopted by parents and children in food-related discussions at mealtimes. *Appetite, 73*, 81-94. doi.org/10.1016/j.appet.2013.10.019
Boysen, G. A., Vogel, D. L., & Madon, S. (2006). A public versus private administration of the implicit association test. *European Journal of Social Psychology, 36*, 845-856. doi:10.1002/ejsp.318
Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Cambridge, MA: Harvard University Press.
Brink, E., Van Rossum, C., Postma-Smeets, A., Stafleu, A., Wolvers, D., Van Dooren, C., ... Ocké, M. (2019). Development of healthy and sustainable food-based dietary guidelines for the Netherlands. *Public Health Nutrition, 22*, 2419-2435. doi.org/10.1017/S1368980019001435
Broeders, D. W. J., Das, H. D., Jennissen, R. P. W., Tiemeijer, W. L., & De Visser, M. (2018). *Van verschil naar potentieel: een realistisch perspectief op de sociaaleconomische gezondheidsverschillen*, WRR-Policy Brief 7. Den Haag: WRR.
Bukman, A. J., Teuscher, D., Feskens, E. J. M., van Baak, M. A., Meershoek, A., & Renes, R. J. (2014). Perceptions on healthy eating, physical activity and lifestyle advice: opportunities for adapting lifestyle interventions to individuals with low socioeconomic status. *BMC Public Health, 14*, 1036. doi.org/10.1186/1471-2458-14-1036
Burton, S., & Kees, J. (2012). Flies in the ointment? Addressing potential impediments to population-based health benefits of restaurant menu labeling initiatives. *Journal of Public Policy & Marketing, 31*, 232-239. doi.org/10.1509/jppm.10.104

Butler, C. W. & Wilkonson, R. (2013). Mobilising recipiency: Child participation and 'rights to speak' in multi-party family interaction. *Journal of Pragmatics, 50*, 37-51. doi.org/10.1016/j.pragma.2013.01.012
Calnan, M. (1986). Maintaining health and preventing illness: A comparison of the perceptions of women from different social classes. *Health Promotion International, 1*, 167-177. doi.org/10.1093/heapro/1.2.167
Cameron, D. (2008). Talk from the top down. *Language & Communication, 28*, 143-155. doi.org/10.1016/j.langcom.2007.09.001
CBS. (n.d.-a). Begrippen: Laag inkomen. Retrieved from https://www.cbs.nl/nl-nl/onze-diensten/methoden/begrippen?tab=l#id=laag-inkomen
CBS. (n.d.-b). Onderwijsniveau. Retrieved from https://www.cbs.nl/nl-nl/artikelen/nieuws/2013/40/onderwijsniveau-bevolking-gestegen/onderwijsniveau
CBS. (2021). Onderwijsniveau. Retrieved from https://www.cbs.nl/nl-nl/nieuws/2018/22/helft-van-laagopgeleide-25-tot-45-jarige-mannen-rookt/onderwijsniveau
Charbonnier, L. v. M., F. , van der Laan, L. N., Viergever, M. A., & Smeets, P. A. M. (2016). Standardized food images: A photographing protocol and image database. *Appetite, 96*, 166-173. doi:10.1016/j.appet.2015.08.041
Charles, N., & Kerr, M. (1988). *Women, food and families*. Manchester: Manchester University Press.
Cheetham, T. J., Turner-Cobb, J. M., & Gamble, T. (2016). Children's implicit understanding of the stress-illness link: Testing development of health cognitions. *British Journal of Health Psychology, 21*, 781-795. doi.org/10.1111/bjhp.12181
Choi, H., Paek, H., & Whitehill King, K. (2012). Are nutrient-content claims always effective? Match-up effects between product type and claim type in food advertising. *International Journal of Advertising, 31*, 421-443. doi.org/10.2501/IJA-31-2-421-443
Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. New York: Routledge Academic.
Couper-Kuhlen, E. (2010). Commentary on Stivers and Rossano: 'Mobilizing response'. *Research on Language and Social Interaction, 43*, 32-37. doi.org/10.1080/08351810903471316
Couper-Kuhlen, E., & Ono, T. (2007). 'Incrementing' in conversation. A comparison of practices in English, German, and Japanese. *Pragmatics, 17*, 513–552. doi.org/10.1075/prag.17.3.02cou
Craven, A. & Potter, J. (2010). Directives: Entitlement and contingency in action. *Discourse Studies, 12*, 419-442. doi.org/10.1177/1461445610370126
Critical Appraisal Skills Programme. (2018). CASP qualitative checklist. Retrieved from https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf
Cunha, L. M., Cabral, D., Moura, A. P., & de Almeida, M. D. V. (2018). Application of the Food Choice Questionnaire across cultures: Systematic review of cross-cultural and single-country studies. *Food Quality and Preference, 64*, 21-36. doi.org/10.1016/j.foodqual.2017.10.007
Cvencek, D., Greenwald, A. G., & Meltzoff, A. N. (2011). Measuring implicit attitudes of 4-year-olds: The Preschool Implicit Association Test. *Journal of Experimental Child Psychology, 109*, 187-200. doi.org/10.1016/j.jecp.2010.11.002
Dalma, A., Kastorini, C. M., Zota, D., Veloudaki, A., Petralias, A., Yannakoulia, M., & Linos, A. (2016). Perceptions of parents and children, participating in a school-based feeding programme in disadvantaged areas in Greece: a qualitative study. *Child: Care, Health and Development, 42*, 267-277. doi.org/10.1111/cch.12315
Dalstra, J. A. A., Kunst, A. E., Borrell, C., Breeze, E., Cambois, E., Costa, G., . . . Mackenbach, J. P. (2005). Socioeconomic differences in the prevalence of common chronic diseases: an

overview of eight European countries. *International Journal of Epidemiology, 34*, 316-326. doi.org/10.1093/ije/dyh386
De Houwer, J., Teige-Mocigemba, S., Spruyt, A., & Moors, A. (2009). Implicit measures: A normative analysis and review. *Psychological Bulletin, 135*, 347-368. doi.org/10.1037/a0014211
Dibsdall, L. A., Lambert, N., & Frewer, L. J. (2002). Using interpretative phenomenology to understand the food-related experiences and beliefs of a select group of low-income UK women. *Journal of Nutrition Education and Behavior, 34*, 298-309. doi.org/10.1016/s1499-4046(06)60112-7
Dinsa, G. D., Goryakin, Y., Fumagalli, E., & Suhrcke, M. (2012). Obesity and socioeconomic status in developing countries: a systematic review. *Obesity Reviews, 13*, 1067-1079. doi.org/10.1111/j.1467-789X.2012.01017.x
Divert, C., Chabanet, C., Schoumacker, R., Martin, C., Lange, C., Issanchou, S., & Nicklaus, S. (2017). Relation between sweet food consumption and liking for sweet taste in French children. *Food Quality and Preference, 56*, 18-27. doi.org/10.1016/j.foodqual.2016.09.009
Dressler, H., & Smith, C. (2013). Health and eating behavior differs between lean/normal and overweight/obese low-income women living in food-insecure environments. *American Journal of Health Promotion, 27*, 358-365. doi.org/10.4278/ajhp.120119-QUAL-55
Drew, P. (1997). 'Open' class repair initiators in response to sequential sources of troubles in conversation. *Journal of Pragmatics, 28*, 69-101. doi.org/10.1016/S0378-2166(97)89759-7
Drew, P. (2013). Conversation analysis and social action. *Journal of Foreign Language*, *37*, 2-20.
Drewnowski, A., & Greenwood, M. R. C. (1983). Cream and sugar: Human preferences for high-fat foods. *Physiology & Behavior, 30*, 629-633. doi.org/10.1016/0031-9384(83)90232-9
Dye, C. J., & Cason, K. L. (2005). Perceptions of older, low-income women about increasing intake of fruits and vegetables. *Journal of Nutrition for the Elderly, 25*, 21-41. doi.org/10.1300/J052v25n01_04
Edelson, L. R., Mokdad, C., & Martin, N. (2016). Prompts to eat novel and familiar fruits and vegetables in families with 1-3 year-old children: Relationships with food acceptance and intake. *Appetite, 99*, 138-148. doi.org/10.1016/j.appet.2016.01.015
Edwards, D. (2012). Discursive and scientific psychology. *British Journal of Social Psychology, 51*, 425-435. doi.org/10.1111/j.2044-8309.2012.02103.x
Edwards, D. & Potter, J. (1992). *Discursive psychology*. London: Sage.
Edwards, D. & Potter, J. (2017). Some uses of subject-side assessments. *Discourse Studies, 19*, 497-514. doi.org/10.1177/1461445617715171
Eikenberry, N., & Smith, C. (2004). Healthful eating: perceptions, motivations, barriers, and promoters in low-income Minnesota communities. *Journal of the American Dietetic Association, 104*, 1158-1161. doi.org/10.1016/j.jada.2004.04.023
Eilittä, T., Haddington, P., & Vatanen, A. (2021). Children seeking the driver's attention in cars: Position and composition of children's summons turns and children's rights to engage. *Journal of Pragmatics, 178*, 175-191. doi.org/10.1016/j.pragma.2021.03.005
Engler-Stringer, R. (2010). The domestic foodscapes of young low-income women in montreal: Cooking practices in the context of an increasingly processed food supply. *Health Education & Behavior, 37*, 211-226. doi.org/10.1177/1090198109339453
Evans, J. S. B. T. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. *Annual Review of Psychology, 59*, 255-278. doi.org/10.1146/annurev.psych.59.103006.093629
Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4 ed.). London: Sage.
Fielding-Singh, P. (2017). A taste of inequality: Food's symbolic value across the socioeconomic spectrum. *Sociological Science, 4*, 424-448. doi.org/10.15195/v4.a17

Fielding-Singh, P. (2019). You're worth what you eat: Adolescent beliefs about healthy eating, morality and socioeconomic status. *Social Science & Medicine, 220*, 41-48. doi.org/10.1016/j.socscimed.2018.10.022
Fielding-Singh, P., & Wang, J. (2017). Table talk: How mothers and adolescents across socioeconomic status discuss food. *Social Science & Medicine, 187*, 49-57. doi.org/10.1016/j.socscimed.2017.06.016
Finkelstein, S. R., & Fishbach, A. (2010). When healthy food makes you hungry. *Journal of Consumer Research, 37*, 357-367. doi.org/10.1086/652248
Fisher, J. O., Wright, G., Herman, A. N., Malhotra, K., Serrano, E. L., Foster, G. D., & Whitaker, R. C. (2015). 'Snacks are not food'. Low-income, urban mothers' perceptions of feeding snacks to their preschool-aged children. *Appetite, 84*, 61-67. doi.org/0.1016/j.appet.2014.09.007
Flegal, K. M., Ogden, C. L., Fryar, C., Afful, J., Klein, R., & Huang, D. T. (2019). Comparisons of self-reported and measured height and weight, BMI, and obesity prevalence from national surveys: 1999-2016. *Obesity, 27*, 1711-1719. doi.org/10.1002/oby.22591
Flinkfeldt, M., Parslow, S., & Stokoe, E. (2021). How categorization impacts the design of requests: Asking for email addresses in call-centre interactions. *Language in Society, first view*, 1-24. doi.org/10.1017=S0047404521000592
Fries, L. R., Martin, N., & Van der Horst, K. (2017). Parent-child mealtime interactions associated with toddlers' refusals of novel and familiar foods. *Physiology & Behavior, 176*, 93-100. doi.org/10.1016/j.physbeh.2017.03.001
Garcia-Bailo, B., Toguri, C., Eny, K. M., & El-Sohemy, A. (2009). Genetic variation in taste and its influence on food selection. *A Journal of Integrative Biology, 13*, 69-80. doi.org/10.1089/omi.2008.0031
Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.
GBD 2015 Obesity Collaborators. (2017). Health effects of overweight and obesity in 195 countries over 25 years. *The New England Journal of Medicine, 377*, 13-27. doi.org/10.1056/NEJMoa1614362
Giskes, K., Avendaño, M., Brug, J., & Kunst, A. E. (2010). A systematic review of studies on socioeconomic inequalities in dietary intakes associated with weight gain and overweight/obesity conducted among European adults. *Obesity Reviews, 11*, 413-429. doi.org/10.1111/j.1467-789X.2009.00658.x
Goodwin, C. & Goodwin, M. H. (1987). Concurrent operations in talk: Notes on the interactive organization of assessments. *IPRA Papers in Pragmatics, 1*, 1-54. doi.org/10.1075/iprapip.1.1.01goo
Govan, C. L., & Williams, K. D. (2004). Changing the affective valence of the stimulus items influences the IAT by re-defining the category labels. *Journal of Experimental Social Psychology, 40*, 357-365. doi.org/10.1016/j.jesp.2003.07.002
Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*, 1464-1480. doi:10.1037/0022-3514.74.6.1464
Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*, 197-216. doi.org/10.1037/0022-3514.85.2.197
Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*, 17-41. doi.org/10.1037/a0015575
Guinard, J. X. (2001). Sensory and consumer testing. *Trends in Food Science & Technology, 11*, 273-

283. doi.org/10.1016/S0924-2244(01)00015-2
Ham, J., & van den Bos, K. (2010). On unconscious morality: The effects of unconscious thinking on moral decision making. *Social Cognition, 28*, 74-83. doi.org/10.1521/soco.2010.28.1.74
Hardcastle, S. J., & Blake, N. (2016). Influences underlying family food choices in mothers from an economically disadvantaged community. *Eating Behaviors, 20*, 1-8. doi.org/10.1016/j.eatbeh.2015.11.001
Hasselbalch, A. L., Heitmann, B. L., Kyvik, K. O., & Sørensen, T. I. A. (2008). Studies of twins indicate that genetics influence dietary intake. *The Journal of Nutrition, 138*, 2406-2412. doi.org/10.3945/jn.108.087668
Hepburn, A. (2020a). The preference for self-direction as a resource for parents' socialisation practices. *Qualitative Research in Psychology, 17*, 450-468. doi.org/10.1080/14780887.2019.1664679
Hepburn, A. (2020b). Managing embodied misconduct: Burping and spitting in family mealtime interactions. In S. Wiggins & K. Osvaldsson Cromdal (Eds.), *Discursive Psychology and Embodiment. Palgrave Studies in Discursive Psychology* (pp. 57-80). London: Palgrave Macmillan. doi.org/10.1007/978-3-030-53709-8_3
Hepburn, A. & Potter, J. (2011). Threats: Power, family mealtimes, and social influence. *British Journal of Social Psychology, 50*, 99-120. doi.org/10.1348/014466610X500791
Heritage, J. (1984). A change-of-state token and aspects of its sequential placement. In J. M. Atkinson and J. Heritage (Eds.) *Structures of Social Action*. Cambridge: Cambridge University Press, pp. 299-345.
Heritage, J. & Raymond, G. (2005). The terms of agreement: Indexing epistemic authority and subordination in talk-in-interaction. *Social Psychology Quarterly, 68*, 15-38. doi.org/10.1177/019027250506800103
Herman, A. N., Malhotra, K., Wright, G., Fisher, J. O., & Whitaker, R. C. (2012). A qualitative study of the aspirations and challenges of low-income mothers in feeding their preschool-aged children. *International Journal of Behavioral Nutrition and Physical Activity, 9*, 132. doi.org/10.1186/1479-5868-9-132
Hochbaum, G., Rosenstock, I., & Kegels, S. (1952). *Health belief model*. United States Public Health Service.
Hoenink, J. C., Waterlander, W., Beulens, J. W. J., & Mackenbach, J. D. (2022). The role of material and psychosocial resources in explaining socioeconomic inequalities in diet: A structural equation modelling approach. *SSM - Population Health*, *17*, 101025. doi.org/10.1016/j.ssmph.2022.101025
Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the implicit association test and explicit self-report measures. *Personality and Social Psychology Bulletin, 31*, 1369-1385. doi.org/10.1177/0146167205275613
Hooft van Huysduynen, E. J., van Woerkum, C. M. J., Perenboom, C. W. M., Verbruggen, E. C. A. M., van Lee, L., Geelen, A., . . . de vries, J. H. M. (2014). Effects of counselling intervention to improve diet quality: a randomised controlled trial in parents of 4 to 12 year old children. In E. J. Hooft van Huysduynen (Ed.), *Towards healthy diets for parents: Effectiveness of a counselling intervention* (pp. 37-52).
Hoppert, K., Mai, R., Zahn, S., Hoffmann, S., & Rohm, H. (2012). Integrating sensory evaluation in adaptive conjoint analysis to elaborate the conflicting influence of intrinsic and extrinsic attributes on food choice. *Appetite, 59*, 949-955. doi.org/10.1016/j.appet.2012.09.005
Hughes, S. O., Power, T. G., Papaioannou, M. A., Cross, M. B., Nicklas, T. A., Hall, S. K., & Shewchuck, R. M. (2011). Emotional climate, feeding practices, and feeding styles: an observational analysis of the dinner meal in Head Start families. *International Journal of Behavioral Nutrition and Physical Activity, 8*, 60. doi.org/10.1186/1479-5868-8-60
Huma, B., Stokoe, E., & Sikveland, R. O. (2019). Persuasive conduct: alignment and resistance in prospecting 'cold' calls. *Journal of Language and Social Psychology, 38*, 33-60. doi.org/10.1177/0261927X18783474
Hupkens, C. L. H., Knibbe, R. A., & Drop, M. J. (2000). Social class differences in food consumption: The explanatory value of permissiveness and health and cost considerations. *European Journal of Public Health, 10*, 108-113. doi.org/10.1093/eurpub/10.2.108
Hupkens, C. L. H., Knibbe, R. A., Van Otterloo, A. H., & Drop, M. J. (2000). Eat it or leave it: Educational differences in how mothers handle children's food dislikes. *Ecology of Food and Nutrition, 39*, 247-270. doi.org/10.1080/03670244.2000.9991618
Inglis, V. B., K. , & Crawford, D. (2005). Why do women of low socioeconomic status have poorer dietary behaviours than women of higher socioeconomic status? A qualitative exploration. *Appetite, 45*, 334-343. doi.org/10.1016/j.appet.2005.05.003
Irmak, C., Vallen, B., & Robinson, S. R. (2011). The impact of product name on dieters' and nondieters' food evaluations and consumptions. *Journal of Consumer Research, 38*, 390-405. doi.org/10.1086/660044
Issanchou, S. (2017). Determining factors and critical periods in the formation of eating habits: Results from the Habeat project. *Annals of Nutrition and Metabolism, 70*, 251-256. doi.org/10.1159/000471514
Jarrett, R. L., Bahar, O. S., & Kersh, R. T. (2016). 'When we do sit down together': family meal times in low-income African American families with preschoolers. *Journal of Family Issues, 37*, 1483-1513. doi.org/10.1177/0192513X14547417
Jefferson, G. (1980). On 'trouble premonitory' response to inquiry. *Sociological Inquiry*, *50*, 153–185. doi.org/10.1111/j.1475-682X.1980.tb00019.x
Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation analysis: Studies from the first generation* (pp. 13-23). Philadelphia, PA: John Benjamins.
Jonsson, L., Larsson, C., Berg, C., Korp, P., & Lindgren, E. C. (2017). What undermines healthy habits with regard to physical activity and food? Voices of adolescents in a disadvantaged community. *International Journal of Qualitative Studies on Health and Well-being, 12*, 1333901. doi.org/10.1080/17482631.2017.1333901
Jung, S. E., Shin, Y. H., Kim, S., Hermann, J., & Bice, C. (2017). Identifying underlying beliefs about fruit and vegetable consumption among low-income older adults: An elicitation study based on the Theory of Planned Behavior. *Journal of Nutrition Education and Behavior, 49*, 717-723. doi.org/10.1016/j.jneb.2017.05.343
Kahneman, D. (2003). Maps of bounded rationality: psychology for behavioral economics. *American Economic Review, 93*, 1449-1475. doi.org/10.1257/000282803322655392
Kent, A. (2012a). Compliance, resistance, and incipient compliance when responding to directives. *Discourse Studies, 14*, 711-730. doi.org/10.1177/1461445612457485
Kent, A. (2012b). Responding to directives: What can children do when a parent tells them what to do? In S. Danby & M. Theobald (Eds.), *Disputes in everyday life: Social and moral orders of children and young people* (pp. 57-84). Bingley, UK: Emerald Insight.
Kitzinger, C. (2000). Doing feminist conversation analysis. *Feminism & Psychology, 10*, 163-193. doi.org/10.1177/0959353500010002001
Knobl, V., Dallacker, M., Hertwig, R., & Mata, J. (2022). Happy and healthy: How family mealtime routines relate to child nutritional health. *Appetite, 171*, 105939. doi.org/10.1016/j.

appet.2022.105939
Konttinen, H., Sarlio-Lähteenkorva, S., Silventoinen, K., Männistö, S., & Haukkala, A. (2013). Socio-economic disparities in the consumption of vegetables, fruit and energy-dense foods: the role of motive priorities. *Public Health Nutrition, 16*, 873-882. doi.org/10.1017/S1368980012003540
Lamerichs, J., Koelen, M., & Te Molder, H. (2009). Turning adolescents into analysts of their own discourse: raising reflexive awareness of everyday talk to develop peer-based health activities. *Qualitative Health Research, 19*, 1162-1175. doi.org/10.1177/1049732309341655
Laurier, E. & Wiggins, S. (2011). Finishing the family meal. The interactional organisation of satiety. *Appetite, 56*, 53-64. doi.org/10.1016/j.appet.2010.11.138
Lems, E., Hilverda, F., Broerse, J. E. W., & Dedding, C. (2019). 'Just stuff yourself': Identifying health-promotion strategies from the perspectives of adolescent boys from disadvantaged neighbourhoods. *Health Expectations, 22*, 1040-1049. doi.org/10.1111/hex.12913
Lems, E., Hilverda, F., Sarti, A., van der Voort, L., Kegel, A., Pittens, C., . . . Dedding, C. (2020). 'McDonald's Is Good for My Social Life'. Developing health promotion together with adolescent girls from disadvantaged neighbourhoods in Amsterdam. *Children & Society, 34*, 204-219. doi.org/10.1111/chso.12368
Liem, D. G. & Russell, C. G. (2019). The influence of taste liking on the consumption of nutrient rich and nutrient poor foods. *Frontiers in Nutrition, 15*, 174. doi.org/10.3389/fnut.2019.00174
Loehlin, J. C. (2005). Resemblance in personality and attitudes between parents and their children. In S. Bowles, H. Gintis, & M. Osborne Groves (Eds.), Unequal chances: Family background and economic success (pp. 192-207). Princeton: Princeton University Press.
Lucan, S. C., Barg, F. K., Karasz, A., Palmer, C. S., & Long, J. A. (2012a). Concepts of healthy diet among Urban, low-income, African Americans. *Journal of Community Health, 37*, 754-762. doi.org/10.1007/s10900-011-9508-x
Lucan, S. C., Barg, F. K., Karasz, A., Palmer, C. S., & Long, J. A. (2012b). Perceived influences on diet among urban, low-income African Americans. *American Journal of Health Behavior, 36*, 700-710. doi.org/10.5993/ajhb.36.5.12
Mai, R., & Hoffman, S. (2015). How to combat the unhealthy = tasty intuition: The influencing role of health consciousness. *Journal of Public Policy & Marketing, 34*, 63-83. doi.org/10.1509/jppm.14.006
Malhotra, K., Herman, A. N., Wright, G., Bruton, Y., Fisher, J. O., & Whitaker, R. C. (2013). Perceived benefits and challenges for low-income mothers of having family meals with preschool-aged children: childhood memories matter. *Journal of the Academy of Nutrition and Dietetics, 113*, 1484-1493. doi.org/10.1016/j.jand.2013.07.028
Marshall, I. J., Wang, Y., Crichton, S., McKevitt, C., Rudd, A. G., & Wolfe, C. D. A. (2015). The effects of socioeconomic status on stroke risk and outcomes. *The Lancet Neurology, 14*, 1206-1218. doi.org/10.1016/S1474-4422(15)00200-8
Mech, P., Hooley, M., Skouteris, H., & Williams, J. (2016). Parent-related mechanisms underlying the social gradient of childhood overweight and obesity: a systematic review. *Child: Care, Health and Development, 42*, 603-624. doi.org/10.1111/cch.12356
Mete, R., Shield, A., Murray, K., Bacon, R., & Kellet, J. (2019). What is healthy eating? A qualitative exploration. *Public Health Nutrition, 22*, 2408-2418. doi.org/10.1017/S1368980019001046
Mitchell, N. S., Catenacci, V. A., Wyatt, H. R., & Hill, J. O. (2011). Obesity: overview of an epidemic. *Psychiatric Clinics, 34*, 717-732. doi.org/10.1016/j.psc.2011.08.005
Mogendorff, K., Te Molder, H., Van Woerkum, C., & Gremmen, B. (2016). Turning experts into self-reflexive speaker: the problematization of technical-scientific expertise relative to alternative forms of expertise. *Science Communication, 38*, 26-50. doi.org/10.1177/1075547015615113
Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, T. P. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine, 6*, e1000097. doi.org/10.1371/journal.pmed.1000097
Mondada, L. (2009). The methodical organization of talking and eating: Assessments in dinner conversations. *Food Quality and Preference, 20*, 558-571. doi.org/10.1016/j.foodqual.2009.03.006
Mondada, L. (2018). The multimodal interactional organization of tasting: Practices of tasting cheese in gourmet shops. *Discourse Studies, 20*, 743-769. doi.org/10.1177/1461445618793439
Monsivais, P., McLain, J., & Drewnowski, A. (2010). The rising disparity in the price of healthful foods: 2004-2008. *Food Policy, 35*, 514-520. doi.org/10.1016/j.foodpol.2010.06.004
Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology, 18*, 143. doi.org/10.1186/s12874-018-0611-x
Netherlands Nutrition Center. (2011). *Dietary guidelines*. Retrieved from https://www.voedingscentrum.nl/Assets/Uploads/voedingscentrum/Documents/Professionals/Schijf%20van%20Vijf/20110412_Richtlijnen%20voedselkeuze%20VC.pdf
Ng, M., Fleming, T., Robinson, M., Thomson, B., Graetz, N., Margono, C., . . . Ferede, S. (2014). Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet, 384*, 766-781. doi.org/10.1016/S0140-6736(14)60460-8
Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Math = male, me = female, therefore math = not me. *Journal of Personality and Social Psychology, 83*, 44-59. doi.org/10.1037//0022-3514.83.1.44
Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2007). The implicit association test at age 7: A methodological and conceptual review. In J. A. Bargh (Ed.), *Social psychology and the unconscious: the automaticity of higher mental processes* (pp. 265 - 292). New York: Psychology Press.
Olsen, S. V. (1999). Strength and conflicting valence in the measurement of food attitudes and preferences. *Food Quality and Preference, 10*, 483-494. doi.org/10.1016/S0950-3293(99)00049-X
O'Neill, M., Rebane, D., & Lester, C. (2004). Barriers to healthier eating in a disadvantaged community. *Health Education Journal, 63*, 220-228. doi.org/10.1177/001789690406300303
Paugh, A. & Izquierdo, C. (2009). Why is this a battle every night?: Negotiating food and eating in American dinnertime interaction. *Linguistic Anthropology, 19*, 185-204. doi.org/10.1111/j.1548-1395.2009.01030.x
Paquette, M. C. (2005). Perceptions of healthy eating: State of knowledge and research gaps. *Canadian Journal of Public Health, 93*, S15-S19.
Pechey, R., Jebb, S. A., Kelly, M. P., Almiron-Roig, E., Conde, S., Nakamura, R., . . . Marteau, T. M. (2013). Socioeconomic differences in purchases of more vs. less healthy foods and beverages: Analysis of over 25,000 British households in 2010. *Social Science & Medicine, 92*, 22-26. doi.org/10.1016/j.socscimed.2013.05.012
Pechey, R., Monsivais, P., Ng, Y. L., & Marteau, T. M. (2015). Why don't poor men eat fruit? Socioeconomic differences in motivations for fruit consumption. *Appetite, 84*, 271-279. doi.org/10.1016/j.appet.2014.10.022
Pelchat, M. L., & Pliner, P. (1995). 'Try it. You'll like it'. Effects of information on willingness to try novel foods. *Appetite, 24*, 153-165. doi.org/10.1016/S0195-6663(95)99373-8

Pescud, M., & Pettigrew, S. (2014). Treats: low socioeconomic status Australian parents' provision of extra foods for their overweight or obese children. *Health Promotion Journal of Australia, 25*, 104-109. doi.org/10.1071/he13093

Pescud, M., Pettigrew, S., & Henley, N. (2014). Nutrition beliefs of disadvantaged parents of overweight children. *Health Education Journal, 73*, 201-208. doi.org/10.1177/0017896912471036

Pomerantz, A. (1984). Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 57-101). Cambridge, England: Cambridge University Press.

Pomerantz, Anita. (2021, April 28). *My papers that report on asking and telling practices* [Video]. YouTube. https://www.youtube.com/watch?v=L1D5GPtcrGM

Porter, L., Shriver, L. H., & Ramsay, S. (2016). Maternal perceptions related to eating and obesity risk among low-income African American preschoolers. *Maternal and Child Health Journal, 20*, 2565-2572. doi.org/10.1007/s10995-016-2082-1

Potter, J. (1996). *Representing reality: discourse, rhetoric, and social construction*. London: Sage.

Potter, J. (2021). Discursive psychology and naturally occurring talk. In D. Silverman (Ed.), *Qualitative research* (5th ed., pp. 203–222). London: Sage Publications.

Potter, J. & Hepburn, A. (2005). Discursive psychology as a qualitative approach for analysing interaction in medical settings. *Medical Education, 39*, 338-344. doi.org/10.1111/j.1365-2929.2005.02099.x

Potter, J. & Hepburn, A. (2020). Shaming interrogatives: Admonishments, the social psychology of emotion, and discursive practices of behaviour modification in family mealtimes. *British Journal of Social Psychology, 59*, 347-364. doi.org/10.1111/bjso.12346

Potter, J., Hepburn, A., & Edwards, D. (2020). Rethinking attitudes and social psychology – Issues of function, order, and combination of subject-side and object-side assessments in natural settings. *Qualitative Research in Psychology, 17*, 336-356. doi.org/10.1080/14780887.2020.1725952

Raghunathan, R., Naylor, R. W., & Hoyer, W. D. (2006). The unhealthy = Tasty intuition and its effects on taste inferences, enjoyment, and choice of food products. *Journal of Marketing, 70*, 170-184. doi.org/10.1509/jmkg.70.4.170

Reiss, F. (2013). Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. *Social Science & Medicine, 90*, 24-31. doi.org/10.1016/j.socscimed.2013.04.026

Reno, R. R., Cialdini, R. B., & Kallgren, C. A. (1993). The transsituational influence of social norms. *Journal of Personality and Social Psychology, 64*, 104-112. doi.org/10.1037/0022-3514.64.1.104

RIVM. (2021). Gezond gewicht bij personen van 4 jaar en ouder in 2020. Retrieved on 20 December 2021, from https://www.rivm.nl/leefstijlmonitor/gezond-gewicht

Roefs, A., Huijding, J., Smulders, F. T. Y., MacLeod, C. M., de Jong, P. J., Wiers, R. W., & Jansen, A. T. M. (2011). Implicit measures of association in psychopathology research. *Psychological Bulletin, 137*, 149-193. doi:10.1037/a0021729

Rutland, A., Cameron, L., Milne, A., & McGeorge, P. (2005). Social norms and self-presentation: Children's implicit and explicit intergroup attitudes. *Child Development, 76*, 451-466. doi.org/10.1111/j.1467-8624.2005.00856.x

Sacks, H., Schegloff, E. A., Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language, 50*, 696-735. doi.org/10.2307/412243

Sacks, H. (1992). In G. Jefferson (Ed.), *Lectures on conversation* (2 vols). Oxford and Cambridge, MA: Blackwell.

Sacks, H. (1995). *Lectures on Conversation: Volumes I & II.* Oxford: Basil Blackwell.

Sacks, H., & Schegloff, E. A. (1979). Two preferences in the organization of reference to persons in conversation and their interaction. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 15-21). New York, NY: Irvington.

Schegloff, E. A. (1997). Whose text? Whose context? *Discourse & Society, 8*, 165-187. doi.org/10.1177/0957926597008002002

Schegloff, E. A. (2007). *Sequence organization in interaction. A primer in conversation analysis. Vol. 1.* Cambridge: Cambridge University Press.

Schegloff, E. A. (2010). Commentary on Stivers and Rossano: 'Mobilizing response'. *Research on Language and Social Interaction, 43*, 38-48. doi.org/10.1080/08351810903471282

Sciubba, E., Shrikant, N., & Williamson, F. (2021, June 2). Guest blog: EM/CA for Racial Justice. *Research on Language and Social Interaction – Blog.* https://rolsi.net/2021/06/02/guest-blog-emca-for-racial-justice/

Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist, 54*, 93-105. doi.org/10.1037/0003-066X.54.2.93

Schwarz, N., & Oyserman, D. (2001). Asking questions about behavior: Cognition, communication, and questionnaire construction. *American Journal of Evaluation, 22*, 127-160. doi.org/10.1177/109821400102200202

Shavers, V. L. (2007). Measurement of socioeconomic status in health disparities research. *Journal of the National Medical Association, 99*, 1013-1023. doi.org/10.13016/avw3-9cvx

Shaw, R. & Kitzinger, C. (2007). Memory in interaction: An analysis of repeat calls to a home birth helpline. *Research on Language and Social Interaction, 40*, 117-144. doi.org/10.1080/08351810701331307

Shepherd, R. (1989). Factors influencing food preferences and choice. In R. Shepherd (Ed.), *Handbook of the Psychophysiology of Human Eating* (pp. 3–24). Chichester, West Sussex: Wiley.

Shepherd, R. (1999). Social determinants of food choice. *Proceedings of the Nutrition Society, 58*, 807-812. doi.org/10.1017/s0029665199001093

Sidnell, J. & Stivers, T. (Eds.) (2013). *The handbook of conversation analysis.* Malden, MA: Wiley-Blackwell.

Skinner, J. D., Carruth, B. R., Bounds, W., Ziegler, P., & Reidy, K. (2002). Do food-related experiences in the first 2 years of life predict dietary variety in school-aged children? *Journal of Nutrition Education and Behavior., 34*, 310-315. doi.org/10.1016/S1499-4046(06)60113-9

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*, 1638-1647. doi.org/10.1016/S0002-8223(02)90349-4

Sneijder, P. & Te Molder, H. F. M. (2006). Disputing taste: food pleasure as an achievement in interaction. *Appetite, 46*, 107-116. doi.org/10.1016/j.appet.2005.10.002

Sneijder, P. & Te Molder, H. (2009). Normalizing ideological food choice and eating practices. Identity work in online discussions on veganism. *Appetite, 52*, 621-630. doi.org/10.1016/j.appet.2009.02.012

Speer, S. A. & Hutchby, I. (2003). From ethics to analytics: Aspects of participants' orientations to the presence and relevance of recording devices. *Sociology, 37,* 315-337. doi.org/10.1177/0038038503037002006

Stephens, L. D., Crawford, D., Thornton, L., Olstad, D. L., Morgan, P. J., van Lenthe, F. J., & Ball, K. (2018). A qualitative study of the drivers of socioeconomic inequalities in men's eating behaviours. *BMC Public Health, 18*, 1257. doi.org/10.1186/s12889-018-6162-6

Stivers, T., Mondada, L., & Steensig, J. (2011). Knowledge, morality and affiliation in social interaction. In T. Stivers, L. Mondada, & J. Steensig (Eds.), *The Morality of Knowledge in Conversation*. Cambridge, England: Cambridge University Press.

Stivers, T. & Rossano, F. (2010). Mobilizing response. *Research on Language and Social Interaction, 43*, 3-31. doi.org/10.1080/08351810903471258

Stokoe, E. (2014). The Conversation-Analytic Role-Play Method (CARM): A method for training communication skills as an alternative to simulated role-play. *Research on Language and Interaction, 47*, 255-265. doi.org/10.1080/08351813.2014.925663

Stronks, K., Hoeymans, N., Haverkamp, B., Den Hertog, F. R. J., Van Bon-Martens, M. J. H., Galenkamp, H., . . . Van Oers, H. A. M. (2018). Do conceptualisations of health differ across social strata? A concept mapping study among lay people. *BMJ Open, 8*, e020210. doi.org/10.1136/bmjopen-2017-020210

Stuber, J. M., Middel, C. N. H., Mackenbach, J. D., Beulens, J. W. J., & Lakerveld, J. (2020). Successfully recruiting adults with a low socioeconomic position into community-based lifestyle programs: A qualitative study on expert opinions. *International Journal of Environmental Research and Public Health, 17*, 2764. doi.org/10.3390/ijerph17082764

Teuscher, D., Bukman, A. J., van Baak, M. A., Feskens, E. J., Renes, R. J., & Meershoek, A. (2015). Challenges of a healthy lifestyle for socially disadvantaged people of Dutch, Moroccan and Turkish origin in the Netherlands: a focus group study. *Critical Public Health, 25*, 615-626. doi.org/10.1080/09581596.2014.962013

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., . . . al., e. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine, 169*, 467-473. doi.org/10.7326/M18-0850

Trofholz, A. C., Schulte, A. K., & Berge, J. M. (2018). A qualitative investigation of how mothers from low income households perceive their role during family meals. *Appetite, 126*, 121-127. doi.org/10.1016/j.appet.2018.03.017

Vadiveloo, M., Morwitz, V., & Chandon, P. (2013). The interplay of health claims and taste importance on food consumption and self-reported satiety. *Appetite, 71*, 349-356. doi.org/10.1016/j.appet.2013.09.005

Vainik, U., Dagher, A., Dubé, L., & Fellows, L. K. (2013). Neurobehavioral correlates of body mass index and eating behaviours in adults: A systematic review. *Neuroscience and Biobehavioral Reviews, 37*, 279-299. doi.org/10.1016/j.neubiorev.2012.11.008

Van der Heijden, A., Te Molder, H., De Graaf, C., & Jager, G. (2020). Healthy is (not) tasty? Implicit and explicit associations between food healthiness and tastiness in primary school-aged children and parents with a lower socioeconomic position. *Food Quality and Preference, 84*, 103939. doi.org/10.1016/j.foodqual.2020.103939

Van der Heijden, A., Te Molder, H., Jager, G., & Mulder, B. C. (2021). Healthy eating beliefs and the meaning of food in populations with a low socioeconomic position: A scoping review. *Appetite, 161*, 105135. doi.org/10.1016/j.appet.2021.105135

Van der Heijden, A., Te Molder, H., Huma, B., & Jager, G. (2022). To like or not to like: negotiating food assessments of children from families with a low socioeconomic position. *Appetite, 170,* 105853. doi.org/10.1016/j.appet.2021.105853

Van der Meer, T. (2017, 1 september). School verplicht kinderen water te drinken, ouders boos: 'water is voor honden'. *AD.* https://www.ad.nl/tilburg/school-verplicht-kinderen-water-te-drinken-ouders-boos-water-is-voor-honden~a72da0eb/

Van der Velde, L. A., Nguyen, A. N., Schoufour, J. D., Geelen, A., Jaddoe, V. W. V., Franco, O. H., & Voortman, T. (2019). Diet quality in childhood: the Generation R study. *European Journal of Nutrition, 58*, 1259-1269. doi.org/10.1007/s00394-018-1651-z

Van Lee, L., Feskens, E. J., Meijboom, S., Hooft van Huysduynen, E. J., van 't Veer, P., & de Vries, J. H. G., A. . (2016). Evaluation of a screener to assess diet quality in the Netherlands. *British Journal of Nutrition, 115*, 517-526. doi.org/10.1017/S0007114515004705

Van Lee, L., Geelen, A., Hooft van Huysduynen, E. J. C., De Vries, J. H., Van 't Veer, P., & Feskens, E. J. (2012). The Dutch Healthy Diet index (DHD-index): an instrument to measure adherence to the Dutch guidelines for a healthy diet. *Nutrition Journal, 11*, 49. doi.org/10.1186/1475-2891-11-49

Van Otterloo, A. H., & Ogtrop, J. P. H. M. (1989). *Het regime van veel, vet en zoet: praten met moeders over voeding en gezondheid*. Amsterdam: VU Uitgeverij.

Van Rossum, C. T. M., Buurma-Rethans, E. J. M., Vennemann, F. B. C., Beukers, M., Brants, H. A. M., De Boer, E. J., & Ocke, M. C. (2016). *The diet of the Dutch: Results of the first two years of the Dutch National Food Consumption Survey 2012-2016.* Bilthoven: National Institute for Public Health and the Environment.

Vassalo, M., Saba, A., Arvola, A., Dean, M., Messina, F., Winkelmann, M., ... Shepherd, R. (2009). Willingness to use functional breads. Applying the Health Belief Model across four European countries. *Appetite, 52*, 452-460. doi.org/10.1016/j.appet.2008.12.008

Veen, M., Te Molder, H., Gremmen, B., & Van Woerkum, C. (2012). If you can't eat what you like, like what you can: how children with coeliac disease and their families construct dietary restrictions as a matter of choice. *Sociology of Health & Illness, 35*, 592-609. doi.org/10.1111/j.1467-9566.2012.01519.x

Vereecken, C., Covents, M., Parmentier, J., & Maes, L. (2012). Test-retest reliability and agreement between children's and parents' reports of a computerized food preferences tool. *Public Health Nutrition, 16*, 8-14. doi.org/10.1017/S1368980012001085

Versteeg, W. B. (2018). *How do you know? Expert negotiations of expert authority* (Doctoral dissertation, University of Twente, Enschede, the Netherlands). doi.org/10.3990/1.9789036546928

Volaco, A., Cavalcanti, A. M., Filho, R. P., & Précoma, D. B. (2018). Socioeconomic status: The missing link between obesity and diabetes mellitus? *Current Diabetes Reviews, 14*, 321-326. doi.org/10.2174/1573399813666170621123227

Wanich, U., Riddell, L., Cicerale, S., Mohebbi, M., Sayompark, D., Liem, D. G., & Keast, R. S. J. (2020). Association between food liking and diet quality in Australian young adults. *Asia Pacific Journal of Clinical Nutrition, 29*, 166-174. doi.org/10.6133/apjcn.202003_29(1).0022

Waters, L. A., Galichet, B., Owen, N., & Eakin, E. (2011). Who participates in physical activity intervention trials? *Journal of Physical Activity & Health, 8*, 85-103. doi.org/10.1123/jpah.8.1.85

Werle, C. O. C., Trendel, O., & Ardito, G. (2013). Unhealthy food is not tastier for everybody: The 'healthy = tasty' French intuition. *Food Quality and Preference, 28*, 116-121. doi.org/10.1016/j.foodqual.2012.07.007

Whitehead, K. A. (2020). The problem of context in the analysis of social action: The case of implicit whiteness in post-apartheid South Africa. *Social Psychology Quarterly, 83*, 294-313. doi.org/10.1177/0190272519897595

WHO. (2016). *Report of the commission on ending childhood obesity*. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/204176/9789241510066_eng.pdf;jsessionid=141FC-0BEE4A726BB7B37B724120B1443?sequence=1

WHO. (2021). Obesity and overweight: key facts. Retrieved on 20 December 2021, from https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight

Wiggins, S. (2001). Construction and action in food evaluation: Conversational data. *Journal of Language and Social Psychology, 20,* 445-463. doi.org/10.1177/0261927X01020004003

Wiggins, S. (2002). Talking with your mouth full: Gustatory mmms and the embodiment of pleasure. *Research on Language and Social Interaction, 35*, 311-336. doi.org/10.1207/S15327973RLSI3503_3

Wiggins, S. (2002b). *Eating your words: constructing food and eating practices in mealtime conversation.* (Doctoral dissertation, Loughborough University, Loughborough, United Kingdom). https://repository.lboro.ac.uk/articles/thesis/Eating_your_words_constructing_food_and_eating_practices_in_mealtime_conversation/9479645

Wiggins, S. (2004). Good for 'you': Generic and individual healthy eating advice in family mealtimes. *Journal of Health Psychology, 9*, 535-548. doi.org/10.1177/1359105304044037

Wiggins, S. (2004b). Talking about taste: using a discursive psychological approach to examine challenges to food evaluations. *Appetite, 43*, 29-38. doi.org/10.1016/j.appet.2004.01.007

Wiggins, S. (2013). The social life of 'eugh': Disgust as assessment in family mealtimes. *The British Psychological Society, 52*, 489-509. doi.org/10.1111/j.2044-8309.2012.02106.x

Wiggins, S. (2014). Adult and child use of love, like, don't like and hate during family mealtimes. Subjective category assessments as food preference talk. *Appetite, 80*, 7-15. doi.org/10.1016/j.appet.2014.04.024

Wiggins, S. (2017). *Discursive psychology. Theory, method and applications.* London: Sage.

Wiggins, S. (2019). Moments of pleasure: a preliminary classification of gustatory mmms and the enactment of enjoyment during infant mealtimes. *Frontiers in Psychology, 10*, 1404. doi.org/10.3389/fpsyg.2019.01404

Wiggins, S. & Hepburn, A. (2007). Food abuse. Mealtimes, helplines and 'troubled' eating. In A. Hepburn & S. Wiggins (Eds.), *Discursive research in practice. New approaches to psychology and interaction* (pp. 263-280). Cambridge University Press.

Wiggins, S. & Keevallik, L. (2020). Enacting gustatory pleasure on behalf of another: the multimodal coordination of infant tasting practices. *Symbolic Interaction, 44*, 87-111. doi.org/10.1002/SYMB.527

Wiggins, S. & Potter, J. (2003). Attitudes and evaluative practices: Category vs. item and subjective vs. objective constructions in everyday food assessments. *British Journal of Social Psychology, 42*, 513-531. doi.org/10.1348/014466603322595257

Wilkinson, S. (2011). Gender, routinisation and recipient design. In S. A. Speer & E. Stokoe (Eds.), *Conversation and gender* (pp. 112-134). Cambridge, England: Cambridge University Press.

Williams, E. P., Mesidor, M., Winters, K., Dubbert, P. M., & Wyatt, S. B. (2015). Overweight and obesity: prevalence, consequences, and causes of a growing public health problem. *Current Obesity Reports, 4*, 363-370. doi.org/10.1007/s13679-015-0169-4

Zarnowiecki, D. M., Dollman, J., & Parletta, N. (2014). Associations between predictors of children's dietary intake and socioeconomic position: A systematic review of the literature. *Obesity Reviews, 15*, 375-391. doi.org/10.1111/obr.12139

Zarnowiecki, D. M., Parletta, N., & Dollman, J. (2014). The role of socio-economic position as a moderator of children's healthy food intake. *British Journal of Nutrition,112*, 830-840. doi.org/10.1017/S0007114514001354

Summary

Socioeconomic disparities in diet quality continue to prevail, and already emerge in childhood. Children from families with a low SEP consume unhealthier diets than children from families with a higher SEP. However, populations with a low SEP are least reached by interventions to improve diet quality and other lifestyle factors, which paradoxically could result in an increase of the disparity in diet quality and eating behaviors between populations with lower and higher SEPs. Moreover, populations with a low SEP are underrepresented in research. Instead of focusing on reducing the socioeconomic inequalities in health and dietary status, it may be more effective to focus on the health 'potential' of populations with a low SEP, and especially children, as they are the ones where the benefits of improved dietary patterns and eating behaviors have the biggest impact.

The research reported in this thesis set out to investigate how health potential could be realized via improving eating behaviors in the everyday life of families with a low socioeconomic position. There are differences between populations with low and higher SEPs with regard to food preference, i.e., what they (dis)like, and what they believe is healthy or not, and (not) tasty. Therefore, this thesis aimed to provide insight in how these differences arise, and what the meaning is of '(un)healthy' and (not) 'tasty', and what it means to 'like' or 'dislike' a food, in the everyday life of families with a low SEP. A multidisciplinary approach was deployed, combining perspectives from nutrition sciences and psychology, diverse theoretical approaches, and quantitative and qualitative research methods.

In **Chapter 2**, the range of implicit (i.e., unconscious) and explicit (i.e., conscious) associations between (un)healthiness, (not) tastiness and (dis)liking of foods was mapped in primary school-aged children and parents from families with a low SEP. It was hypothesized that research participants would associate unhealthy foods with tastiness, in line with the so-called unhealthy = tasty intuition. 37 primary school-aged children and their parents with a low SEP participated in implicit association tests and filled out paper-and-pencil questionnaires. The results showed that children and parents implicitly associated healthy foods and tastiness more strongly with each other than healthy foods and not tasty. In contrast to the hypothesis, this indicated a healthy = tasty intuition. Measures

on the explicit level showed a similar result for parents. Children, however, showed mixed results as they rated pictures of unhealthy foods as tastier than pictures of healthy foods, and rated the descriptions 'food that is tasty' and 'food I like to eat' higher than 'food that is healthy for me', while they also indicated that they did not believe unhealthy foods were tastier than healthy foods. Possible theoretical and methodological explanations are discussed, including the possibility that rather than displaying intrinsic beliefs, parents and children oriented to a societal norm, internalized to such an extent that it could be measured even at the implicit level.

Chapter 3 reports a scoping review of the fragmented scientific literature on healthy eating beliefs and the meaning of food in populations with a low SEP. A systematic search of scientific publication databases identified 35 publications as relevant for inclusion in the scoping review. The thorough review and qualitative synthesis of the literature showed that populations with a low SEP expressed diverse meanings of what they considered to be 'healthy' and 'good' food. They perceived healthy eating (as it was understood by them) as important. However, they expressed various perceived barriers that indicated perceived limited control over what is eaten, and which may also be interpreted as competing values. Expressed barriers included limited time and money, social influences (such as indulging someone with food they like), desired identities conveyed by the consumption of specific foods, and adhering to traditions. However, participants also expressed a desire to be in control over what is eaten and perceived eating behavior as one's own responsibility. Furthermore, parents articulated how they used food to coordinate (eating) behavior of their children.

In **Chapter 4**, an interactional approach to food preference was deployed. It was explored how children and parents with a low SEP orient to and negotiate food tastiness (i.e., liking and disliking) in conversations during everyday family mealtimes. Video recordings of 79 evening mealtimes of families with a low SEP were analysed deploying discursive psychology and conversation analysis. The analysis revealed that children's produced 'likes' and 'dislikes' of food were treated differently by their parents. Children's food likes were routinely not responded to, agreed with, or further elaborated by parents. Children's food dislikes, on the other hand, were typically treated as food refusals or as non-genuine claims. The analysis indicated that children's food likes and dislikes (assessments) that accomplished social actions such as refusals or complaints about

food more frequently yielded a response from parents than likes and dislikes that appeared as food preference displays.

Furthermore, in **Chapter 5** it was explored how children and parents from families with a low SEP orient to and negotiate (un)healthiness of food in conversations during everyday family mealtimes. Deploying discursive psychology and conversation analysis, additional analyses of the 79 video recorded mealtimes of families with a low SEP showed that (un)healthy eating and (un)healthiness of food were hardly explicitly oriented to, i.e., were hardly discussed. When they were oriented to, claims about (un)healthiness were produced and designed as identity-centered, food-centered or person-centered claims that accomplished specific actions in the interactional environment in which they were produced. Identity-centered health claims were produced in the interactional environment of managing someone else's behavior. Parents constructed a desirable prospective identity for their child, typically to overcome food resistance or to reinforce good eating behavior. Food-centered health claims occurred in a variety of contexts where they accomplished actions that accounted for the speaker's own behavior, such as for eating or providing a particular food. Person-centered health claims accomplished actions in contexts where the referent of the health claim was a food in a hypothetical situation, rather than a food eaten in the present situation.

In the general discussion (**Chapter 6**), overarching conclusions and theoretical and practical implications are discussed. In sum, this thesis indicated that children and parents with a low SEP oriented to 'healthy is tasty' as a normative rather than an intrinsic belief. In addition, it was shown that people with a low SEP encounter competing values as they place a high value on healthy food, but more value on other things. Competing values can hinder, but also enhance healthy eating. Furthermore, this thesis showed that families with a low SEP only trivially oriented to food healthiness and tastiness in everyday conversations during family meals. The combination of multiple research approaches and methods, and the recruitment and participation of families with a low SEP, are reflected upon and recommendations are provided. Finally, it is proposed that a more in-depth connection to populations with a low SEP through mutual understanding and a common language about food, health and taste could be an innovative basis for policy, measures and interventions to improve healthy eating behavior in a way that is rewarding for all involved.

Dankwoord / Acknowledgements

Een proefschrift is natuurlijk niet compleet zonder het bedanken van alle mensen die direct of indirect hebben bijgedragen aan het succesvol volbrengen van mijn promotietraject, met dit proefschrift als resultaat. Met veel plezier en dankbaarheid heb ik dan ook dit dankwoord mogen schrijven; als állerlaatste onderdeel van mijn proefschrift!

Als eerste wil ik graag hartelijk mijn (co-)promotoren bedanken: Hedwig, Gerry en Kees. Wat vormen wij samen een superteam! Hedwig, vanaf de eerste dag ben jij ontzettend enthousiast geweest over dit project en dat werkt heel aanstekelijk. Na een gesprek met jou zag ik het project vaak ook weer helemaal zitten. Ondanks jouw drukke agenda vond je het toch heel belangrijk om af en toe gezamenlijk datasessies te houden en inhoudelijk naar de videodata te kijken. Ik heb genoten van deze gezellige en zinvolle bijeenkomsten. Gerry, ook jij was absoluut onmisbaar bij dit project. Jouw expertise ligt meer bij de combinatie van (cognitieve) psychologie en voedingswetenschappen. Je hebt mij erg ondersteund met het ontwikkelen en pre-testen van bijvoorbeeld de IATs en het analyseren en interpreteren van de verschillende soorten kwantitatieve data. De kwalitatieve analyse van alledaagse gesprekken was voor jou een nieuwe ervaring, maar omdat je het zo interessant vond ben je toch bij vrijwel elke meeting geweest en heb je jouw (waardevolle en interessante!) visie op de gesprekken gedeeld. Ook vond ik het fijn dat je recht door zee was en pragmatisch ingesteld. Dat is ontzettend handig bij bijvoorbeeld het nemen van beslissingen! Kees, na jarenlange trouwe dienst ben jij met een welverdiend pensioen gegaan. Mede hierdoor hebben wij wat minder contact gehad. Desondanks vond ik onze gesprekken over de voortgang van het project altijd prettig en positief. Heel erg bedankt allemaal, dat jullie mij de kans hebben gegeven in dit project waardoor ik me verder heb kunnen ontwikkelen als wetenschapper!

There is only one person I can think of who deserves to be mentioned next: dear Bogdana, thank you so much for joining forces, for all your valuable feedback on (early) versions of my discursive psychological analyses, your positivity and enthusiasm! Especially at the start of the interactional part of this project, I struggled with the way of thinking within DP, wondering in which direction I should take the analysis, and got lost in the seemingly endless amounts of videos and transcripts. Your clear and pragmatic suggestions helped me pave

the way. Moreover, I enjoyed and enjoy your company very much, and I hope we continue to do science, chat and have coffees together!

Graag wil ik ook Bob hartelijk bedanken voor het bijdragen aan mijn proefschrift! Voor onze scoping review hebben we stapels titels, abstracts en full texts van artikelen doorgeploegd. Gelukkig is gedeelde smart halve smart, en zo zijn we tot een kwalitatief goede synthese en review gekomen. Meer dan dat wil ik je graag bedanken voor je vriendschap, alle gezelligheid, en fijne gesprekken die we veelvuldig gevoerd hebben en voeren onder het genot van een kopje (inmiddels misschien wel opgelopen tot een aantal emmers) thee. Dit heeft ontzettend bijgedragen aan mijn werkplezier op de Leeuwenborch. Dankjewel! Lapsang souchong.

Lieve Lotte, Berber, Christel en Angeliek – room 4069 – met jullie als kamergenoten ben ik ooit dit avontuur begonnen en ik had me geen betere roomies kunnen wensen! Het was heel gezellig in onze ('mooi' gedecoreerde) kamer, en we hebben zelfs af en toe werk verzet. Want zoals jullie weten; work like it's your profession! Ondanks dat we inmiddels allemaal van kamer, gebouw of zelfs universiteit gewisseld zijn, zijn we nog steeds vriendinnen en spreken we elkaar vaak. Ik vind het geweldig om met jullie gin tonics te maken (wat dan wel?), al onze levenskwesties (including, but not limited to, the highlights and struggles of academics) te bespreken, en heel Traag te dansen. Als kers op de taart zijn Lotte en Berber mijn paranimfen tijdens de publieke verdediging van mijn proefschrift. Bedankt allemaal voor jullie fijne gezelschap en tomeloze inzet!

Natuurlijk wil ik ook Merije en Hanneke heel graag bedanken voor jullie vriendschap en gezelschap op de vierde verdieping. Lebolife zou niet hetzelfde zijn zonder koffie en kletsen over wat ons bezighoudt, wat we allemaal zouden moet doen (of niet), vreemde dingen die we ons afvragen en met niemand anders durven te bespreken, en het ondersteunen van elkaar als het nodig is. Ook hebben we er al vele gezellige lunchwandelingen op zitten (linksom of rechtsom). De Lebo zou niet hetzelfde zijn zonder jullie. Bedankt!

Graag bedank ik ook de leden van de 'studie der conversatie': Lotte, Roel, Alyanne, en Robert. We hebben samen momenten met droge lucht doorstaan en hebben ook vele PhD- en DP-/CA-tips met elkaar uitgewisseld. Dankjulliewel!

Graag bedank ik al mijn leuke collega's van de leerstoelgroep Strategische Communicatie en van de afdeling Humane Voeding en Gezondheid. Voor de goede gesprekken (zowel inhoudelijk als koffieautomaat), wandelingetjes, en het verbreden van mijn horizon. In het bijzonder bedank ik het secretariaat van Humane Voeding en Gezondheid voor de vlugge en correcte administratieve afhandeling van praktische zaken in mijn project; het secretariaat van Strategische Communicatie voor de interesse in mijn project en de leuke gesprekken; en mijn kamergenootjes van kamer 1059 in Helix.

Graag maak ik van de gelegenheid gebruik om ook mijn familie te bedanken. Hoewel jullie niet direct bij het project betrokken waren, droegen jullie wel bij aan mijn algehele welzijn. Ik ben heel blij dat jullie er zijn! Hèlen, Robin, Nico, en favoriete bonusfamilieleden Tineke, Anouk, Jordi en Loes.

Evenzo bedank ik graag mijn vriendinnen Hannah, Britt, Linda, Jef, Noortje, Ron, Pleun, Rebecca, en Elvira. Hoewel het soms best lastig is om goed uit te leggen wat ik nu eigenlijk allemaal doe hier op de universiteit, hebben jullie er altijd met veel interesse naar geluisterd naast de vele andere onderwerpen die wij hebben om te bespreken. Bedankt voor jullie vriendschap!

Tenslotte bedank ik graag een aantal mensen die de praktische kant van mijn onderzoek en proefschrift mede mogelijk hebben gemaakt. Ten eerste de vrijwilligers van de Voedselbank. Jullie hebben mij altijd heel hartelijk en geïnteresseerd ontvangen en ontzettend geholpen met het rekruteren van gezinnen voor deelname aan mijn onderzoek. Ontzettend bedankt hiervoor!

Uiteraard bedank ik ook alle deelnemers aan het onderzoek. Zonder jullie waren het onderzoek en dit proefschrift er niet geweest. Bedankt!

Luc, hartelijk dank voor de fijne samenwerking met betrekking tot het grafisch vormgeven van dit proefschrift. Ik vind het ontzettend mooi geworden!

Bedankt ook alle mede-promovendi, supervisors en bestuursleden van de Edema-Steernberg Stichting. Met sommige heb ik meer contact gehad dan met anderen, maar ik heb zeker een positieve samenwerking en beleving van dit project ervaren, bijvoorbeeld tijdens de voortgangsbijeenkomsten.

In het bijzonder bedank ik wijlen mevrouw drs. J.M.P. Edema, zonder wie de stichting en dit project er niet waren geweest.

Finally, I would like to thank the members of the thesis committee: Professor Sally Wiggins, Dr Alexandra Kent, Professor Judi Mesman and Professor Harm Veling. Thank you for your time and effort to read and assess this thesis, for your questions, and your presence during the public defense ceremony of this thesis.

About the author

Curriculum vitae

Amy van der Heijden was born on 10 September 1993 in Boxtel, the Netherlands. After completing secondary school at the Jacob-Roelandslyceum in Boxtel in 2011, she moved to Wageningen to study the BSc Applied Communication Science at Wageningen University & Research. She focused her minor on food and health. During her studies, Amy was also a board member (secretary) of the student association 'Brabants Studenten Gilde' in Wageningen in 2013-2014. After completing her BSc programme in 2014, she enrolled in the MSc Applied Communication Science with a minor in epidemiology and public health. She wrote her MSc thesis on social-cognitive determinants of performing a tick check after visiting nature, which was published in adapted form in a peer-reviewed scientific journal. Amy completed a research internship at the Dutch Heart Foundation in The Hague, where she conducted a study on motivations and barriers of laypeople to measure their own heart rhythm in order to detect atrial fibrillation. Amy graduated from Wageningen University & Research in 2016.

After her graduation, Amy worked as a volunteer at the Trimbos institute for a couple of months to gain more research experience. At this research institute, she contributed to research projects on preventing substance use in secondary school freshmen, resulting in another scientific publication. In 2017, Amy was appointed as a PhD candidate on the project 'To like or not to like: On negotiating taste in children from families with a low socioeconomic position' at Wageningen University & Research. This project was a collaboration between the chair groups Sensory Science and Eating Behavior (Division of Human Nutrition and Health) and the Strategic Communication Group. Her PhD research focused on how health potential could be realized via improving eating behaviors in the everyday life of families with a low socioeconomic position (reported in this thesis). In 2019, Amy was awarded the Young Professional Award at the annual conference VoedingNL in Utrecht, for conducting original research that provides a unique viewpoint on nutrition science. During her PhD project, Amy joined the educational programme of the Graduate School VLAG, attended multiple national and international conferences and was involved in teach-

ing courses and supervising BSc and MSc thesis students. In 2021, Amy started working as a lecturer at the Strategic Communication Group of Wageningen University & Research. She also continues to develop her research skills, plans and projects.

List of publications

Van der Heijden, A., Te Molder, H., Huma, B., & Jager, G. (2022). To like or not to like: Negotiating food assessments of children from families with a low socio-economic position. *Appetite, 170*, 105853. doi.org/10.1016/j.appet.2021.105853

Van der Heijden, A., Te Molder, H., Jager, G., & Mulder, B. C. (2021). Healthy eating beliefs and the meaning of food in populations with a low socioeconomic position: A scoping review. *Appetite, 161*, 105135. doi.org/10.1016/j.appet.2021.105135

Van der Heijden, A., Te Molder, H., De Graaf, C., & Jager, G. (2020). Healthy is (not) tasty? Implicit and explicit associations between food healthiness and tastiness in primary school-aged children and parents with a lower socio-economic position. *Food Quality and Preference, 84*, 103939. doi.org/10.1016/j.foodqual.2020.103939

Van der Heijden, A., Mulder, B. C., Poortvliet, P. M., & Van Vliet, A. J. H. (2017). Social-cognitive determinants of the tick check: a cross-sectional study on self-protective behavior in combatting Lyme disease. *BMC Public Health, 17*, 900. doi.org/10.1186/s12889-0174908-1

Onrust, S. A., **Van der Heijden, A.**, Zschämisch, A. L., & Speetjens, P. A. M. (2017). Effectiveness of Fresh Start: a randomized study of a school-based program to retain a negative attitude toward substance use in secondary school freshmen. *Substance Use & Misuse, 53*, 921 – 930. doi.org/10.1080/10826084.2017.1385082

Submitted manuscript for publication

Van der Heijden, A., Te Molder, H., Huma, B., & Jager, G., *Healthy food talk as action in everyday mealtime conversations of families with a low socioeconomic position.*

Overview of completed training activities

Discipline specific activities	Organizing institute and location	Year
NutriScience	VLAG, Wageningen	2017
Conversation analysis and healthcare interactions	University of Loughborough, UK	2017
International conference on conversation analysis (ICCA)	ISCA, Loughborough, UK	2018
Multimodality	University of Loughborough, UK	2018
Conversation-analytic role-play method	University of Loughborough, UK	2018
Video/audio data management	University of Loughborough, UK	2018
Sensory perception and food preference: the role of context	VLAG, Wageningen	2018
AWIA symposium	Anéla, Nijmegen	2018
Public health research in practice: Evaluation and adaptation of public health interventions: the role of context	VLAG, Wageningen	2018
Congres VoedingNL - Eiwit en spiermassa	PIT Actief, Utrecht	2019
British Feeding and Drinking Group (BFDG) Annual Meeting (including pre-conference workshop)	BFDG / University of Swansea, UK	2019
Groningen Symposium on Language and Social Interaction (GSLI)	University of Groningen and Anéla, Groningen	2019
Nutrition Disparity and Equity: From differences to potential	Edema-Steernberg Foundation / Wageningen University & Research, Wageningen	2019
European Conference of Conversation Analysis (ECCA2020)	Universities of Nijmegen, Groningen, Utrecht, Amsterdam and the Erasmus Medical Centre (Online)	2020
AWIA symposium	Anéla (Online)	2020
EuroSense	Wageningen University & Research and partners (Online)	2020

AILA: World conference of Applied Linguistics	AILA (Online)	2021

General courses and activities	**Organizing institute and location**	**Year**
VLAG PhD week	VLAG, Baarlo	2017
Project and time management	WGS, Wageningen	2017
Brain training	WGS, Wageningen	2017
Supervising BSc and MSc Thesis students	WGS, Wageningen	2017
Competence Assessment	WGS, Wageningen	2017
Introduction to R	VLAG, Wageningen	2018
Applied Statistics	VLAG, Wageningen	2018
Effective behaviour in your professional surroundings	WGS, Wageningen	2018
Career Perspectives	WGS, Wageningen	2020

Other activities	**Organizing institute and location**	**Year**
Preparation of research proposal	SS & EB, Human Nutrition and Health, Wageningen	2017
HNE-30306 Psychobiology of food choice and eating behaviour (E-Prime practicals and lectures)	Human Nutrition and Health, Wageningen	2017
PhD Tour	Human Nutrition and Health, Montréal, Ottawa, Hamilton, Toronto	2019
Edema-Steernberg Foundation PhD's literature discussion group	Edema-Steernberg Foundation PhD's, Wageningen	2018-2019

The research described in this thesis was financially supported by the Edema-Steernberg Foundation.

Financial support from Wageningen University and Hèlen Stuijvenberg for printing this thesis is gratefully acknowledged.

Cover design by Maikel Verkoelen (Studio Mik)
Lay-out by Luc Dinnissen (studio ds)
Printed by DPN Rikken Print